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FOREWORD

Committee E02 on Terminology presents the Tenth Edition of the *ASTM Dictionary of Engineering Science & Technology*.

This volume allows the reader to reference terminology developed by various ASTM Committees. The dictionary also facilitates the comparison of definitions created by technical subject experts in many disciplines.

Vincent Diaz
Chairman
ASTM Committee E02 on Terminology

ASTM TERMINOLOGY STANDARDS CITED IN THIS COMPILATION

The definitions contained in this compilation are standard definitions that are published in the terminology standards listed below. The designation of the terminology standard and the committee having jurisdiction appear at the end of each definition. Further discussion of terms may be included in the text of the terminology standard.

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Following is a list of committees whose terminology standards appear in the *ASTM Dictionary of Engineering Science & Technology, 10th Edition*. The title of each committee is also included.

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A01	Steel, Stainless Steel and Related Alloys
A04	Iron Castings
A05	Metallic-Coated Iron and Steel Products
A06	Magnetic Properties
B01	Electrical Conductors
B02	Nonferrous Metals and Alloys
B05	Copper and Copper Alloys
B07	Light Metals and Alloys
B08	Metallic and Inorganic Coatings
B09	Metal Powders and Metal Powder Products
C01	Cement
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C04	Vitrified Clay Pipe
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C08	Refractories
C09	Concrete and Concrete Aggregates
C11	Gypsum and Related Building Materials and Systems
C12	Mortars and Grouts for Unit Masonry
C13	Concrete Pipe
C14	Glass and Glass Products
C15	Manufactured Masonry Units
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C17	Fiber-Reinforced Cement Products
C18	Dimension Stone
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D02	Petroleum Products and Lubricants
D03	Gaseous Fuels
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D06	Paper and Paper Products
D07	Wood
D08	Roofing and Waterproofing
D09	Electrical and Electronic Insulating Materials
D10	Packaging
D11	Rubber
D12	Soaps and Other Detergents
D13	Textiles
D14	Adhesives

D15	Engine Coolants
D16	Aromatic Hydrocarbons and Related Chemicals
D18	Soil and Rock
D19	Water
D20	Plastics
D21	Polishes
D22	Air Quality
D24	Carbon Black
D27	Electrical Insulating Liquids and Gases
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F11	Vacuum Cleaners
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F38	Unmanned Air Vehicle Systems
G01	Corrosion of Metals
G02	Wear and Erosion
G03	Weathering and Durability
G04	Compatibility and Sensitivity of Materials in Oxygen Enriched Atmospheres

A

- a**—height of cantilevered shear wall, in metres (feet). **E 631, E06**
- a**—span length of cantilever diaphragm, in. (or mm) **E 631, E06**
- A4A**—symbol for ISO standard metric cut-size paper which is nominally 20 by 30 cm or exactly 210 by 297 mm. **F 1457, F05**
- AASHTO compaction**—see **compaction test**. **D 653, D18**
- AATCC blue wool lightfastness standards, n**—standard dyed-wool samples of seven grades, each step in the series representing a doubling of lightfastness. **E 284, E12**
- abandonment**—see **decommissioning**. **D 653, D18**
- Abbe condenser**—see **condenser, Abbe**. **E 175, E41**
- Abbé value**—the reciprocal dispersive power, a value used in optical design, expressed mathematically as:
- $$\text{Abbé value} = (n_d - 1)/(n_F - n_C)$$
- where n_d is the refractive index for the helium line at 587.6 nm and n_F and n_C are the refractive indices for the hydrogen lines at 486.1 and 656.3 nm, respectively. See synonymous term **nu-value** and related term **dispersion**. **C 162, C14**
- abbreviation, n**—a shortened form of a single-element term created by the omission of some of its letters. **E 1992, E02**
- abduction**—the movement of a body part from the longitudinal (midline) of the body or in reference to fingers and toes, movement away from the midline of hand or foot. **F 869, F08**
- aberration**—any error that results in image degradation. Such errors may be chromatic, spherical, astigmatic, comatic, distortion, or curvature of field; and can result from design or execution, or both. **E 175, E41**
- abietic acid, commercial grade, n**—a product consisting chiefly of rosin acids in substantially pure form, separated either from rosin or tall oil commercially for specific purposes and in which abietic acid and its isomers are the principal components. **D 804, D01**
- ablation, n**—a self-regulating heat and mass transfer process in which incident thermal energy is expended by sacrificial loss of material. **E 349, E21**
- above-grade, adj**—above the surface of the ground, as related to floor location, above a well-ventilated space with at least 18 in. between the bottom of the lowest horizontal structural member and any point of the ground. **F 141, F06**
- abrasion, n**—the wearing away of any part of a material by rubbing against another surface. **D 123, D13**
- abrasion**—a rubbing and wearing away. (ISRM) **D 653, D18**
- abrasion**—the mechanical wearing, grinding, scraping or rubbing away (or down) of rock surfaces by friction or impact, or both. **D 653, D18**
- abrasion, n**—the surface loss of a material due to frictional forces. **D 1566, D11**
- abrasion, n**—wear by displacement of material caused by hard particles or hard protuberances. **D 4175, D02**
- abrasion, n**—the wearing away of any part of a material by rubbing against another surface. **D 4850, D13**
- abrasion, n**—*for inflatable restraint fabrics*, a fuzzy cluster of broken filaments damaged by scraping. **D 6799, D13**
- abrasion, n**—wearing, grinding, or rubbing away by friction. **F 141, F06**
- abrasion-corrosion, n**—a synergistic process involving both abrasive wear and corrosion in which each of these processes is affected by the simultaneous action of the other and, in many cases, is thereby accelerated. **G 40, G02**
- abrasion cycle, n**—one complete movement across the surface of a material. **D 123, D13**
- abrasion cycle, n**—one complete movement across the surface of a material. **D 4850, D13**
- abrasion mark, n**—an area damaged by friction. **D 123, D13**
- abrasion mark, n**—an area damaged by friction. (*Syn.* chafe mark) **D 3990, D13**
- abrasion of refractories, n**—wearing away of refractory surfaces by the scouring action of moving solids. **C 71, C08**
- abrasion resistance**—the degree to which a porcelain enamel will resist attack by abrasive materials. **C 286, B08**
- NOTE**—See Test Methods C 448. **C 286, B08**
- abrasion resistance, n (for coatings)**—the ability of a coating to resist being worn away and to maintain its original appearance and structure when subjected to rubbing, scraping, or wear. **D 16, D01**
- abrasion resistance**—the property of a particle to resist attrition or wearing away by friction. **D 2652, D28**
- abrasion resistance**—the ability of the polished shoe finish to withstand scuff marks versus the nonpolished shoe finish. **D 2825, D21**
- abrasion resistance (coatings)**—ability of a coating to resist being worn away and to maintain its original appearance, integrity, and structure when subjected to rubbing, scraping, or wear. **E 631, E06**
- abrasion resistance (coatings)**—ability of a coating to resist being worn away and to maintain its original appearance, integrity, and structure when subjected to rubbing, scraping, or wear. **E 1605, E06**
- abrasion resistance index, n**—a measure of the abrasion resistance of a rubber relative to that of a standard rubber under the same specified conditions, expressed as a percentage. **D 1566, D11**
- abrasion tester**—a machine for determining the quantity of material lost by friction wear under specified conditions. **F 869, F08**
- abrasive**—any rock, mineral, or other substance that, owing to its superior hardness, toughness, consistency, or other properties, is suitable for grinding, cutting, polishing, scouring, or similar use. **D 653, D18**
- abrasive blasting**—a process for cleaning or finishing by means of an abrasive directed at high velocity against the work piece. **B 374, B08**
- abrasiveness**—the property of a material to remove matter when scratching and grinding another material. (ISRM) **D 653, D18**
- abrasive wear**—wear due to hard particles or hard protuberances forced against and moving along a solid surface. **D 4175, D02**
- abrasive wear, n**—wear due to hard particles or hard protuberances forced against and moving along a solid surface. **G 40, G02**
- abrasivity, n**—the ability of a material or substance to cause abrasive wear. **G 40, G02**
- abridged spectrophotometry, n**—the measurement of reflectance factor or transmittance factor in a number of wavelength bands rather than as continuous functions of wavelength. **E 284, E12**
- ABS**—an abbreviation for alkyl benzene sulfonate. Although strictly speaking this might apply to any such compound, present practice is to use it for those containing branched chains. (See **LAS**). **D 459, D12**
- absolute coil**—a coil (or coils) that respond(s) to the total detected electric or magnetic properties, or both, of a part or section of the test part without comparison to another section of the part or to another part. (E 566) **E 1316, E07**
- absolute filter**—See **filter**. **D 1356, D22**
- absolute filter rating**—particle size above which 100 % of particles that are trapped on or within the filter medium. **D 6161, D19**
- absolute filtration rating, n**—the diameter of the largest hard

absolute filtration rating, n

spherical particle that will pass through a filter under specified test conditions. This is an indication of the largest opening in the filter element. **D 4175, D02**

absolute humidity, n —the mass of water vapor present in a unit volume of air. (See **humidity** and **relative humidity**) **D 123, D13**

absolute humidity, n —the mass of water vapor present in a unit volume of air. **D4920, D13**

absolute humidity, vapor concentration, vapor density (d_v), n —the ratio of the mass of water vapor, m_v , to the total volume of the moist air, v :

$$d_v = \frac{m_v}{v}$$

relative humidity, n —the ratio of the actual water vapor pressure to the saturation pressure.

relative humidity with respect to ice (U_i), n —the ratio in percent of the mole fraction of water vapor, x_v , in moist air to the mole fraction of water vapor, x_{vi} , that the moist air would have if it were saturated with respect to ice at the same pressure, p , and temperature, t .

$$U_i = \frac{X_v}{X_{vi}} \times 100$$

relative humidity with respect to water (U_w), n —the ratio in percent of mole fraction of water vapor, x_v , in moist air to the mole fraction of water vapor, x_{vw} , that the moist air would have if it were saturated with respect to water at the same pressure, p , and temperature, t

$$U_w = \frac{X_v}{X_{vw}} \times 100$$

D 1356, D22

absolute impact velocity—See **impact velocity**. **G 40, G02**

absolute judgment, n —an evaluation of a stimulus made without direct comparison. **E 253, E18**

absolute manometer—a manometer whose calibration can be calculated from the measurable physical constants of the instrument and for which calibration is the same for all ideal gases. **E 1316, E07**

absolute measurements—in electromagnetic testing, measurements made without a direct reference using an absolute coil in contrast to differential and comparative measurements. (See also **absolute coil**). **E 1316, E07**

absolute or true density—See *absolute or true density under density*. **C 242, C21**

absolute pressure—pressure above the absolute zero corresponding to empty space, that is, local atmospheric pressure plus gage pressure. **E 1316, E07**

absolute readout—in electromagnetic testing, the signal output of an absolute coil. (See also **absolute coil**.) **E 1316, E07**

absolute sealing—a level of sealing that requires all seams, slots, holes, and fasteners passing through the seal plane to be sealed. **E 631, E06**

absolute sealing—a level of sealing that requires all seams, slots, holes, and fasteners passing through the seal plane to be sealed. **E 1749, E06**

absolute spectral response, n — $R_a(\lambda)$, AW^{-1} , n —of a photovoltaic device, the short-circuit current density per unit irradiance at a given wavelength. **E 1328, E44**

absolute system—a system that uses a coil assembly and associated electronics to measure the total electromagnetic properties of a test part without direct comparison to another section of the part or to another part (see **absolute coil**.) (E 566) **E 1316, E07**

absolute temperature—See **temperature**. **D 1356, D22**

absorbance—the logarithm of that fraction of an incident light beam that is dissipated in the sample, being neither transmitted nor reflected. **C 242, C21**

absorbance, n —the logarithm to the base of 10 of the reciprocal of transmittance. **D 1356, D22**

absorbance—the logarithm to the base 10 of the reciprocal of the relative transmittance, T , expressed as:

$$A = \log_{10}(1/T) = -\log_{10} T$$

D 4790, D16

absorbance, A, n —the molecular property of a substance that determines its ability to take up radiant power, expressed by:

$$A = \log_{10}(1/T) = -\log_{10} T$$

where T is the transmittance.

D 4175, D02

absorbance, A —the logarithm to the base 10 of the reciprocal of the transmittance, (T).

$$A = \log_{10}(1/T) = -\log_{10} T$$

E 131, E13

absorbance, A, n —logarithm to the base 10 of the reciprocal of the internal transmittance T_I . $A = \log_{10}(1/T_I) = -\log_{10} T_I$. **E 284, E12**

absorbate, n —material that has been retained by the process of absorption. **D 1356, D22**

absorbed dose—the amount of energy imparted by ionizing radiation per unit mass of irradiated matter. Denoted by "rad;" 1 rad = 0.01 j/kg. SI unit is "gray;" 1 gray = 1 j/kg. **E 1316, E07**

absorbed dose (D)—Quantity of ionizing radiation energy imparted per unit mass of a specified material. The SI unit of absorbed dose is the gray (Gy), where 1 gray is equivalent to the absorption of 1 joule per kilogram of the specified material (1 Gy = 1 J/kg). The mathematical relationship is the quotient of $d\bar{\epsilon}$ by dm , where $d\bar{\epsilon}$ is the mean incremental energy imparted by ionizing radiation to matter of incremental mass dm (see ICRU 33).

$$D = d\bar{\epsilon} / dm$$

E 170, E10

absorbed dose rate—the absorbed dose per unit of time; rads/s. SI unit, grays/s. **E 1316, E07**

absorbed dose rate, \dot{D} —the absorbed dose in a material per incremental time interval, that is, the quotient of dD by dt (see ICRU Report 33).

$$\dot{D} = dD/dt$$

SI unit: $Gy \cdot s^{-1}$.

E 170, E10

absorbed moisture—water held mechanically in the material and having physical properties not substantially different from ordinary water at the same temperature and pressure. **C 242, C21**

absorbed moisture, n —water held within the materials and having physical properties not substantially different from ordinary water at the same temperature and pressure. **C 1145, C28**

absorbed water—water held mechanically in a soil or rock mass and having physical properties not substantially different from ordinary water at the same temperature and pressure. **D 653, D18**

absorbent, n —material in which absorption occurs. **D 1356, D22**

absorbent compound, n —in textile cleaning, sponge-like particles which, when saturated with water or dry solvent and detergent and brushed into the textile, remove soil from the textile. See **powder cleaner**. **D 123, D13**

absorbent compound, n —in textile cleaning, sponge-like particles which, when saturated with water or dry solvent and detergent and brushed into the textile, remove soil from the textile. See **powder cleaner**. **D 5253, D13**

absorbent packing—See **packing**. **D 996, D10**

absorbent pad, n —for cleaning textile floor coverings, a damp textile material (fabric, felt, sponge, or mop) used to agitate and wipe the pile and, in the process, absorb soil. **D 123, D13**

absorbent pad, n —for cleaning textile floor coverings, a damp textile material (fabric, felt, sponge, or mop) used to agitate and wipe the pile and, in the process, absorb soil. **D 5253, D13**

absorber—that part of a solar collector whose primary function is to absorb radiant energy and transform it into another form of energy.

NOTE—A thermal absorber usually possesses a solid surface through which energy is transmitted by thermal conduction to the transfer fluid; however, the transfer fluid itself can be the absorber in the case of an optically transparent container and a “black liquid”. A photovoltaic absorber converts part of the incident solar flux into electrical energy, and part to thermal energy. E 772, E44

absorptance, n —the ratio of the radiant flux absorbed by a body to that incident upon it. C 168, C16

absorptance α , n —the ratio of the absorbed radiant or luminous flux to the incident flux. E 284, E12

absorptance, n —ratio of the absorbed radiant or luminous flux to the incident flux. Symbol: α_e , α_v , α .

NOTE—In general, the value of the absorptance depends upon the mode of irradiation, the spectral composition, and the state of polarization of the incident radiation. E 349, E21

absorptance, α —the ratio of the absorbed radiant or luminous flux to the incident flux. (Practice E 491). See **radiometric properties and quantities**. E 772, E44

absorptance, α —the ratio of radiant flux absorbed by a surface to that incident upon it. E 1316, E07

absorption, n —weight of water picked up by a clay masonry unit during immersion at prescribed conditions expressed in relation to the dry weight of the unit. C 43, C15

absorption, n —the process by which a liquid is drawn into and tends to fill permeable pores in a porous solid body; also, the increase in mass of a porous solid body resulting from the penetration of a liquid into its permeable pores. C 125, C09

absorption, n —transformation of radiant energy to a different form of energy by interaction with matter. C 168, C16

absorption—(I) the relationship of the weight of the water absorbed by a ceramic specimen, subjected to prescribed immersion procedure, to the weight of the dry specimen.

(2) the capacity of a substance to take up a substance, usually a liquid or gas, with the formation of an apparently homogeneous mixture. C 242, C21

absorption—the increase in weight of concrete resulting from the penetration of water into the concrete. C 822, C13

absorption—difference in the amount of water contained within a concrete masonry unit or related unit between a saturated and oven-dry condition in accordance with the requirements of Test Methods C 140. It is expressed as weight of water per volume of concrete. C 1209, C15

absorption, n —a process in which one material (the absorbent) takes in or absorbs another (the absorbate); as the absorption of moisture by fibers. (See also **adsorption**, and **moisture equilibrium for testing**. Compare **desorption** and **resorption**.) D 123, D13

absorption—the assimilation of fluids into interstices. D 653, D18

absorption, n —a process in which one material (the absorbent) takes up and retains another (the absorbate) with the formation of an homogeneous mixture having the attributes of a solution. D 1356, D22

absorption—a process in which fluid molecules are taken up by a liquid or solid and distributed throughout the body of that liquid or solid. D 2652, D28

absorption, n —the process by which a liquid is drawn into and tends to fill permeable pores in a porous solid body, also, the increase in mass of a porous solid body resulting from penetration of a liquid into its permeable pores. D 4439, D35

absorption, n —a process in which one material (the absorbent) takes in or absorbs another (the absorbate); as the absorption of moisture by fibers. (See also **adsorption**, and **moisture equilibrium for testing**. Compare **desorption** and **resorption**.) D4920, D13

absorption—the release for desorption holding of a substance within a solid by cohesive or capillary forces. D 6161, D19

absorption—the decrease in intensity which radiation undergoes

during its passage through matter when the ratio of transmitted or reflected luminous flux to incident is less than 1. E 7, E04

absorption, n —the transformation of radiant energy to a different form of energy by interaction with matter. E 284, E12

absorption, n —transformation of radiant energy to a different form of energy by interaction with matter. E 349, E21

absorption—a process in which one material (the absorbent) takes in and retains another (the absorbate). E 609, E35

absorption—the process by which incident radiant energy is transformed into another form of energy by interaction with matter. E 772, E44

absorption—the process whereby the incident particles or photons of radiation are reduced in number or energy as they pass through matter. E 1316, E07

absorption—in leak testing, the binding or incorporation of gas in the interior of a solid (or liquid). E 1316, E07

absorption—a process in which one material (the absorbent) takes in and retains another (the absorbate). E 1519, E35

absorption band—a region of the absorption spectrum in which the absorbance passes through a maximum. E 131, E13

absorption coefficient—specific factor characteristic of a substance on which its absorption radiation depends. The rate of decrease of the natural logarithm of the intensity of a parallel beam per unit distance traversed in a substance. For X-rays, the linear absorption coefficient is the natural logarithm of the ratio of the incident intensity of an X-ray beam incident on unit thickness of an absorbing material to the intensity of the beam transmitted. If I_0 is the incident intensity of a beam of X-rays, I_t the transmitted intensity, and X the thickness of the absorbing material, then:

$$I_t = I_0 \exp(-\mu X)$$

Here μ is the linear absorption coefficient. The mass absorption coefficient is given by μ/ρ where ρ is the density. E 7, E04

absorption coefficient, α —a measure of absorption of radiant energy from an incident beam as it traverses an absorbing medium according to Bouguer's law, $P/P_0 = e^{-\alpha b}$. E 131, E13

absorption coefficient, α , n —measure of the absorption of radiant energy from an incident beam (P_0) as it traverses an absorbing medium according to Bouguer's law, $P = P_0 e^{-\alpha b}$, where b is the sample optical pathlength. E 284, E12

absorption edge—an abrupt change in absorption coefficient at a particular wavelength. The absorption coefficient is always larger on the short wavelength side of the absorption edge. E 7, E04

absorption limit—See **absorption edge**. E 7, E04

absorption loss—that part of transmitted energy (mechanical) lost due to dissipation or conversion into other forms (heat, etc.). D 653, D18

absorption (of electromagnetic radiation), n —a decrease in radiant energy when passing through matter, resulting in a corresponding increase in the energy of the absorbing system. E 135, E01

absorption parameter, a —the relative reflection loss per reflection that results from the absorption of radiant energy at a reflecting surface: $a = 1 - R$, and R = the reflected fraction of incident radiant power. E 131, E13

absorption spectrum—a plot, or other representation, of absorbance, or any function of absorbance, against wavelength, or any function of wavelength. E 131, E13

absorption test—a test made to determine the absorption of concrete. C 822, C13

absorption tinting strength, n —relative change in the absorption properties of a standard white material when a specified amount of an absorbing colorant, black or chromatic, is added to it. E 284, E12

absorptivity, a , n —the specific property of a substance to absorb radiant power per unit sample concentration and path length, expressed by:

$$a = Aflbc$$

absorptivity, a , n

where:

- A = the absorbance defined in 3.1.4,
- f = the dilution factor defined in 3.1.5,
- b = sample cell path length, and
- c = the quantity of absorbing substance contained in a volume of solvent.

D 4175, D02

absorptivity, a —the absorbance divided by the product of the concentration of the substance and the sample pathlength, $a = A/bc$. The units of b and c shall be specified. E 131, E13

absorptivity, a , n —the absorbance divided by the product of the concentration, c , of the substance and the sample optical pathlength, b , $a = A/bc$. The units of b and c shall be specified. E 284, E12

absorptivity, molar, ϵ —the product of the absorptivity, a , and the molecular weight of the substance. E 131, E13

absorptivity of an absorbing material, n —internal absorptance of a layer of the material such that the path of the radiation is of unit length. E 349, E21

ac—symbol used to designate an electric voltage or current whose amplitude varies periodically as a function of time, its average value over one complete period being zero. One complete repetition of the wave pattern is referred to as a CYCLE, and the number of cycles occurring in one second is called the FREQUENCY, measured in hertz (Hz). For example, the electricity supplied by commercial utility companies in the United States is, in most localities, 60 Hz, although other frequencies may be encountered. D 2864, D27

accelerant, n —any material used to initiate or promote the spread of a fire. The most common accelerants are flammable or combustible liquids. Whether a substance is an accelerant depends not on its chemical structure but on its use (source: IAAI Forensic Science Committee, *Glossary of Terms Related to Chemical and Instrumental Analysis of Fire Debris*) (use: Test Method E 1387) CRIM. E 1732, E30

accelerated adsorption tests—adsorption tests in which the end point is hastened by testing at conditions more severe than those anticipated in service. D 2652, D28

accelerated aging, n —in *textile processing and testing*, the use of controlled environmental conditions to promote rapid physical or chemical change in a textile material. D 123, D13

accelerated aging, n —in *textile processing and testing*, the use of controlled environmental conditions to promote rapid physical or chemical change in a textile material. D 6799, D13

accelerated aging—the deterioration of a material faster than normal by subjecting the material to conditions specified by the test method being followed. F 869, F08

accelerated aging—a technique to simulate the effects of time on a package by subjecting the product/package system to elevated temperatures in a controlled environment representative of controlled environment storage conditions. The equivalent time is generally estimated by assuming the degradation of packaging materials follows the kinetics described by the Arrhenius reaction rate function, more discussion of which is available in Guide F 1980. F 1327, F02

accelerated erosion—erosion at a rate greater than geologic or natural erosion. D 4410, D19

accelerated life test, n —a test method designed to approximate in a short time, the deteriorating effect of normal long-term service conditions. D 1566, D11

accelerated life test—method designed to approximate, in a short time, the deteriorating effect of normal, long-term service conditions. (D 1566, D11) F 869, F08

accelerated outdoor weathering, n —outdoor weathering using the sun as the source of irradiance, and where the rate of deterioration is accelerated over that of the in-service exposure position increasing one or more of the influencing parameters. G 113, G03

accelerated test—See **test, accelerated**. E 631, E06

accelerated test—See **test, accelerated**. E 1749, E06

accelerated weathering, v —the exposure of a specimen to a specified test environment for a specified time with the intent of producing, in a shorter time period, effects similar to actual weathering. D 1079, D08

accelerating potential—a relatively high voltage applied between the cathode and anode of an electron gun to accelerate electrons. E 7, E04

accelerating potential—the difference in electric potential between the cathode and anode in an X-ray tube through which a charged particle is accelerated; usually expressed in units of kV or MV. E 1316, E07

acceleration period, n —in *cavitation and liquid impingement erosion*, the stage following the incubation period during which the erosion rate increases from near zero to a maximum value. (See also **erosion rate-time pattern**.) G 40, G02

accelerator, n —a material that reduces setting time. C 11, C11

accelerator—a material that increases the rate at which chemical reactions would otherwise occur. D 653, D18

accelerator, delayed action, n —an accelerator that, in conjunction with other curing agent(s), produces, at vulcanizing temperatures, a period of no significant cross-linking, followed by a period of rapid cross-link formation. D 1566, D11

accelerator (rubber), n —a compounding material used in small amounts with a vulcanizing agent to increase the speed of vulcanization. D 1566, D11

accelerometer, n —an instrument that senses inertial reaction to measure linear or angular acceleration. F 538, F09

acceptability/unacceptability, n —degree to which a stimulus is judged to be favorable or unfavorable. E 253, E18

acceptable quality level—the maximum percent defective or the maximum number of units defective per hundred units that, for the purpose of sampling test, can be considered satisfactory as a process average. E 1316, E07

acceptable quality level (AQL), n —the maximum percent nonconforming which, for purposes of sampling inspection, is considered satisfactory as a process average. D 1711, D09

acceptable quality level (AQL or p_1), n —in *acceptance sampling*, the maximum fraction of nonconforming items at which the process average can be considered satisfactory; the process average at which the risk of rejection is called the producer's risk. D 123, D13

acceptance angle, n —for an optical fiber, the maximum angle, measured from the longitudinal axis or centerline of the fiber to an incident ray, within which the ray will be accepted for transmission along the fiber by total internal reflection. E 131, E13

acceptance angle ($\pm \alpha$, deg), n —the angular distance, centered on the array axis of symmetry, over which the following conditions are met: (a) wind components are unambiguously defined, and (b) flow across the transducers is unobstructed or remains within the angular range for which transducer shadow corrections are defined. D 1356, D22

acceptance (control chart or acceptance control chart usage, n), n —a decision that the process is operating in a satisfactory manner with respect to the statistical measures being plotted: action limits: *control limits*. E 456, E11

acceptance criteria, n —numerical limits, ranges, process signatures, or other suitable measures that are necessary for making a decision to accept or reject the result of a process, in-process variable, a product or any other convenient subgroups of manufactured units. E 2363, E55

acceptance level—a test level above or below which test specimens are acceptable in contrast to rejection level. E 1316, E07

acceptance limit (AL), n —a numerical value that defines the point between acceptable and unacceptable quality. D 4175, D02

acceptance limits—test levels used in electromagnetic sorting which establish the group into which the material under test belongs. (E 566) E 1316, E07

acceptance number, *n*—the maximum allowable number of nonconformities for a given AQL and sample size (lot-sample size).

D 1711, D09

acceptance number—numerical value representing the maximum number of permissible non-conformances within a sample submitted for testing and acceptance of the population. **F 1789, F16**

acceptance number (*c*), *n*—in acceptance sampling, the maximum number of nonconforming items in a sample that allows the conclusion that the lot conforms to the specification. **D 123, D13**

acceptance of a lot—the approval of a lot as conforming to contract or specification. **D 1517, D31**

acceptance quality limit (AQL), *n*—quality level that is the worst tolerable process average when a continuing series of lots is submitted for acceptance sampling. **E 1402, E11**

acceptance range—a relative range of variation in impact pressure and release characteristic over which the image acceptor media will receive an image of specified quality. **F 221, F05**

acceptance sampling, *n*—sampling done to provide specimens for acceptance testing. **D 123, D13**

acceptance standard—a tube with artificial discontinuities specified in the applicable product standard used to establish the acceptance level. (E 215) **E 1316, E07**

acceptance standard—in tubing inspection, a tube used to establish the acceptance level with artificial discontinuities as specified in the applicable product standard. **E 1316, E07**

acceptance test, *n*—a test, or series of tests conducted by the procuring agency, or an agent thereof, upon receipt to determine whether an individual lot of materials conforms to the purchase order or contract or to determine the degree of uniformity of the material supplied by the vendor, or both. (Compare **preproduction test** and **qualification test**.) **D 907, D14**

acceptance testing, *n*—testing performed to decide if a material meets acceptance criteria. **D 123, D13**

acceptance testing—testing performed on a product to determine whether or not an individual lot of the product conforms with specified requirements. **F 412, F17**

accepted engineering practice—that which conforms to accepted principles, tests, or standards of nationally recognized technical or scientific authorities. **F 747, F24**

accepted reference value, *n*—a value that serves as an agreed-upon reference for comparison and that is derived as (1) a theoretical or established value, based on scientific principles, (2) an assigned value, based on experimental work of some national or international organization, such as the U.S. National Institute of Standards and Technology (NIST), or (3) a consensus value, based on collaborative experimental work under the auspices of a scientific or engineering group. **D 4175, D02**

accepted reference value, *n*—a value that serves as an agreed-upon reference for comparison, and which is derived as: (1) a theoretical or established value, based on scientific principles, (2) an assigned or certified value, based on experimental work of some national or international organization, or (3) a consensus or certified value, based on collaborative experimental work under the auspices of a scientific or engineering group. **E 456, E11**

accepts, *n*—the output stream from a materials separation device that contains the highest concentration (purity) of the components that the device is designed to separate. **D 5681, D34**

access, *n*—the process of reaching the patients or subjects and establishing physical contact with them. **F 1490, F32**

accessibility—the fraction of total cellulose present that is accessible to certain reagents under certain specified conditions. The conditions of determination should always be indicated. **D 1695, D01**

accessible—permitting close approach or contact that could include requiring removal or opening of an access panel or door. **E 1705, E48**

accessible bag, *n*—for sampling, a bag (in a pile of bags of asbestos fiber) of which at least one side or one end is fully exposed. **D 2946, C17**

accessible surface, *n*—for sampling, in a pile of bags of asbestos fiber, a side (of the pile) in which all the bags are accessible bags. **D 2946, C17**

accessible surface—interior or exterior surface (usually up to 5 ft (1.5 m) from floor or ground) that is accessible for young child to mouth or chew. See also **chewable surface**. **E 631, E06**

accessible surface—interior or exterior surface (usually up to 5 ft (1.5 m) from floor or ground) that is accessible for a young child to mouth or chew. See also **chewable surface**. **E 1605, E06**

accessories, *n*—products fabricated for the purpose of forming corners, edges, control joints, or decorative effects. **C 11, C11**

accessories, *n*—subordinate material such as fasteners, backer strips, closure strips, ridge and corner rolls, roofing starters and finishing pieces, couplings, gaskets, pipe fittings or other supplementary material necessary for the proper application of primary fiber-reinforced cement products. **C 1154, C17**

accessories—subordinate material such as fasteners, backer strips, closure strips, ridge and corner rolls, roofing starters and finishing pieces, couplings, gaskets, pipe fittings or other supplementary material necessary for the proper application of primary asbestos-cement products. **D 2946, C17**

accessories, *n*—preformed metal, fiberglass, or plastic members for use to form corners, edges, control joints, or decorative effects. **E 2110, E06**

accessories—optional mechanical devices used on or in conjunction with a boom system but not included with the basic boom and end connector; for example, lights, paravanes, drogues, buoys, anchor systems, storage bags, boxes or reels, bulkhead connectors or repair kits, and so forth. **F 818, F20**

accessory cord, *n*—ropes used for climbing and mountaineering purposes that are not designed to absorb fall impact energy. **F 1773, F08**

accessory item—an item that facilitates or enhances the operation of equipment but is not essential for its basic operation. **E 2135, E53**

acclimation period—the time necessary for an animal to adjust to the laboratory and specific test environments. **E 609, E35**

Ac_{cm}, Ac₁, Ac₃, Ac₄—See **transformation temperature**. **A 941, A01**

accommodation, visual—adjustment of the eye, either the focus or the iris opening, to optimize its performance under the specific viewing conditions prevailing. **E 1316, E07**

accreditation, *n*—official authorization, approval, or recognition accorded an individual or organization based upon specific qualification. **E 631, E06**

accreditation—procedure by which an authoritative body gives formal recognition that a body or person is competent to carry out specific tasks, (ISO Guide 2). **E 1187, E36**

accreditation, *n*—Official authorization, approval, or recognition accorded an individual or organization based upon specific qualifications. **E 1605, E06**

accreditation, *n*—procedure by which an authoritative body gives formal recognition that a body or person is competent to carry out specific tasks. **E 1732, E30**

accreditation criteria, for laboratory accreditation, *n*—set of requirements used by an accrediting body which a testing laboratory must meet to be accredited, (ISO Guide 2, A). **E 1187, E36**

accredited laboratory—testing laboratory to which accreditation has been granted, (ISO Guide 2, A). **E 1187, E36**

accredited laboratory test report—test report that includes a statement by the testing laboratory that it is accredited for the test reported and that the test has been performed in accordance with the conditions prescribed by the accrediting body, (ISO Guide 2, A). **E 1187, E36**

accrediting authority, *n*—a body that evaluates the capability of a testing agency or an inspection agency, or both, in certain specific fields of activity. **D 1356, D22**

accrediting body—governmental or non-governmental body that conducts and administers a laboratory accreditation system and grants accreditation, (ISO Guide 2, A). **E 1187, E36**

accrediting body, n

accrediting body, n—governmental or non-governmental body that conducts and administers a laboratory accreditation system, and grants accreditation. **E 1732, E30**

accretion, n—a phenomenon consisting of the increase in size of particles by the process of external additions. **D 1356, D22**

accretion—a process of sediment accumulation. **D 4410, D19**

accumulation period, n—in *cavitation and liquid impingement erosion*, a less-preferred term for **acceleration period**. **G 40, G02**

accumulation test—a leak test used to detect very small leaks in which gas contained in a component being tested will, if a leak is present, collect for a specified period of time in a closed evacuated chamber into which the component has been placed. At the end of the test period the chamber is opened to a leak detector which is sensitive to the gas. **E 1316, E07**

accumulative pump, n—a mechanical pump dispenser that accumulates internal pressure by means of a valving-system that maintains a high velocity flow of the product no matter what the actuation velocity that results in a consistent fine mist spray. **D 6655, D10**

accumulator—a pulsation dampener installed on the suction and/or discharge lines of pumps, generally plunger type, to minimize pressure surges and provide uniformity of flow. **D 6161, D19**

accuracy, n—of *atest method*, the degree of agreement between the true value of the property being tested (or an accepted standard value) and the average of many observations made according to the test method, preferably by many observers. (See also **bias** and **precision**.) **D 123, D13**

accuracy, n—a measure of the degree of conformity of a value generated by a specific procedure to the assumed or accepted true value, and includes both precision and bias. **D 1129, D19**

accuracy, n—the degree of conformity of a value generated by a specific procedure to the assumed or accepted true value and includes both precision and bias. **D 1356, D22**

accuracy, n—the closeness of agreement between a test result and an accepted reference value. **D 4175, D02**

accuracy—the agreement between the mean of a series of repeated measurements of a property and the accepted reference value of the property. **D 4790, D16**

accuracy, n—closeness of a measured value to the true or an accepted reference or standard value. **D 5681, D34**

accuracy—the closeness of agreement between an observed value and an accepted reference value. Where an accepted reference value is not available, accuracy is a description of a measure of the degree of conformity of a value generated by a specific procedure to the assumed or accepted true value, including both precision and bias. **D 6161, D19**

accuracy—the closeness of agreement between an observed value and an accepted reference value (See Terminology E 456). **E 131, E13**

accuracy, n—of *methods of chemical analysis*, a characteristic manifested by agreement. **E 135, E01**

accuracy—the closeness of agreement between a measurement result and an accepted reference value (see Terminology E 456). **E 170, E10**

accuracy, n—the closeness of agreement between a test result and an accepted reference value. **E 284, E12**

accuracy, n—of *temperature measurement*, closeness of agreement between the result of a temperature measurement and a true value of the temperature. **E 344, E20**

accuracy, n—ability of an *infrared thermometer* to give a reading close to the *true temperature*. **E 344, E20**

accuracy, n—the closeness of agreement between a test result and an accepted reference value. **E 456, E11**

accuracy, n—degree of conformity of a measured or calculated value to some recognized standard or specified value.

ACH₅₀, n—the ratio of the air leakage rate at 50 Pa (0.2 in. H₂O), corrected for a standard air density, to the volume of the test zone (1/h). **E 631, E06**

accuracy—generally, a term used to indicate the reliability of a

measurement, or an observation. Specifically, a measure of closeness of agreement between a test result and a recognized standard value. For example, the difference between the observed and a standard value for the sulfur content of a sample of refuse-derived fuel. This difference includes both random and systematic errors. **E 856, D34**

accuracy, n—the closeness or degree of agreement (within a stated tolerance and probability of conformity) between a value measured or estimated by a WIM system and an accepted reference value. **E 867, E17**

accuracy—the agreement between an experimentally determined value and the accepted reference value. In chemical work, this term is frequently used to express freedom from bias, but in other fields it assumes a broader meaning as a joint index of precision and bias. To avoid confusion, the term *bias* will be used in appraising the systematic error of test methods for industrial chemicals. See also **bias**. **E 1547, E15**

accuracy, n—the closeness of the agreement between the result of a measurement and a true value of the quantity that is being measured. (Adapted from draft ISO VIM, International Vocabulary of Basic and General Terms) **E 1605, E06**

accuracy—the agreement between an experimentally determined value and the accepted reference value. **E 2161, E37**

accuracy, n—a measurement concept that describes the degree of correspondence between an average measured value and an accepted reference or standard value for the object, material or phenomenon under test. **F 538, F09**

accuracy (as distinguished from precision)—the degree of conformity of a measured or calculated value to some recognized standard or specified value. This concept involves the systematic error of an operation, which is seldom negligible. (E 380) **F 221, F05**

accurate, adj—when performance or value of a device, as determined by tests made with a suitable reference material, conforms to the standard within the allowable tolerance. **F 2463, F10**

acetal plastic, n—a plastic based on polymers having a predominance of acetal linkages in the main chain. (See also *polyoxymethylene*.) **F 1251, F04**

acetal plastics, n—plastics based on polymers having a predominance of acetal linkages in the main chain. (See also *polyoxymethylene*.) **D 883, D20**

acetal plastics, n—highly crystalline linear thermoplastic homopolymers or copolymers characterized by repeating oxymethylene units. **F 412, F17**

acetate—a manufactured fiber in which the fiber-forming substance is cellulose acetate. Where not less than 92 % of the hydroxyl groups are acetylated, the term triacetate may be used as a generic description of the fiber. **D 123, D13**

acetylation—substitution of an acetyl radical for an active hydrogen. Specifically, formation of cellulose acetate from cellulose. **D 1695, D01**

acetylation pulps—pulps used in the manufacture of cellulose acetate or other esters, and subject to various specifications by the manufacturers, including those of purity, moisture content, sheet properties, and viscosity. **D 1695, D01**

acetyl groups—the characteristic groups of acetic acid; CH₃CO—. **D 1695, D01**

ac excitation, N₁/Iℓ₁—the ratio of the rms ampere-turns of exciting current in the primary winding of an inductor to the effective flux path length of the inductor. **A 340, A06**

achieved width, n—the calculated bar or other element width based on measurements. **F 1294, F05**

achromatic—literally, color-free. A lens or prism is said to be achromatic when corrected for two colors. The remaining color seen in an image formed by such a lens is said to be secondary chromatic aberration. See **apochromatic objective**. **E 7, E04**

achromatic—literally, color-free. A lens or prism is said to be achromatic when corrected for two colors. The remaining color

- seen in an image formed by such a lens is said to be secondary chromatic aberration. **E 175, E41**
- achromatic**, *adj*—(1) for primary light sources, the computed chromaticity of the equal-energy spectrum.
(2) for surface colors, the color of a whitish light, serving as the illuminant, to which adaptation has taken place in the visual system of the observer.
(3) perceived as having no hue, that is, as white, gray, or black. **E 284, E12**
- achromatic objective**—an objective that is corrected chromatically for two colors, and spherically for one, usually in the yellow-green part of the spectrum. **E 7, E04**
- achromatic objective**—an objective that is corrected chromatically for two colors, and spherically for one, usually in the yellow-green part of the spectrum. **E 175, E41**
- achromatic objective lens**—an objective lens with longitudinal chromatic correction for green and blue, and spherical chromatic correction for green. Note—Lens should be used with a green filter. **E 7, E04**
- acicular powder**, *n*—needle-shaped particles. **B 243, B09**
- acid annealing**—an annealing process in which ferrous metal shapes are coated with acid before and in conjunction with the annealing. **C 286, B08**
- acid content**, *n*—of felt, the number of milliequivalents of acid present per unit weight of felt, measured under prescribed conditions. **D 123, D13**
- acid content**, *n*—of felt, the number of milliequivalents of acid present per unit weight of felt, measured under prescribed conditions. **D 4845, D13**
- acid etch**, *v*—to clean or alter a surface by the application of acid. **C 904, C03**
- acid-etched**—treated in an acid bath, usually phosphoric, to provide a rough surface. **F 547, F16**
- acid-extractable material**—substances dissolved by an acid under specified conditions. **D 2652, D28**
- acid extraction**—See **extraction**. **E 7, E04**
- acid foods**—foods that have a natural pH of 4.6 or below. **F 17, F02**
- acid gas**—natural gas containing high concentrations of hydrogen sulfide or carbon dioxide, or both, which is acidic when in contact with water or water vapor. **D 4150, D03**
- acid groups**—functional groups having the properties of acids. In cellulose and its derivatives, these are usually carboxyl groups. **D 1695, D01**
- acidifier**—a material that can be added to spray mixtures to lower the pH. **E 1519, E35**
- acidity**, *n*—the quantitative capacity of aqueous media to react with hydroxyl ions. **D 1129, D19**
- acidity**, *n*—the quality, state or degree of being acid. **D 4175, D02**
- acidity**—the number of milligrams of sodium hydroxide consumed when 100 mL of the sample are titrated under the conditions prescribed in this method. **D 4790, D16**
- acidity**—the quantitative capacity of aqueous media to react with hydroxyl ions. **D 6161, D19**
- acidity, free mineral**, *n*—the quantitative capacity of aqueous media to react with hydroxyl ions to pH 4.3. **D 1129, D19**
- acidity, theoretical free mineral**, *n*—the free mineral acidity that would result from the conversion of the anions of strong acids in solution to their respective free acids. **D 1129, D19**
- acid mine drainage (AMD)**, *n*—water exhibiting a pH of less than 6.0 and in which total acidity exceeds total alkalinity, discharged from an active, inactive or abandoned coal mine and reclamation operation or from an area affected by surface coal mining and reclamation operations. **E 2201, E50**
- acid mine water**, *n*—see **AMD**. **E 2201, E50**
- acid number**, *n* (for coatings)—the number of milligrams of potassium hydroxide (KOH) required to neutralize the free acids in 1 g of an oil, resin, varnish, or other substance; generally reported on the nonvolatile content. **D 16, D01**
- acid number**, *n*—the quantity of base, expressed in milligrams of potassium hydroxide, that is required to titrate acidic constituents present in 1 g of sample. **D 907, D14**
- acid number**, *n*—the quantity of base, expressed as milligrams of potassium hydroxide per gram of sample, required to titrate a sample to a specified end point. **D 4175, D02**
- acid number**, *n*—the quantity of base, expressed in milligrams of potassium hydroxide per gram of sample that is required to titrate a sample to a specified end point. **D 4175, D02**
- acid polishing**—the polishing of a glass surface by acid treatment. **C 162, C14**
- acid producing potential (AP)**, *n*—the potential for a solid material sample to produce acidic effluent, based on the percent of sulfide contained in that sample as iron-sulfide mineral (for example, pyrite or pyrrhotite). The AP is commonly converted to the amount of calcium carbonate required to neutralize the resulting amount of acidic effluent produced by the oxidation of contained iron sulfide minerals; it is expressed as the equivalent tons of calcium carbonate per 1000 tons of solid material. The AP is therefore calculated by multiplying the percent of sulfide contained in the material by a stoichiometric factor of 31.25. **D 5681, D34**
- acid rain**—rain having a pH of less than 5.65.
active hours—See **hours of operation**.
active solar energy system—See **building subsystem**.
adapt—See **building modification**.
add—See **building modification**. **E 631, E06**
- acid reaction**—a characteristic of materials producing the acid-color of the indicator used under the conditions prescribed in this method. **D 4790, D16**
- acid refractories**, *n*—see **refractories, acid**. **C 71, C08**
- acid resistance**—the degree to which a porcelain enamel will resist attack by acids. **C 286, B08**
- acid-resistant brick**, *n*—brick suitable for use in contact with chemicals, usually in conjunction with acid-resistant mortars. See **Specification C 279**. **C 43, C15**
- acid-sized paper**, *n*—paper that has been manufactured using a procedure or process at pH values below 7 (usually 4.0 to 6.5) that results in paper that has resistance to aqueous liquid penetration. See **sizing**. **D 1968, D06**
- acid treating**—a refining process in which an unfinished petroleum insulating oil is contacted with sulfuric acid to improve its color, odor, stability, and other properties. **D 2864, D27**
- acid value**—see **acid number**. **D 16, D01**
- acid-wash color**—the color developed in the separated acid when a sample of detergent alkylate is agitated with sulfuric acid under the conditions prescribed by the method. **D 459, D12**
- acid wash color**—the color developed in the separated acid when a sample is agitated with sulfuric acid under the condition prescribed in this method. **D 4790, D16**
- acid-washed**—a worn surface produced by applying acid. **C 119, C18**
- AC impedance**—See **electrochemical impedance**. **G 15, G01**
- aciniform**, *adj*—shaped like a cluster of grapes. **D 3053, D24**
- ACK**, *n*—a communication control character transmitted by a receiver as an affirmative response to a sender; a signal that the printer receiver sends to the host indicating that the printer has received a message and is ready to receive the next message. **F 1457, F05**
- ac loss characteristics**—those properties of a dielectric or insulation system (such as dissipation factor, power factor, and loss index) that may be used as a measure of the power or energy losses that would result from the use of such material in an ac electric field. **D 2864, D27**
- acoustical barrier**—contiguous objects such as solid walls, buildings, or earthen berms that substantially block the direct path of sound between a source and receiver, and which, if they have an

acoustical barrier

open edge or edges allowing diffraction around them, are sufficiently wide and high to cause significant reduction of the sound traveling from the source to the receiver. **C 634, E33**

acoustical board—a low-density, sound absorbing cellulose fiber-board having a factory-applied finish and a fissured, felted-fiber, slotted or perforated surface pattern provided to reduce sound reflection. Usually supplied for use in the form of tiles. **D 1554, D07**

acoustical ceiling panel, *n*—a form of a prefabricated sound absorbing ceiling element used with exposed suspension systems (see Specification E 1264). **E 176, E05**

acoustical ceiling tile, *n*—a form of a prefabricated sound absorbing ceiling element used with concealed or semi-exposed suspension systems, stapling, or adhesive bonding (see Specification E 1264). **E 176, E05**

acoustical material—any material considered in terms of its acoustical properties. *Commonly and especially*, a material designed to absorb sound. **C 634, E33**

acoustic birefringence—the effect observed when orthogonally polarized SH-shear waves are propagated through the same material thickness and the difference in phase velocity is related to components of plane stress. **E 1316, E07**

acoustic emission (AE)—the class of phenomena whereby transient elastic waves are generated by the rapid release of energy from localized sources within a material, or the transient waves so generated. Acoustic emission is the recommended term for general use. Other terms that have been used in AE literature include (1) stress wave emission, (2) microseismic activity, and (3) emission or acoustic emission with other qualifying modifiers. **E 1316, E07**

acoustic emission channel—see **channel, acoustic emission**. **E 1316, E07**

acoustic emission count (emission count) (N)—see **count, acoustic emission**. **E 1316, E07**

acoustic emission count rate—see **count rate, acoustic emission (emission rate or count rate) (N)**. **E 1316, E07**

acoustic emission event—see **event, acoustic emission**. **E 1316, E07**

acoustic emission event energy—see **energy, acoustic event**. **E 1316, E07**

acoustic emission sensor—see **sensor, acoustic emission**. **E 1316, E07**

acoustic emission signal amplitude—see **signal amplitude, acoustic emission**. **E 1316, E07**

acoustic emission signal (emission signal)—see **signal, acoustic emission**. **E 1316, E07**

acoustic emission signature (signature)—see **signature, acoustic emission**. **E 1316, E07**

acoustic emission transducer—see **sensor, acoustic emission**. **E 1316, E07**

acoustic emission waveguide—see **waveguide, acoustic emission**. **E 1316, E07**

acoustic impedance, $Z \equiv R + jX$; $[ML^{-4}T^{-1}]$; mks acoustic ohm ($Pa \cdot s/m^3$)—of a surface, for a given frequency, the complex quotient obtained when the sound pressure averaged over the surface is divided by the volume velocity through the surface. The real and imaginary components are called, respectively, **acoustic resistance and acoustic reactance**. **C 634, E33**

acoustic pathlength (d , (m)), *n*—the physical distance between transducer transmitter-receiver pairs. **D 1356, D22**

acousto-ultrasonics (AU)—a nondestructive examination method that uses induced stress waves to detect and assess diffuse defect states, damage conditions, and variations of mechanical properties of a test structure. The AU method combines aspects of acoustic emission (AE) signal analysis with ultrasonic materials characterization techniques. **E 1316, E07**

acquisition—(1) the act of acquiring. (2) Acquiring hardware, supplies or services through purchase, lease, or other means, including transfer or fabrication, whether the supplies or services are already

in existence or must be created, developed, demonstrated, and evaluated. **E 2135, E53**

acromion, *n*—in anatomy, that part of the shoulder blade located at the end of the spine which articulates with the collar bone. (See also **shoulder joint**.) **D 123, D13**

acromion, *n*—that part of the shoulder blade located at the end of the spine, which articulates with the collarbone. (See also **shoulder joint**.) **D 5219, D13**

across back shoulder, *n*—the horizontal distance across the back from the top of one shoulder joint to the top of the other shoulder joint, taken with the arms down. **D 5219, D13**

across front shoulder width, *n*—the horizontal distance across the front from the top of one shoulder joint to the top of the other shoulder joint, taken with the arms down. **D 5219, D13**

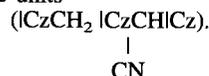
across machine direction, *n*—the direction perpendicular to which a product moves through the manufacturing process. **F 141, F06**

across (or against) grain, *n*—the direction in a body with preferred orientation due to forming stresses that has the maximum *c*-axis alignment as measured in an X-ray diffraction test. **C 709, D02**

across (or against) grain, *n*—the direction in a body with preferred orientation due to forming stresses that has the maximum *c*-axis alignment as measured in an X-ray diffraction test. **D 4175, D02**

across shoulder, *n*—in body measurements, the distance from shoulder joint to shoulder joint across the back. **D 123, D13**

acrylic—a manufactured fiber in which the fiber-forming substance is any long-chain synthetic polymer composed of at least 85 % by weight of acrylonitrile units



****anidex**—a manufactured fiber in which the fiber-forming substance is any long-chain synthetic polymer composed of at least 50 % by weight of one or more esters of a monohydric alcohol and acrylic acid, $CH_2|C_xCH(C_2COOH)$.

******aramid**—a manufactured fiber in which the fiber-forming substance is a long-chain synthetic aromatic polyamide in which at least 85 % of the amide ($|C_2C(C_2NH(C_2))$) linkages



are attached directly to two aromatic rings. **D 123, D13**

acrylic plastic, *n*—a plastic based on polymers made with acrylic acid or a structural derivative of acrylic acid. **F 1251, F04**

acrylic plastics—plastics based on polymers made with acrylic acid or a structural derivative of acrylic acid. **D 883, D20**

acrylic resin—under **resin, synthetic**, see **acrylic resin**. **D 16, D01**

acrylonitrile-butadiene-styrene (ABS) pipe and fitting plastics—plastics containing polymers or blends of polymers, or both, in which the minimum butadiene content is 6%, the minimum acrylonitrile content is 15 %, the minimum styrene or substituted styrene content, or both, is 15 %, and the maximum content of all other monomers is not more than 5 %; plus lubricants, stabilizers, and colorants. **F 412, F17**

actinic radiation, *n*—the spectral region(s) of a light source responsible for the photodegradation of a particular material. **G 113, G03**

actinolite asbestos—asbestiform variety of the monoclinic amphibole silicate minerals of the tremolite-actinolite series. **D 2946, C17**

action level, *n*—a level of a contaminant in a medium at or above which activities to control the level are initiated. **E 1605, E06**

action level (AL)—the level above or below which will lead to the adoption of one of two alternative actions. **D 5681, D34**

activated carbon—a family of carbonaceous substances manufactured by processes that develop adsorptive properties. **D 2652, D28**

activated carbon—granulated or powdered activated carbon used to remove tastes, odor, chlorine, chloramines, and some organics from water. A family of carbonaceous substances manufactured by processes that develop adsorptive properties. **D 6161, D19**

activated charcoal, *n*—activated charcoal refers to properly conditioned coconut-shell charcoal. **D 1356, D22**

activated sintering, *v*—a sintering process during which the rate of sintering is increased, for example, by addition of a substance to the powder or by changing sintering conditions. **B 243, B09**

activated sludge, *n*—the precipitated solid matter, consisting mainly of bacteria and other aquatic microorganisms, that is produced in a domestic wastewater treatment plant; activated sludge is used primarily in secondary sewage treatment to microbially oxidized dissolved organic matter in the effluent. **D 4175, D02**

activated sludge, *n*—the precipitated solid matter, consisting mainly of bacteria and other aquatic microorganisms, that is produced at a domestic wastewater treatment plant; activated sludge is used primarily in secondary sewage treatment to microbially oxidize dissolved organic matter in the effluent. **D 6384, D02**

activation—elimination of a passive condition on a surface. **B 374, B08**

activation—a process in which contamination of the surface of contacts causes arcing at lower than usual voltage or arcing persists at lower than usual current, or both. For example, palladium contacts operated in an organic vapor produce arcs at voltage and current less than the minimum arcing voltage and current because of the presence of carbon on the contact surfaces. **B 542, B02**

activation—any process whereby a substance is treated to develop adsorptive properties. **D 2652, D28**

activation—in neutron radiography, the process of causing a substance to become artificially radioactive by subjecting it to bombardment by neutrons or other particles. **E 1316, E07**

activation—the process of causing a substance to become artificially radioactive by subjecting it to bombardment by neutrons or other particles. **E 1316, E07**

activation cross section—the cross section for processes in which the product nucleus is radioactive (see **cross section**). **E 170, E10**

activation temperature—temperature which generates an optical density of 0.20. **F 1623, F05**

activator—in *diffusion coatings*, a chemical, usually a halide salt, that enters into a reaction with the source or master alloy, depositing the source on the substrate. **B 374, B08**

activator—a material that causes a catalyst to begin its function. **D 653, D18**

activator, *n*—compounding material used in small proportions to increase the effectiveness of an accelerator. **D 1566, D11**

activator—a material that increases the biological efficacy of agricultural chemicals. **E 1519, E35**

active—the negative direction of electrode potential. (Also used to describe corrosion and its associated potential range when an electrode potential is more negative than an adjacent depressed corrosion rate [passive] range.) **G 15, G01**

active chemical deposit rate—the amount of active ingredient deposited per unit area. **E 1102, E35**

active chemical rate—the amount of active ingredient (a.i.) applied per unit treated, expressed in terms of mass per relevant unit treated. (For area treatment, kg a.i./ha, lb a.i./A, or oz a.i./1000 ft. of row; for space application, mg a.i./m³, or oz a.i./1000 ft³; for individual units, kg a.i./plant or animal.) **E 1102, E35**

active coat, *n*—a coating layer which contains the primary image (color) forming ingredients. **F 1623, F05**

active earth pressure—see **earth pressure**. **D 653, D18**

active fiber optic chemical sensor, *n*—a fiber optic chemical sensor in which a transduction mechanism other than the intrinsic spectroscopic properties of the analyte is used to modulate the optical signal. **E 131, E13**

active hours—See **hours of operation**. **E 1480, E06**

active hours, *n* (heuresd'activité)—times when a facility is normally fully occupied and operational. **E 631, E06**

active ingredient—component of an aerosol formulation that produces the specific effect for which the formulation is designed. **D 3064, D10**

active ingredient—a component of the formulation that produces a specific effect for which the formulation is designed. **E 1519, E35**

active ingredient of a synthetic detergent—the organic surface-active material present in the detergent. **D 459, D12**

active layer—the top layer of ground that is subject to annual freezing and thawing. (In the zone of discontinuous permafrost, the active layer is often underlain by unfrozen ground.) **D 7099, D18**

active layer failure—any of several possible forms of slope failure in the active layer. **D 7099, D18**

active layer thickness—the thickness of the top layer of ground that is subject to annual freezing and thawing. **D 7099, D18**

active oxygen—in *cleaning compounds*, the oxidizing power of oxygen present as peroxide or other active oxygen-containing moieties in solution expressed as oxygen (equivalent weight 8.00). **D 459, D12**

active (real) power, *P*—the product of the rms current, *I*, in an electrical circuit, the rms voltage, *E*, across the circuit, and the cosine of the angular phase difference, θ between the current and the voltage.

$$P = EI \cos\theta$$

NOTE—The portion of the active power that is expended in a magnetic core is the total core loss, *P_c*. **A 340, A06**

active rock glacier—a mass of rock fragments and finer material, on a slope, that contains an ice core or interstitial ice, and which shows evidence of recent movement. **D 7099, D18**

active solar energy system—a **building subsystem** in which solar energy is collected and transferred predominantly by mechanical power not derived from solar radiation. **E 631, E06**

active state of plastic equilibrium—see **plastic equilibrium**. **D 653, D18**

activity—for *activated carbon*, the adsorptive capacity of an adsorbent, usually as measured by a standard test. **D 2652, D28**

activity—*of a catalyst*, the measure of the rate of a specific catalytic reaction conducted in the presence of a catalyst. **D 3766, D32**

activity—the thermodynamically effective concentration of a free ion in solution. In dilute solutions, ionic activity, and concentration are practically identical, but in solutions of high ionic strength, or in the presence of complexing agents, activity may differ significantly from concentration. Ionic activity, not concentration, determines both the rate and the extent of chemical reactions. **D 4127, D19**

activity, *A*—of an amount of radioactive nuclide in a particular energy state at a given time, the quotient of *dN* by *dt*, where *dN* is the expectation value of the number of spontaneous nuclear transitions from that energy state in the time interval *dt* (ICRU).

$$A = dN/dt$$

Unit: s⁻¹

The special name for the unit of activity is the becquerel (Bq).

$$1 \text{ Bq} = 1 \text{ s}^{-1}$$

E 170, E10

activity coefficient—a factor, γ , that relates activity, *A*, to the concentration, *C* of a species in solution:

$$A = \gamma C$$

The activity coefficient is dependent on the ionic strength of the solution. Ions of similar size and charge have similar activity coefficients. **D 4127, D19**

activity (ion)—the ion concentration corrected for deviations from ideal behavior. Concentration multiplied by activity coefficient. **B 374, B08**

activity limit—the lowest activity that can be measured in a solution that is well buffered with respect to the ion being measured. The activity limit will vary as a function of solution pH. **D 4127, D19**

activity standard

- activity standard**—a standardizing solution whose value is reported in terms of ionic activity. If the electrode is calibrated using activity standards, the activity of the free, unbound ion in the sample is determined. **D 4127, D19**
- actuation force**—the maximum force measured prior to or including point at which contact closure is achieved on a membrane switch. **F 2112, F01**
- actuator, button, or spray head, n**—the fingerpad that the consumer depresses to dispense product. **D 6655, D10**
- acuity, n**—the ability to repeatedly detect or discriminate sensory stimuli. **E 253, E18**
- acute ecotoxicity, n**—the propensity of a material to produce adverse behavioral, biochemical, or physiological effects in non-human organisms or populations in a short period of time, usually not constituting a substantial portion of the life span of the organism. **D 4175, D02**
- acute ecotoxicity, n**—the propensity of a test material to produce adverse behavioral, biochemical or physiological effects in non-human organisms or populations in a short period, usually not constituting a substantial portion of the life span. **D 4175, D02**
- acute ecotoxicity, n**—the propensity of a test material to produce adverse behavioral, biochemical, or physiological effects in non-human organisms or populations in a short period, usually not constituting a substantial portion of the life span. **D 6384, D02**
- acute ecotoxicity test, n**—a comparative ecotoxicity test in which a representative subpopulation of organisms is exposed to different treat rates of a test material and is observed for a short period, usually not constituting a substantial portion of their life span. **D 4175, D02**
- acute ecotoxicity test, n**—a comparative ecotoxicity test in which a representative subpopulation of organisms is exposed to different treat rates of a test material and is observed for a short period, usually not constituting a substantial portion of their life span. **D 6384, D02**
- acute radiation syndrome**—the immediate effects of a short term, whole body overexposure of a person to ionizing radiation. These effects include nausea and vomiting, malaise, increased temperature, and blood changes. **E 1316, E07**
- acute test**—a comparative study in which organisms, that are subjected to different treatments, are observed for a short period usually not constituting a substantial portion of their life span. **E 943, E47**
- acute toxicity test, n**—a comparative toxicity test in which a representative subpopulation of organisms is exposed to different treat rates of a test material and is observed for a short period usually not constituting a substantial portion of their life span. **D 4175, D02**
- acyl groups**—radicals derived from carboxylic acids by removal of the hydroxyl group. **D 1695, D01**
- Adams color difference, n**—color difference calculated by using the Adams-Nickerson opponent-color equations, based on applying the Munsell Value function to CIE 1931 tristimulus values X, Y, Z . **E 284, E12**
- adapt, v—in building, to make suitable for a particular purpose by means of change or modification. E 631, E06**
- adaptation, sensory, n**—a decrease in sensitivity to a given stimulus which occurs as a result of exposure to that stimulus. **E 253, E18**
- adaptive location**—source location by iterative use of simulated sources in combination with computed location. **E 1316, E07**
- ADC**—abbreviation for **automatic density control. F 1457, F05**
- add, v—in building, to extend by means of new construction, or by enclosing an existing structure. E 631, E06**
- addition, n**—a material that is interground or blended in limited amounts into a hydraulic cement during manufacture.
- functional addition, n**—an addition introduced to modify one or more properties of a hydraulic cement.
- air-entraining addition, n**—a functional addition that will entrain air in mortar or concrete.
- processing addition, n**—an addition introduced to aid in the manufacture or handling, or both, of a hydraulic cement. **C 219, C01**
- addition agent**—a material added in small quantities to a solution to modify its characteristics. It is usually added to a plating solution for the purpose of modifying the character of a deposit. **B 374, B08**
- addition polymerization**—polymerization in which monomers are linked together without the splitting off of water or other simple molecules. **D 883, D20**
- addition polymerization, n**—polymerization in which monomers are linked together without the splitting off of water or other simple molecules and involves the opening of a double bond. **F 1251, F04**
- additive, n**—a substance added in small quantities to another substance, usually to improve specific properties (for example, a drier, mildewcide, etc.). **D 16, D01**
- additive**—any material other than the basic components of a grout system. **D 653, D18**
- additive**—a chemical compound or compounds added to an insulating fluid for the purpose of imparting new properties or altering those properties which the fluid already has. **D 2864, D27**
- additive, n**—a material added to another, usually in small amounts, to impart or enhance desirable properties or to suppress undesirable properties. **D 4175, D02**
- additive color mixture, n**—superposition or other nondestructive combination of lights of different perceived colors. **E 284, E12**
- additive color stimulus mixture, n**—method of simulation that combines on the retina the actions of various color stimuli in such a manner that they cannot be perceived individually. **E 284, E12**
- additive primaries, n**—same as **primary color stimuli. E 284, E12**
- adfreeze shear strength**—the shear stress required to separate two objects that are bonded together by ice. **D 7099, D18**
- adfreeze tensile strength**—the tensile stress required to separate two objects that are bonded together by ice. **D 7099, D18**
- adfreezing**—the process by which objects are bonded together by the ice formed between them. **D 7099, D18**
- adhere, v**—to cause two surfaces to be held together by adhesion. **D 907, D14**
- adherence**—(1) the degree of adhesion of a porcelain enamel or other ceramic coating to a metal substrate.
(2) Stress necessary to cause separation of one material from another at their interface. **C 286, B08**
- adherent, n**—a body held to another body by an adhesive. **D 907, D14**
- adherend preparation, n**—see **surface preparation. D 907, D14**
- adhesion**—the attractive force that exists between an electrodeposit and its substrate that can be measured as the force required to separate an electrodeposit and its substrate. **B 374, B08**
- adhesion**—the physical attraction of two substances, especially the macroscopically observable attraction of dissimilar substances. **C 904, C03**
- adhesion, n**—the property denoting the ability of a material to resist delamination or separation into two or more layers. **D 123, D13**
- adhesion, n—in tirefabrics, the force required to separate a textile material from rubber or other elastomer by a definite prescribed method. D 123, D13**
- adhesion**—shearing resistance between soil and another material under zero externally applied pressure.
- | | Symbol | Unit |
|----------------|--------|-----------------------|
| Unit Adhesion | C_a | FL ⁻² |
| Total Adhesion | C_a | F or FL ⁻¹ |
- D 653, D18**
- adhesion**—shearing resistance between two unlike materials under zero externally applied pressure. **D 653, D18**
- adhesion, n**—the state in which two surfaces are held together by interphase forces.
- mechanical adhesion, n**—adhesion between surfaces in which

the adhesive holds the parts together by interlocking action.

specific adhesion, n—adhesion between surfaces which are held together by intermolecular forces of a chemical or physical nature. **D 907, D14**

adhesion, n—condition in which surfaces are held together by chemical or physical forces or both. **D 1566, D11**

adhesion, n—*for asbestos*, see **fiber adhesion**. **D 2946, C17**

adhesion, n—the property denoting the ability of a material to resist delamination or separation into two or more layers. **D 6477, D13**

adhesion, n—*in tirefabrics*, the force required to separate a textile material from rubber or other elastomer by a definite prescribed method. **D 6477, D13**

adhesion, n—the bonding of the ink to the substrate. **D 6488, D01**

adhesion, n—the tendency of one surface to adhere to another surface prior to movement due to dwell time, as well as other factors. **F 1646, F13**

adhesion failure, n—rupture of an adhesive bond in which the separation appears visually to be at the adhesive/adherend interface. **D 907, D14**

adhesion failure, n—*in characterizing the locus of an adhesive-joint-failure*, the fracture occurring within the interphase region. (Compare *cohesion failure*.) **D 907, D14**

adhesion failure, n—the loss of structural integrity due to the separation of two bonded surfaces at the bond interface. **D 1566, D11**

adhesion, practical, n—the force or work required to detach or remove a coating from the underlayer or substrate; it can be measured in terms of peel, pull, or shear strength as an experimentally determined quantity. **B 374, B08**

adhesion promoter, n—a material built into a binder or added to a paint to form primary bonds to either the substrate or the previously applied coating, with the specific aim of improving the dry or wet adhesion, or both. **D 16, D01**

adhesion promoter, n—a substance used to improve bonding of the adhesive to the substrate. (Compare *coupling agent* and *primer*.) **D 907, D14**

adhesion value, n—force required to cause adhesion failure. **D 1566, D11**

adhesive, n—a substance capable of holding materials together by surface attachment. **C 11, C11**

adhesive, n—a substance capable of holding materials together by surface attachment. **C 274, D30**

adhesive, n—a substance capable of holding materials together by surface attachment. (See also **glue, gum, mucilage, paste, resin, and sizing**.)

adhesive, assembly, n—see **assembly adhesive**.

adhesive, bulk, n—see **bulk adhesive**.

adhesive, casein, n—see **casein adhesive**.

adhesive, cellular, n—see **cellular adhesive**.

adhesive, cold-setting, n—see **cold-setting adhesive**.

adhesive, contact, n—see **contact adhesive**.

adhesive, foamed, n—see **foamed adhesive**.

adhesive, gap-filling, n—see **gap-filling adhesive**.

adhesive, heat activated, n—see **heat activated adhesive**.

adhesive, hot-melt, n—see **hot-melt adhesive**.

adhesive, hot-setting, n—see **hot-setting adhesive**.

adhesive, intermediate-temperature-setting, n—see **intermediate-temperature-setting adhesive**.

adhesive, mastic, n—see **mastic adhesive**.

adhesive, multiple-layer, n—see **multiple-layer adhesive**.

adhesive, polyvinyl acetate emulsion, n—see **polyvinyl acetate emulsion adhesive**.

adhesive, pressure-sensitive, n—see **pressure-sensitive adhesive**.

adhesive, room-temperature-setting, n—see **room-temperature-setting adhesive**.

adhesive, separate application, n—see **separate-application adhesive**.

adhesive, solvent, n—see **solvent adhesive**.

adhesive, solvent-activated, n—see **solvent-activated adhesive**.

adhesive, structural, n—see **structural adhesive**.

adhesive, warm-setting, n—see **warm-setting adhesive**.

adhesive, urea-formaldehyde, n—see **urea-formaldehyde adhesive**. **D 907, D14**

adhesive, n—a substance capable of holding materials together by surface attachment. **D 996, D10**

adhesive—a substance capable of holding materials together by surface attachment.

NOTE—adhesive is the general term and includes, among others, cement, glue, mucilage, and paste. All of these terms are loosely used interchangeably. Various descriptive adjectives are applied to the term adhesive to indicate certain characteristics as follows:

(1) Physical form, that is, liquid adhesive, tape adhesive

(2) Chemical type, that is, silicate adhesive, resin adhesive

(3) Materials bonded, that is, paper adhesive, metal-plastic adhesive, can label adhesive

(4) Conditions of use, that is, hot-setting adhesive **D 1038, D07**

adhesive—a substance capable of holding materials together by means of surface attachment.

cold setting adhesive—an adhesive which sets at temperatures below 20°C (68°F).

contact pressure adhesive—a resinous adhesive which is aggressively and permanently tacky at room temperature and adheres to a variety of surfaces upon contact with a minimum of pressure required. (Syn. **pressure-sensitive adhesives**.)

core splice adhesive—a film adhesive, capable of expansion of at least 175 % of its original thickness, used primarily to join or splice together two or more separate sections of core material in sandwich constructions.

foamed adhesive—an adhesive, the apparent density of which has been decreased substantially by the presence of numerous gaseous cells dispersed throughout its mass.

supported film adhesive—an adhesive material incorporating a carrier that remains in the bond when the adhesive is employed; carrier support material is usually composed of organic/inorganic fibers which may be in woven (knit) or nonwoven (mat) form.

unsupported film adhesive—an adhesive material in film form without a carrier support. **E 631, E06**

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unsupported film adhesive—an adhesive material in film form without a carrier support. **E 1749, E06**

adhesive—a substance capable of holding materials together by surface attachment. **F 412, F17**

adhesive, anaerobic, n—see **anaerobic adhesive**.

adhesive, anaerobic, n—see **anaerobic adhesive**. D 907, D14

adhesive-bonded anchor—anchor placed into a hole in the base material, and which derives its holding strength from a chemical adhesive placed between the wall of the hole in the base material and the embedded portion of the anchor. E 2265, E06

adhesive bonded joint—see **joint, adhesive bonded**. F 412, F17

adhesive, contact—an adhesive that is apparently dry to the touch and that will adhere to itself instantaneously upon contact. E 631, E06

adhesive, contact—an adhesive that is apparently dry to the touch and that will adhere to itself instantaneously upon contact. E 1749, E06

adhesive dispersion, n—a two-phase system in which one phase is suspended in a liquid. (Compare to **emulsion**.) D 907, D14

adhesive failure, n—in *building construction*, failure of the bond between the sealant, adhesive, or coating and the substrate surface. C 717, C24

adhesive failure, n—a separation of two bonded surfaces that occurs within the bonding material. D 1566, D11

adhesive joint, n—location at which two adherends are held together with adhesive. D 907, D14

adhesive-joint failure, n—the locus of fracture occurring in an adhesively-bonded joint resulting in a loss of load-carrying capability. D 907, D14

adhesive, solvent—see **solvent cement**. F 412, F17

adhesive transfer—a condition occurring when an adhesive-coated material is peeled away from an opposing material to which it has been sealed and shows visible evidence of the adhesive being left on the opposing material. This evidence is in the form of an adhesive layer that remains with the opposing material, the adhesive having separated either adhesively from the coated web or cohesively within the adhesive itself. F 1327, F02

adhesive treated-tire cord, n—a tire cord whose adhesion to rubber or other elastomer has been improved by the application of a dip followed by rapid drying and (normally) additional heat treatment. D 123, D13

adhesive treated tire cord, n—a tire cord whose adhesion to rubber or other elastomer has been improved by the application of a dip followed by rapid drying and (normally) additional heat treatment. D 6477, D13

adhesive wear, n—wear due to localized bonding between contacting solid surfaces leading to material transfer between the two surfaces or loss from either surface. G 40, G02

adhesive wear (scuffing), n—wear due to localized bonding between contacting solid surfaces leading to material transfer between the two surfaces or loss from either surface. D 4175, D02

adiabatic calorimeter, n—a calorimeter that has a jacket temperature adjusted to follow the calorimeter temperature as closely as possible so as to maintain zero thermal head. D 5681, D34

adiabatic decomposition temperature rise, (T)_d, n—an estimation of the computed temperature which a specimen would attain if all of the enthalpy (heat) of decomposition reaction were to be absorbed by the sample itself. High values represent high hazard potential. E 1445, E27

adiabatic extrusion—a method of extrusion in which, after the extrusion apparatus has been heated sufficiently by conventional means to plastify the material, the extrusion process can be continued with the sole source of heat being the conversion of the drive energy, through viscous resistance of the plastic mass in the extruder. D 883, D20

adiabatic extrusion—a method of extrusion in which the sole source of heat is the conversion of the drive energy, through viscous resistance of the plastic mass in the extruder. (D20) F 412, F17

adiabaticity, n—the condition in which there is no significant gain or loss of heat throughout the length of the column. D 4175, D02

adjacency—two OCR characters printed on the same line with character spacing reference lines separated by the proper space for the font and system. F 149, F05

adjunct instructor—an individual with specialized subject matter expertise, who, on occasion, instructs a specific topic of a curriculum under the direction of the course instructor/coordinator. F 1177, F30

adjusted internal rate-of-return (AIRR)—the compound rate of interest that, when used to discount the terminal values of costs and benefits of a project over a given study period, will make the costs equal the benefits when cash flows are reinvested at a specified rate. (Syn. *financial management rate of return (FMRR)*)

adjusted serviceability score—See **serviceability score**. E 631, E06

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E 833, E06

adjusted mode, n—output of an *IR thermometer* that gives temperature measured and calculated from a subject or object, by correcting such temperature for variations in ambient temperature, *subject's* temperature, emissivity, body site (that is, *oral*, or *rectal*), etc. E 344, E20

adjusted serviceability score—See **serviceability score**. E 1480, E06

adjusting device, n—a section of the instrument used to adjust the amount of mercury in the bulb and main capillary to that needed for the intended temperature interval. E 344, E20

adjuvant—a material added to a tank mix to aid or modify the action of an agrichemical, or the physical characteristics of the mixture. E 1519, E35

administrative controls—Administrative measures that are used to control occupational exposures to hazards. E 1605, E06

administrative removal—(*of workers*), temporary removal of workers from a job site prior to blood-lead levels reaching values requiring medical removal. E 631, E06

administrative removal—(*of workers*), temporary removal of workers from a job site prior to blood-lead levels reaching values requiring medical removal. E 1605, E06

admittance ratio, ypc \equiv *gpc* - *jbpc*; [dimensionless]—the reciprocal of the impedance ratio. The real and imaginary components are called, respectively, **conductance ratio** and **susceptance ratio**. C 634, E33

admittance, Y—the reciprocal of impedance. E 1142, E37

admixed mortar, n—masonry mortar that deviates from those combinations of materials recognized by Specification C 270 in that it also contains an admixture. C 1180, C12

admixture, n—a material other than water, aggregates, hydraulic cementitious material, and fiber reinforcement that is used as an ingredient to modify properties and is added to the batch before or during its mixture. C 11, C11

admixture, n—a material other than water, aggregates, hydraulic cementitious material, and fiber reinforcement that is used as an ingredient of a cementitious mixture to modify its freshly mixed, setting, or hardened properties and that is added to the batch before or during its mixing.

accelerating admixture, n—admixture that accelerates the setting and early strength development of concrete. (C 494/C 494M)

air-entraining admixture, n—admixture that causes the development of a system of microscopic air bubbles in concrete or mortar during mixing.

chemical admixture, n—a nonpozzolanic admixture in the form of a liquid, suspension, or water-soluble solid.

mineral admixture, n—deprecated term.

retarding admixture, n—admixture that retards the setting of concrete. (C 494/C 494M)

water-reducing admixture, n—admixture that either increases the slump of freshly mixed mortar or concrete without increasing the water content or that maintains the slump with a reduced amount of water due to factors other than air entrainment.

- water-reducing admixture, high-range, n*—a water-reducing admixture capable of producing at least 12 % reduction of water content when tested in accordance with Specification C 494/C 494M and meeting the other relevant requirements of Specification C 494/C 494M. **C 125, C09**
- admixture**—a material other than water, aggregates, cement and fibre reinforcing used as an ingredient of concrete and added to the batch immediately before or during its mixture. **C 822, C13**
- admixture, n**—substance other than the Specification C 270 prescribed materials of water, aggregate, and cementitious materials that is added to a masonry mortar as an ingredient to improve one or more chemical or physical properties of the conventional masonry mortar. **C 1180, C12**
- admixture**—a material other than water, aggregates, or cementitious material, used as a grout ingredient for cement-based grouts. **D 653, D18**
- admixture, n**—a material other than water, aggregates, hydraulic cement, and fiber reinforcement, used as an ingredient of concrete or mortar, and added to the concrete batch immediately before or during its mixing. **E 2201, E50**
- adsorbate, n**—material that has been retained by the process of adsorption. **D 1356, D22**
- adsorbate**—any substance that is adsorbed. **D 2652, D28**
- adsorbed water**—water in a soil or rock mass attracted to the particle surfaces by physiochemical forces, having properties that may differ from those of pore water at the same temperature and pressure due to altered molecular arrangement; adsorbed water does not include water that is chemically combined within the clay minerals. **D 653, D18**
- adsorbent, n**—solid material on the surface of which adsorption takes place. **D 1356, D22**
- adsorbent**—any solid having the ability to concentrate significant quantities of other substances on its surface. **D 2652, D28**
- adsorption**—the capacity of a substance to accept and retain on its surface a layer of another substance, usually a gas or a liquid. **C 242, C21**
- adsorption, n**—a process in which the surface of a solid takes on or absorbs in an extremely thin layer molecules of gases, of dissolved substances, or of liquids with which it is in contact. (See also **absorption, moisture equilibrium of testing**. Compare **desorption** and **resorption**.) **D 123, D13**
- adsorption**—the attachment of water molecules or ions to the surfaces of soil particles. **D 653, D18**
- adsorption, n**—a physical process in which molecules of gas, of dissolved substances, or of liquids, adhere in an extremely thin layer to the surfaces of solid bodies with which they are in contact. **D 1356, D22**
- adsorption**—a process in which fluid molecules are concentrated on a surface by chemical or physical forces, or both. **D 2652, D28**
- adsorption, n**—a process in which the surface of a solid takes on or adsorbs in an extremely thin layer molecules of gases, of dissolved substances, or of liquids with which it is in contact. (See also **absorption and moisture equilibrium for testing**. Compare **desorption** and **resorption**.) **D 4920, D13**
- adsorption**—the holding of a substance onto the surface of a solid by chemical surface forces, without forming new chemical bonds. **D 6161, D19**
- adsorption zone*—see **mass transfer zone**. **D 2652, D28**
- advanced ceramic, n**—a highly engineered, high performance, predominantly non-metallic, inorganic, ceramic material having specific functional attributes. **C 1145, C28**
- advanced life support**—medically accepted life sustaining, invasive or non-invasive procedures; provided under the direction of a physician or other authorized health care provider. **F 1177, F30**
- advanced sulfur control products (ASC), n**—products generated from advanced coal conversion technologies including FBC (fluidized-bed combustion) and products from advanced environmental emission cleanup technologies such as duct injection and lime injection multiphase burners (LIMB). The type of by-product is technology-dependent and could be a bed ash and high-lime fly ash for an FBC technology, etc. **E 2201, E50**
- advancing slope grouting**—a method of grouting by which the front of a mass of grout is caused to move horizontally by use of a suitable grout injection sequence. **D 653, D18**
- adventitious agents, n**—an unintentionally introduced microbiological or other infectious contaminant. In the production of TEMPs, these agents may be unintentionally introduced into the process stream or the final product, or both. **F 2312, F04**
- adventitious carbon referencing**—XPS, determining the charging potential of a particular specimen by comparing the experimentally determined binding energy of the C 1s binding energy from absorbed hydrocarbon on the specimen with a standard binding energy value.
- NOTE—A nominal value of 285.0 is often used for the binding energy of the relevant C 1s peak, although some analysts prefer specific values in the range 284.6 eV to 285.2 eV depending on the nature of the substrate. **E 673, E42**
- AE activity, n**—the presence of acoustic emission during a test. **E 1316, E07**
- AE amplitude*—see **dB_{AE}**. **E 1316, E07**
- Ae_{cm}, Ae₁, Ae₃, Ae₄*—See **transformation temperature**. **A 941, A01**
- aeolian deposits**—wind-deposited material such as dune sands and loess deposits. **D 653, D18**
- aeolian vibration**—resonant vibration of a conductor caused by the alternate shedding of wind-induced vortices from opposite sides of the conductor. (Frequency is usually less than 200 Hz and amplitude rarely exceeds one conductor diameter.) **B 354, B01**
- aerating nozzle**—a device to atomize liquid for the purpose of aeration.
- NOTE—Although this term is occasionally used to designate certain types of airblast or internal mixing pneumatic atomizers, it is ambiguous and is not recommended for describing the latter devices. **E 1620, E29**
- aeration, n**—exposing a substance or area to air circulation; the process of mixing air with a pulverized fuel or a powdered material such as fly ash in a transport pipe or storage bin. **E 2201, E50**
- aeration system**—a type of circulation system that causes the beverage to cascade across the top and down the sides of the bowl interior incorporating air into the beverage. **F 1827, F26**
- AE rms, n**—the rectified, time averaged AE signal, measured on a linear scale and reported in volts. **E 1316, E07**
- aerobe, n**—an organism that requires oxygen to remain metabolically active. **D 4175, D02**
- aerobes**—organisms that require air or free oxygen for growth. **F 1600, F20**
- aerobic, adj**—(1) taking place in the presence of oxygen; (2) living or active in the presence of oxygen. **D 4175, D02**
- aerobic, n**—a condition in which a measurable volume of air is present in the incubation chamber or system. **D 4439, D35**
- aerobic, adj**—(1) taking place in the presence of oxygen; (2) living or active in the presence of oxygen. **D 6384, D02**
- aerobic**—able to live, grow, or take place only where free oxygen is present. **E 1705, E48**
- aerobic bacteria**—bacteria that require oxygen for growth. See **bacteria, aerobes**. **D 6161, D19**
- aerobic fermentation**—fermentation processes that require the presence of air. **E 1705, E48**
- aerodynamic diameter**—the diameter of a hypothetical sphere having a specific gravity of unity and the same settling velocity as the actual particle. **E 1620, E29**
- aerosol, n**—a dispersion of solid or liquid particles in a gaseous medium. **D 1356, D22**
- aerosol, n**—a dispersion of solid particles or liquid particles, or both, in gaseous media. **E 1620, E29**
- aerosol can side seam**—cans which are formed from rectangular

aerosol can side seam

sheets have a soldered, bonded or welded strip which joins two corresponding or matching side gill edges to form a cylinder.

D 3064, D10

aerosol container, empty, *n*—*in building construction*, an aerosol container is considered empty when the product flow reaches 0.5 g per second or less.

C 717, C24

aerosol development—development in which the toner is carried to the field of the electrostatic image by means of a suspending gas.

F 335, F05

aerosol generator—any mechanical or thermal device that produces a liquid dispersion having a volume median less than 50 μm .

E 1102, E35

aerosol package—See **package**.

D 996, D10

aerosol packaging—pressurizing sealed containers with liquefied or compressed gases, enabling the product to self-dispense. The term "aerosol" as used here is not confined to the scientific definition (that is, a suspension of fine solid or liquid particles in air or gas).

D 3064, D10

aerosols—distribution of droplets with $D_{V,5} \leq 50 \mu\text{m}$.

E 1102, E35

AE signal duration—the time between AE signal start and AE signal end.

E 1316, E07

AE signal end—the recognized termination of an AE signal, usually defined as the last crossing of the threshold by that signal.

E 1316, E07

AE signal generator—a device which can repeatedly induce a specified transient signal into an AE instrument.

E 1316, E07

AE signal rise time—the time between AE signal start and the peak amplitude of that AE signal.

E 1316, E07

AE signal start—the beginning of an AE signal as recognized by the system processor, usually defined by an amplitude excursion exceeding threshold.

E 1316, E07

aesthetic joint, *n*—a deprecated term. See **aesthetic reveal**.

E 2110, E06

aesthetic reveal, *n*—a groove cut into the insulation board which serves the function of decoration or to provide a starting or stopping point for finish-coat application, or both.

E 2110, E06

affective test, *n*—any method to assess acceptance, attitudes, emotions, or preference for a stimulus (i).

E 253, E18

aftercure, *n*—a continuation of the process of vulcanization after the energy source has been removed.

D 1566, D11

after effects, *n*—total array of sensations that occur after elimination of the physical stimulus from the sensing field.

E 253, E18

afterflame, *n*—persistent flaming of a material after the ignition source has been removed.

D 123, D13

after-flame time, *n*—the length of time for which a material continues to flame after the ignition source has been removed.

D 123, D13

afterflame time, *n*—the length of time in seconds for which a material continues to flame after the ignition source has been removed.

F 819, F18

after-flame time, *n*—the length of time for which a material continues to flame after the ignition source has been removed.

F 1494, F23

afterglow, *n*—glow in a material after the removal of an external ignition source or after the cessation (natural or induced) of flaming of the material. (See also **flame, glow**, and **smoldering**.)

D 123, D13

afterglow, *n*—glow in material after the removal of an external ignition source or after the cessation (natural or induced) of flaming of the material. (See also **flame, glow**, and **smoldering**.)

D 4391, D13

afterglow, *n*—emission of light, usually subsiding, from a material undergoing combustion, but occurring after flaming has ceased.

E 176, E05

afterglow, *n*—a glow in a material after the removal of an external ignition source or after the cessation (natural or induced) of flaming of the material (see also **glow**).

F 1494, F23

afterglow time, *n*—the time afterglow continues after the cessation of flaming or after removal of the ignition source.

D 123, D13

aftersensation, *n*—sense impression after direct stimulation of the sense organ has ceased.

E 253, E18

aftertaste, *n*—the oral or nasal sensations that occur after the source of the stimulus has been removed from the oral cavity. See **after effects**.

E 253, E18

agar, *n*—a semisolid culture medium used to support the growth of bacteria and other micro-organisms.

F 1494, F23

aged insulation value—thermal resistance (R-value) of a thermal insulation material as determined after standard conditioning to simulate service exposure.

E 631, E06

age hardening, *n*—hardening by **aging**, usually after rapid cooling or **cold working**.

A 941, A01

aging, accelerated, *n*—exposure of rubber to a test environment with the intent of producing, in a shorter time period, effects similar to normal ageing.

D 1566, D11

aging (act of), *n*—exposure of materials to a deteriorating environment for a specified time interval.

D 1566, D11

aging, air bomb, *n*—the process of exposing materials to the action of air at an elevated temperature and pressure.

D 1566, D11

aging, air oven, *n*—The process of exposing materials to the action of air at an elevated temperature at atmospheric pressure.

D 1566, D11

aging, natural, *n*—ageing under normal service conditions.

D 1566, D11

aging, oxygen bomb, *n*—the process of exposing materials to the action of oxygen at an elevated temperature and pressure.

D 1566, D11

aging (rubber), *n*—the irreversible change of material properties during exposure to a deteriorating environment, for a specified time interval.

D 1566, D11

aging, shelf, *n*—ageing during storage.

D 1566, D11

agency, *n*—an organization or part of an organization engaged in the activities of testing or inspection, or both.

D 1356, D22

age resistance, *n*—the ability of a material to resist deterioration caused by ageing.

D 1566, D11

ageusia, *n*—lack of sensitivity to taste stimuli.

E 253, E18

agglomerate, *n*—several particles adhering together.

B 243, B09

agglomerate—a jumbled mass or collection of two or more particles or aggregates, or a combination thereof, held together by relatively weak cohesive forces caused by weak chemical bonding or an electrostatic surface charge generated by handling or processing.

C 242, C21

agglomerate, *n*—*in manufactured carbon and graphite product technology*, a composite particle containing a number of grains.

C 709, D02

agglomerate, *n*—*as used in fractography*, a cluster of grains, particles, platelets, or whiskers, or a combination thereof, present in a larger solid mass.

C 1145, C28

agglomerate, *n*—*in manufactured carbon and graphite product technology*, a composite particle containing a number of grains.

D 4175, D02

agglomerate, *n*—two or more particles adhering together.

E 1638, E29

agglomerate, compounding material, *n*—a cluster of particles of one or more compounding materials loosely held together.

D 1566, D11

agglomerate, latex, *n*—a cluster of rubber particles in a colloidal aqueous suspension of such particles.

D 1566, D11

agglomerates, *n*—clusters of particles of compounding materials contained in a continuous rubber phase.

D 1566, D11

agglomerating, *adj*—*as applied to coal*, the property of softening when it is heated to above about 400°C in a nonoxidizing atmosphere, and then appearing as a coherent mass after cooling to room temperature.

D 121, D05

agglomeration, *n*—a process of contact and adhesion whereby the particles of a dispersion form clusters of increasing size.

D 1356, D22

agglomeration (latex), *n*—reversible or irreversible joining together of latex particles.

D 1566, D11

agglomeration or flocculation—the coalescence of dispersed suspended matter into large flocs or particles which settle rapidly.

D 4410, D19

aggradation—the geologic process by which stream beds, flood plains, and the bottoms of other water bodies are raised in elevation by the deposition of material eroded and transported by water from other areas.

D 4410, D19

aggradational ice—newly formed ice lenses, especially in the lower part of the active layer, which become incorporated into the permafrost due to a raising of the permafrost table or a lowering of the permafrost base.

D 7099, D18

aggradation of permafrost—see **permafrost aggradation**.

D 7099, D18

aggregate, *n*—an inert granular material which may be added to gypsum plasters.

C 11, C11

aggregate, *n*—granular material, such as sand, gravel, crushed stone, or iron blast-furnace slag, used with a cementing medium to form hydraulic-cement concrete or mortar.

*coarse aggregate, *n**—(1) aggregate predominantly retained on the 4.75-mm (No. 4) sieve; or (2) that portion of an aggregate retained on the 4.75-mm (No. 4) sieve.

*fine aggregate, *n**—(1) aggregate passing the 9.5-mm (3/8-in.) sieve and almost entirely passing the 4.75-mm (No. 4) sieve and predominantly retained on the 75- μ m (No. 200) sieve; or (2) that portion of an aggregate passing the 4.75-mm (No. 4) sieve and retained on the 75- μ m (No. 200) sieve.

*heavyweight aggregate, *n**—see *high-density aggregate*.

*high-density aggregate, *n**—aggregate with relative density greater than 3.3, such as: barite, magnetite, limonite, ilmenite, iron, or steel.

*lightweight aggregate, *n**—see *low-density aggregate*.

*low-density aggregate, *n**—aggregate with bulk density less than 1120 kg/m³ (70 lb/ft³), such as: pumice, scoria, volcanic cinders, tuff, and diatomite; expanded or sintered clay, shale, slate, diatomaceous shale, perlite, vermiculite, or slag; and end products of coal or coke combustion.

*normal-density aggregate, *n**—aggregate that is neither high nor low density.

*normalweight aggregate, *n**—see *normal-density aggregate*.

C 125, C09

aggregate—a dense mass of particles held together by strong intermolecular or atomic cohesive forces that is stable to normal mixing techniques, including high-speed stirring and ultrasonics.

C 242, C21

aggregate—any inert material such as sand, gravel, slag, carbon, etc., usually consisting of various-sized particles and used with chemical-resistant binders to form chemical-resistant mortars.

C 904, C03

aggregate, *n*—a dense mass of particles held together by strong intermolecular or atomic cohesive forces. It is stable to normal handling and ordinary mixing techniques including high-speed stirring and ultrasonics.

C 1145, C28

aggregate, *n*—a granular material of mineral composition such as sand, gravel, shell, slag, or crushed stone, used with a cementing medium to form mortars or concrete, or alone as in base courses, railroad ballasts, etc.

D 8, D04

aggregate—as a *grouting material*, relatively inert granular mineral material, such as sand, gravel, slag, crushed stone, etc. "Fine aggregate" is material that will pass a No. 4 (6.4-mm) screen,

"Coarse aggregate" is material that will not pass a No. 4 (6.4-mm) screen. Aggregate is mixed with a cementing agent (such as Portland cement and water) to form a grout material.

D 653, D18

aggregate—(1) crushed stone, crushed slag, or water-worn gravel used for surfacing a built-up roof;

(2) any granular mineral material.

D 1079, D08

aggregate—granular material such as sand, gravel, crushed stone.

D 6161, D19

aggregate, *v*—to process or combine like items into a category; for example, adding together 30-s traffic volume counts, or averaging speeds from lane-by-lane detectors that are parts of traffic data counting station to be the total traffic volume or average speed at that traffic counting station for a 5-min time period.

E 867, E17

aggregate, *n*—granular material such as sand, gravel, crushed stone, crushed hydraulic-cement concrete, iron blast furnace slag, or coal bottom ash and boiler slag used as a component in concrete or mortar with a hydraulic cementing medium to produce either concrete or mortar.

E 2201, E50

aggregate, lightweight (LWA), *n*—aggregate of low density. Examples of LWA include coal bottom ash, pumice, scoria, volcanic cinders, tuff, and diatomite; expanded or sintered clay, shale, slate, diatomaceous shale, perlite, vermiculite, or slag; and bonded or sintered coal combustion products (CCPs) used to produce lightweight concrete or component products.

E 2201, E50

aggregates, *n*—a granular mineral material such as natural sand, manufactured sand, gravel, crushed stone, and air cooled blast furnace slag.

C 1180, C12

aggregation, *n*—the resultant set of aggregated data associated with an aggregating process.

E 867, E17

aggressiveness index (A.I.), *n*—the value computed from the sum of the pH + log alkalinity + log hardness of water sample where both alkalinity and hardness are reported as CaCO₃L.

D 4175, D02

aggressive tack, *n*—see *aggressive tack* under **tack**.

D 907, D14

aggressivity index, *n*—measure of the corrosiveness of water toward asbestos-cement defined as:

$$\text{pH} + \log(AH)$$

where:

pH = negative of the logarithm of the hydronium molarity (index of acidity of the water) pH units.

A = total alkalinity, ppm as CaCO₃, as determined by Test Methods D 1067, and

H = calcium hardness, ppm as CaCO₃, as determined by Test Method D 1126.

D 2946, C17

aging, *n*—a change in the properties of certain **steels** that occurs at ambient or moderately elevated temperatures after hot working or a heat treatment (**quench aging**, **natural aging**, or **artificial aging**) or after a cold-working operation (**strainingaging**).

A 941, A01

aging—the storing of porcelain enamel slips or powders before use. The change occurring in slips or powders with the lapse of time.

C 286, B08

aging, *n*—(1) the effect on materials of exposure to an environment for an interval of time. (2) the process of exposing materials to an environment for an interval of time.

D 883, D20

aging—in general, the change of properties with the passage of time. Specifically, the changes occurring in shredded alkali cellulose when allowed to stand exposed to air.

D 1695, D01

aging, *n*—(1) the effect on materials of exposure to an environment for an interval of time.

(2) the process of exposing materials to an environment for an interval of time. (D20)

F 412, F17

aging—(1) the effect on materials of exposure to an environment for an interval of time. (2) the process of exposing materials to an environment for an interval of time. (D 883, D20)

F 869, F08

aging, *n*—the process of exposing materials to an environment for an interval of time.

F 1251, F04

aging, *n*—the exposure of a material to individual or combined stresses such as time, temperature, pressure, abrasion, ionizing radiation, light, impact with gas or particles, tensile or compressive

aging, *n*

force (either static or cyclic), contact with other materials or chemicals, or any other feature that may be present during a material's service life.

artificial aging, *n*—aging in which a stress variable is outside the domain of exposure that a material might see in a component for oxygen service or in which an alternative mechanism is used to produce an effect that simulates the results of natural aging.

natural aging, *n*—aging in which a material is exposed to conditions replicating those that are present in actual service in a component for oxygen service. **G 126, G04**

aging coefficient—the percentage change in a specific magnetic property resulting from a specific aging treatment.

NOTE—The aging treatments usually specified are:

(a) 100 h at 150°C or

(b) 600 h at 100°C.

A 340, A06

aging effect, *n*—a change in a material brought about by exposure of the material to an environment for an interval of time. **F 1251, F04**

aging, magnetic—the change in the magnetic properties of a material resulting from metallurgic change due to a normal or specified aging condition.

NOTE—This term implies a deterioration of the magnetic properties of magnetic materials for electronic and electrical applications, unless otherwise specified. **A 340, A06**

aging time, *n*—see **joint conditioning time**. **D 907, D14**

agitator, *n*—a device that is in contact with the surface to be cleaned and assists in dirt removal by mechanical action, rotary and otherwise. **F 395, F11**

agitators—a removable device attached to the power output shaft that extends downward into the mixer bowl and converts or imparts the desired action on the contents of the bowl. **F 1827, F26**

agitator tank—a tank, usually vertical and with open top, with rotation paddles used to prevent segregation of grout after mixing. **D 653, D18**

agricultural lime—either ground quicklime or hydrated lime whose calcium and magnesium content is capable of neutralizing soil acidity. **C 51, C07**

agricultural limestone—ground or pulverized limestone whose calcium and magnesium content is capable of neutralizing soil acidity. **C 51, C07**

"A" Horizon—see **horizon**. **D 653, D18**

AIAG, *n*—an abbreviation for the Automotive Industry Action Group; a standards body composed of representatives from the U.S. automobile industry responsible for the development of a common automotive industry standard relating to symbol technologies and Electronic Data Interchange (EDI). **F 1294, F05**

aid climbing, *n*—a technique of climbing that utilizes auxiliary devices as a means of ascent to supplement the natural features of the surface being climbed. **F 1773, F08**

AIM, *n*—an acronym for the Automatic Identification Manufacturers; a trade association of automatic identification suppliers. **F 1294, F05**

air assist nozzle—a pneumatic atomizer in which pressurized air is utilized to enhance the atomization produced by pressurized liquid. The air may be required only for part of the operating range (for example, low liquid flow rates). **E 1620, E29**

air at normal conditions (standard air), *n*—air at 50 % relative humidity, 25°C and 101.3 kPa (77°F and 760 mm Hg). See also **atmosphere**. **D 1356, D22**

air atomizing—air used to atomize powder and to control powder/air mix and powder cloud density. **C 286, B08**

air atomizing nozzle—see **pneumatic atomizer**. **E 1620, E29**

air bells—bubbles of irregular shape formed generally during the pressing or molding operations in the manufacture of optical glass. **C 162, C14**

air blast nozzle—see **airblast nozzle**. **E 1620, E29**

airblast nozzle—a pneumatic atomizer that utilizes a relatively large volume of low-pressure air.

NOTE—The term is occasionally used to designate the entire class of pneumatic atomizers. **E 1620, E29**

airborne drift—the dispersion of chemical particles to the atmosphere outside the intended target. **E 1102, E35**

airborne sound—sound that arrives at the point of interest, such as one side of a partition, by propagation through air. **C 634, E33**

air bubble barrier—special-purpose barrier created by rising stream of air bubbles and entrained water, produced by injecting air at some depth below water surface. **F 818, F20**

air carrier sprayer—an apparatus consisting of a pressure source and controls for the spray liquid and a blower with suitable ducts to produce an air jet in which spray nozzles are located. Air from the blower carries the spray for a distance for deposition on the target being treated. **E 1102, E35**

air chain, *n*—*in mica*, a series of air inclusions in the form of a chain or streak. **D 1711, D09**

air-change rate—air-leakage in volume units per hour divided by the building space volume with identical volume units (normally expressed as air changes per hour, ACH or ACPH). **E 631, E06**

air classification, *n*—the separation of powder into particle size fractions by means of an air stream of controlled velocity. **B 243, B09**

air conditioning—the simultaneous control of all, or at least the first three, of those factors affecting both the physical and chemical conditions of the atmosphere within any structure. These factors include temperature, humidity, motion, distribution, dust, bacteria, odor, and toxic gases. **E 41, G03**

air content, *n*—the volume of air voids in cement paste, mortar, or concrete, exclusive of pore space in aggregate particles, usually expressed as a percentage of total volume of the paste, mortar, or concrete. **C 125, C09**

air content, *n*—of freshly mixed mortar the volume of air (and other gases) in mortar, expressed as a percentage of total volume of mortar. **C 219, C01**

air-cooled blast-furnace slag, *n*—the material resulting from solidification of molten blast-furnace slag under atmospheric conditions; subsequent cooling may be accelerated by application of water to the solidified surface. **C 125, C09**

air-dried moisture—this term has been used inappropriately to refer to both residual moisture and air-dry loss. Because of the potential for confusion, this term shall not be used. **D 121, D05**

air drop, *n*—lengths of open run conductors or cables supported only at each end. **E 176, E05**

air-dry—a condition applied to paper or pulp whereby its moisture content is in equilibrium with the atmospheric conditions to which it is exposed. According to trade custom, pulps are generally understood to be air dry when they contain 10 % of moisture, for example, a pound of air-dry pulp contains 0.9 lb of oven-dry pulp and 0.1 lb of moisture (see *STP 60-B*). **D 1695, D01**

air, dry—air containing no water vapor. **E 41, G03**

air drying, *n*—a process of partial drying of coal to bring its moisture near to equilibrium with the atmosphere in the room in which further reduction and division of the sample will take place. **D 121, D05**

air drying—a process of partial drying of RDF-3 to bring its moisture content near to equilibrium with the atmosphere in the room in which the sieving is to take place. **D 5681, D34**

air drying—a process of partial drying of RDF to bring its moisture content near to equilibrium with the atmosphere in which further reduction, division, and characterization of the sample are to take place. In order to bring about the equilibrium, the RDF is usually subjected to drying under controlled temperature conditions ranging from 30 to 40°C. **D 5681, D34**

air-drying—a process of partial drying of refuse-derived fuel (RDF)

to bring its moisture content near to equilibrium with the atmosphere in which further reduction, division, and characterization of the sample are to take place. In order to bring about this equilibrium, the RDF is usually subjected to drying under controlled temperature conditions ranging from 30 to 40°C.

E 856, D34

air-dry loss, n —in coal, the loss in mass, expressed as a percentage, resulting from each air-drying stage or the sum of all sequential air-drying stages in which the results from each stage are adjusted to the as-received basis. D 121, D05

air-dry loss—the decrease in sample mass due to air-drying. This decrease is presumed to be moisture. E 856, D34

air-entraining addition, n —see **addition**; **functional addition**; **air-entraining addition** C 219, C01

air-entraining hydraulic cement, n —a hydraulic cement containing an air-entraining addition in such amount as to cause air to be entrained in mortar within specified limits when measured by the prescribed method. C 219, C01

air entry value—the applied suction at which water menisci of the porous segment of a suction sampler break down, and air enters. D 653, D18

air exfiltration—air leakage out of the building driven by negative pressure.

negative pressure—air pressure on the outdoor side of a building envelope lower than on the indoor side. E 631, E06

air-felting—forming of a fibrous-felted board from an air suspension of damp or dry fibers on a batch or continuous forming machine (sometimes referred to as the dry or semi-dry process). D 1554, D07

air flow rate—the flow rate of air, expressed in volume per relevant unit (ft³/min, m³/s, m³/tree). E 1102, E35

airflow resistance, R ; [ML⁻⁴T⁻¹]; mks acoustic ohm (Pa·s/m³)—the quotient of the air pressure difference across a specimen divided by the volume velocity of airflow through the specimen. The pressure difference and the volume velocity may be either steady or alternating. C 634, E33

airflow resistivity, r_o ; [ML⁻³T⁻¹]; mks rayl/m (Pa·s/m²)—of a homogeneous material, the quotient of its specific airflow resistance divided by its thickness. C 634, E33

air fluidizer—air used to impart fluid-like properties to powder via a fluid bed. C 286, B08

Air Force modified general question test (AFMGQT), n —test format with flexible question orderings and numbers of relevant questions. The AFMGQT can be used in single-issue, multiple facet, and multiple-issue PDD examinations. The AFMGQT uses relevant, comparison, sacrifice relevant and irrelevant questions. E 2035, E52

air freezing index—see **freezing index**. D 7099, D18

air-fuel ratio, n —in internal combustion engines, the mass ratio of air-to-fuel in the mixture being induced into the combustion chambers. D 4175, D02

air-gap magnetic field strength, H_g —the magnetic field strength required to produce the induction existing at some point in a nonmagnetic gap in a magnetic circuit.

NOTE—In the cgs-emu system of units, H_g is numerically equal to the induction existing at such a point and exceeds the magnetic field strength in the magnetic material. A 340, A06

air-handling unit—the distribution-system fan and portion of the distribution system that is integral to the furnace, air-conditioner, or heat-pump. E 631, E06

air handling unit—a device used for distributing conditioned air supply to a room, space, or area. E 772, E44

air header—the pipe running within a cassette that distributes the air to the individual modules or aerators. D 6161, D19

air infiltration—air leakage into the building drive by positive pressure.

positive pressure—air pressure on the outdoor side of a building envelope higher than on the indoor side. E 631, E06

air leakage, n —in buildings, the passage of uncontrolled air through cracks or openings in the building envelope or its components, such as ducts, because of air pressure or temperature difference. E 631, E06

air leakage—the movement/flow of air through the building envelope, which is driven by either or both positive (infiltration) and negative (exfiltration) pressure differences across the envelope. E 631, E06

air-leakage graph—the graph that shows the relationship of measured air flow rates to the corresponding measured pressure differences (usually plotted on a log-log scale). E 631, E06

air-leakage rate—the volume of air movement per unit time across the building envelope.

NOTE—This movement includes flow through joints, cracks, and porous surfaces, or combination thereof. The driving force for such an air leakage in service can be either mechanical pressurization and de-pressurization, natural wind pressures, or air temperatures differentials between the building interior and the outdoors, or combination thereof. E 631, E06

air leakage rate—the time rate of air flow across the air retarder. Expressed as cubic feet per minute per square foot of AR surface at a stated pressure differential across the AR expressed in inches of H₂O. (Cubic meters per second per square meter of AR surface at a pressure differential in Pascals.) E 631, E06

air leakage rate—the volume of air movement per unit time across the building envelope. This movement includes flow through joints, cracks, and porous surfaces or combinations thereof. The driving force for such air leakage in buildings can be either mechanical pressurization or evacuation, natural wind pressures, or air temperature differentials between the building interior and the outdoors, or combinations thereof. E 631, E06

air-leakage rate—the volume of air movement per unit time across the building envelope or the exterior envelope of the air distribution system. E 631, E06

air leakage rate, Q_{env} , n —the total volume of air passing through the test zone envelope per unit of time (m³/s, ft³/min). E 631, E06

air leakage site—a location on the building envelope where air enters or exits the building causing air leakage to occur. E 631, E06

air-lock—an intermediate enclosed chamber of a vacuum or pressure system through which an object may be passed without materially changing the vacuum or pressure of the system. E 7, E04

air mass, AM—the ratio of the mass of atmosphere in the actual observer-sun path to the mass that would exist if the observer was at sea level, at standard barometric pressure, and the sun was directly overhead.

NOTE—(Sometimes called air mass ratio.) Air mass varies with the zenith angle of the sun and the local barometric pressure, which changes with altitude. For sun zenith angle, Z , of 62° or less and local atmospheric pressure, P , where P_o is standard atmospheric pressure, $AM \approx \sec Z (P/P_o)$. E 772, E44

air permeability, n —the rate of air flow passing perpendicular through a known area under a prescribed air pressure differential between the two surfaces of a material. D 123, D13

air permeability, n —the rate of air flow passing perpendicular through a known area under a prescribed air pressure differential between the two surfaces of a material. D 4850, D13

air pollution, n —the presence of unwanted material in the air. D 1356, D22

air power (AP, W), n —(1) in a vacuum cleaner, the net time rate of work performed by an air stream while expending energy to produce an airflow by a vacuum cleaner under specified air resistance conditions. (2) a measure of the ability of the air stream to do work. Air power is expressed in terms of air watts. F 395, F11

air retarder (AR)—a material or system in building construction that is designed and installed to reduce air leakage either into or through the opaque wall. E 631, E06

air sampling pump—a portable, battery-powered air pump that may

air sampling pump

be attached to a belt on a worker or to a stationary object. The pump is used to draw air through a filter holder that is placed within the personal breathing zone of a worker. Alternatively, the pump may be attached to a stationary object in order that it may be used for area sampling. **E 631, E06**

air, saturated—a mixture of dry air and water vapor in which the latter is at its maximum concentration for the prevailing temperature and pressure. **E 41, G03**

air scour—distributing air over the entire area at the bottom of a filter media flowing upward or immersed membrane to improve the effectiveness of filtration or backwashing or to permit the use of lower backwash water flow rate, or both. **D 6161, D19**

air-slaked lime—the product containing various proportions of the oxides, hydroxides, and carbonates of calcium and magnesium which results from the exposure of quicklime to the air in sufficient quantity to show physical signs of hydration (difficult to determine visually in pulverized quicklime). **C 51, C07**

air-space ratio, G_a (D)—ratio of: (1) volume of water that can be drained from a saturated soil or rock under the action of force of gravity, to (2) total volume of voids. **D 653, D18**

air splice, n —*for inflatable restraint fabrics*, the thicker portion of a yarn resulting from the entanglement of the filaments at the ends of two multifilament yarns to create a continuous yarn. **D 6799, D13**

air stripping—removal of volatile substances from a water solution by passing a gas through the solution. **D 6161, D19**

air-supported roof, n —a fabric roof-system that is properly secured and primarily supported and held in place by air pressure. **D 123, D13**

air-supported roof, n —a fabric roof-system that is properly secured and primarily supported and held in place by air pressure. **D 4850, D13**

air-supported structure—an amusement device that incorporates a structural and mechanical system and employs a high-strength fabric or film that achieves its strength, shape, and stability by pretensioning with internal air pressure, all of which are intended to provide an enclosed area for the self enjoyment of those so confined within. **F 747, F24**

air thawing index—see **thawing index**. **D 7099, D18**

airtightness, n —the degree to which a test zone envelope resists the flow of air.

NOTE— ACH_{50} , air leakage rate, and effective leakage area are examples of measures of building airtightness. **E 631, E06**

air void, n —a space in cement paste, mortar, or concrete filled with air; an entrapped air void is characteristically 1 mm or more in width and irregular in shape; an entrained air void is typically between 10 and 1000 μm in diameter and spherical or nearly so. **C 125, C09**

air-void ratio, G_v (D)—the ratio of: (1) the volume of air space, to (2) the total volume of voids in a soil or rock mass. **D 653, D18**

air wicking, n —*in tires*, the passage of air longitudinally along or through yarns in a fabric that has been encased and cured in rubber or other elastomer, that is, air permeability in the plane of the fabric. **D 123, D13**

air wicking, n —*in tires*, the passage of air longitudinally along or through yarns in a fabric that has been encased and cured in rubber or other elastomer, that is, air permeability in the plane of the fabric. **D 6477, D13**

Airy disk—the image of a bright point object, as focused by a lens system. With monochromatic light, it consists of a central point of maximum intensity surrounded by alternate circles of light and darkness caused by the reinforcement and interference of diffracted rays. The light areas are called maxima and the dark areas minima. The distribution of light from the center to the outer areas of the figure was investigated mathematically by Sir George Airy. The diffraction disk forms a basis for determining the resolving power of an ideal lens system. The diameter of the disk depends largely on the aperture of the lens. The diffraction of light causing the Airy disk is a factor limiting the resolution of a well corrected optical system. **E 175, E41**

alabaster—a soft, easily carved massive form of gypsum (calcium sulfate), often pleasingly blotched and stained. A banded stalagmitic calcite is also called alabaster. **C 119, C18**

alabaster glass—a milky-white glass that diffuses light without fiery color. **C 162, C14**

albedo—the fraction of the total solar radiation incident on a body that is reflected by it. **D 7099, D18**

albedo—the use of the term *albedo* is discouraged in favor of the preferred term, **reflectance**. **E 772, E44**

ALC—apparent lead concentration. **E 631, E06**

Alclad, adj —having an aluminum or aluminum-alloy coating that is metallurgically bonded to either one side or both surfaces of an aluminum alloy product, and that is anodic to the alloy to which it is bonded, thus electrolytically protecting the core alloy against corrosion. (See also individual product type such as *Alcladplate*, *Alclad sheet*, and so forth). **B 881, B07**

alclad sheet and plate—composite sheet (and plate) having on both surfaces a metallurgically bonded aluminum or aluminum alloy coating that is anodic to the core alloy to which it is bonded, thus electrolytically protecting the core alloy against corrosion.

alter—See **building modification**.

ambient light—See **lighting**.

E 631, E06

alclad sheet and plate—composite sheet (and plate) having on both surfaces a metallurgically bonded aluminum or aluminum alloy coating that is anodic to the core alloy to which it is bonded, thus electrolytically protecting the core alloy against corrosion.

E 1749, E06

alcohol-benzene solubility—solubility of a cellulosic pulp in a mixture of ethanol and benzene. The term is without precise meaning unless complete specification of an analytical procedure is attached explicitly or implicitly. **D 1695, D01**

alcohols—series of liquid products composed of a hydrocarbon plus a hydroxyl group, such as ethanol ($\text{C}_2\text{H}_5\text{OH}$). **E 1705, E48**

alcove—a narrow channel to convey molten glass from refiner to forehearth or to the revolving pot where it is gathered by the Owens machine. **C 162, C14**

aldehyde groups—carbonyl groups to which a hydrogen atom is attached; the first oxidation stage of an alcohol;—CHO. **D 1695, D01**

aldehydes—a broad class of organic compounds having a generic formula RCHO , and characterized by a carbonyl group. **D 4790, D16**

algae—a major group of lower plants, generally aquatic, photosynthetic of extremely varied morphology and physiology, mono cellular plants with chlorophyll often masked by a brown or red pigment. **D 6161, D19**

alginate, n —a polysaccharide obtained from some of the more common species of marine algae, consisting of an insoluble mix of calcium, magnesium, sodium, and potassium salts. **F 2312, F04**

alginitite—See *alginitite* under **maceral**.

D 121, D05

aliases, n —*in a fractional factorial design*, two or more effects which are estimated by the same contrast and which, therefore, cannot be estimated separately. **E 456, E11**

aliases, n —*in a fractional factorial design*, two or more effects which are estimated by the same contrast and which, therefore, cannot be estimated separately. **E 1325, E11**

aliasing—the appearance of features at wavenumbers other than their true value caused by using a sampling frequency less than twice the highest modulation frequency in the interferogram; also known as “folding.” **E 131, E13**

aliasing, n —the spectrum of a digitized data record exists over the range of frequencies from zero to one half the sampling frequency. If the spectrum of the original signal extends beyond one half the sampling frequency, then those components of the signal at frequencies higher than one half the sampling frequency will, when digitized, be folded back into the spectrum of the digitized signal. The excessive high frequency components will thus be “aliased” into low frequency components. **E 867, E17**

- aligning stiffness coefficient**, *n*—of a tire, the ratio of tire aligning stiffness to the tire normal force. **F 538, F09**
- aligning stiffness** [FL/γ], *n*—of a tire, the rate of change of tire aligning torque with respect to change in tire slip angle, usually evaluated at zero slip angle. **F 538, F09**
- aligning torque** [FL], *n*—of a tire, the component of a tire moment vector tending to rotate a tire about the Z' -axis, positive clockwise when looking in the positive direction of the Z' -axis. **F 538, F09**
- alignment**—a mechanical or electrical adjustment of the components of an optical device in such a way that the path of the radiating beam coincides with the optical axis or other predetermined path in the system. In electron optics there are three general types:
- (1) **magnetic alignment**—an alignment of the electron optical axis of the electron microscope such that the image rotates about a point in the center of the viewing screen when the current flowing through a lens is varied.
 - (2) **mechanical alignment**—a method of aligning the geometrical axis of the electron microscope by relative physical movement of the components, usually as a step preceding either magnetic or voltage alignment.
 - (3) **voltage alignment**—a condition of alignment of an electron microscope such that the image expands or contracts symmetrically about the center of the viewing screen when the accelerating voltage is changed. **E 7, E04**
- alignment**, *n*—the adjustment of various parts of the vehicle's suspension system to ensure proper handling stability and to minimize abnormal tire treadwear. **F 538, F09**
- aliquot**, *n*—a representative portion of the whole that can be expressed as the inverse of an integer. **D 1356, D22**
- alkali**—an industrial term for the oxide of sodium or potassium; less frequently of lithium. **C 162, C14**
- alkali**, *n*—salts of alkali metals, principally sodium and potassium; a hydroxide or carbonate of an alkali metal. **E 2201, E50**
- alkali aggregate reaction**—a chemical reaction between Na_2O and K_2O in the cement and certain silicate minerals in the cement and certain silicate minerals in the aggregate, which causes expansion resulting in weakening and cracking of Portland cement grout. See **reactive aggregate**. **D 653, D18**
- alkali equivalent**, *n*—deprecated term; see **equivalent alkalis**. **C 219, C01**
- alkali ion diode**—a sensor for halogen gases. (See also **halogen leak detector**.) **E 1316, E07**
- alkali metal**, *n*—a metal in Group 1A of the Periodic Table, that is, lithium, sodium, potassium, rubidium, cesium, and francium. **E 2201, E50**
- alkaline detergent**—under **detergent**, see **inorganic alkaline detergent**. **D 459, D12**
- alkaline earth solutions** (AES)—an aqueous solution of the oxide or hydroxide of an element of group IIa in the periodic table, such as calcium or magnesium. These solutions may be strongly alkaline. See **pH**. **C 51, C07**
- alkaline-filled paper**, *n*—a paper containing an alkaline filler such as calcium carbonate; having a pH value in excess of 7 (extract pH usually in the range from 7.5 to 10.0), and containing a reserve buffering capacity that can neutralize acidic materials formed in the paper or acidic gases sorbed from the atmosphere. **D 1968, D06**
- alkaline or basic reaction**—a characteristic of the materials producing the alkalicolor of the indicator used under the conditions prescribed in this method. **D 4790, D16**
- alkaline reserve**, *n*—the level, expressed as moles per kilogram or percent by weight of paper, of alkaline materials (such as calcium carbonate) capable of neutralizing either acidic degradation products formed in paper during its use and storage, or acidic gases sorbed by the paper from the atmosphere. **D 1968, D06**
- alkaline-sized paper**, *n*—paper that has been manufactured using a procedure or process at a pH value above 7 (usually 7.5 to 10.0) that results in paper that has resistance to aqueous liquid penetration. See **sizing**. **D 1968, D06**
- alkalinity**, *n*—the quantitative capacity of aqueous media to react with hydrogen ions. **D 1129, D19**
- alkalinity**—the quantitative capacity of aqueous media to react with hydrogen ions. "M" alkalinity is that which will react with acid as the pH of the sample is reduced to the methylorange endpoint of about 4.5. "P" alkalinity is that which reacts with acid as the pH of the sample is reduced to the phenolphthalein end point of 8.3. "M" is the total alkalinity which is the sum of hydroxide, carbonate, and bicarbonate contents, "P" includes all the hydroxyl and half the carbonate content. **D 6161, D19**
- alkalinity**, *n*—the capacity of water to neutralize acids, a property imparted by the water's content of carbonates, bicarbonates, and hydroxides and occasionally borates, silicates, and phosphates. It is often expressed in milligrams per liter of calcium carbonate (see **calcium carbonate equivalent**). **E 2201, E50**
- alkalinity agent**—a material that can be added to the spray mixture to raise the pH. **E 1519, E35**
- alkali resistance**—for **porcelain enamels**, the degree to which a porcelain enamel will resist attack by aqueous alkaline solutions. **C 286, B08**
- alkali resistance**—for a cellulosic pulp, the fraction insoluble in alkali, usually sodium hydroxide, of a fixed concentration under specified conditions. The term is without precise meaning unless complete specification of an analytical procedure is attached explicitly or implicitly. (see also **alkali solubility**.) **D 1695, D01**
- alkali solubility**, *n*—in **wool**, the percent of clean wool that is soluble in a specified alkaline solution under controlled conditions of temperature and time. **D 123, D13**
- alkali solubility**—for a cellulosic pulp, the fraction in alkali of a fixed concentration under specified conditions. This term is without precise meaning unless complete specification of an analytical procedure is attached explicitly or implicitly. Some related terms imply at least a partial specification, for example, "ten percent potassium hydroxide solubility" or "nondilution alkali solubility." **D 1695, D01**
- alkali-solubility**, *n*—in **wool**, the percent of clean wool that is soluble in a specified alkaline solution under controlled conditions of temperature and time. **D 4845, D13**
- alkali soluble resin**—low molecular weight, acid functional natural resins, modified natural resins, or synthetic copolymers characterized by forming a true solution in water when basified to pH 8 or greater, while being insoluble in water at pH 6 or lower. **D 2825, D21**
- alkali staining**—discoloration caused by the presence of an alkali. **D 1695, D01**
- alkyd plastics**—plastics based on alkyd resins. **D 883, D20**
- alkyd resin**—under **resin, synthetic**, see **alkyd resin**. **D 16, D01**
- alkyd resin**—a polyester convertible into a crosslinked form; requiring a reactant of functionality higher than two, or having double bonds. **D 883, D20**
- alkyd resin**, *n*—a polyester convertible into a crosslinked form; requiring a reactant of functionality higher than two, or having double bonds. **F 1251, F04**
- alkyl benzene sulfonate (in the context of soaps and detergents)**—the detergent produced by sulfonating detergent alkylate; any surface-active substance having the molecular structure of a benzene sulfonic acid having as a ring substituent(s) an alkyl group(s) sufficiently large to confer detergent properties. **D 459, D12**
- alkyl groups**—monovalent aliphatic radicals derived from aliphatic hydrocarbons by removal of a hydrogen. **D 1695, D01**
- alligator**—a general term used for leather made from the skins of all aquatic species with a grain similar to the american alligator which cannot be killed legally and, therefore, is not used by the United States industry. **D 1517, D31**
- alligator (crocodile) cracking**, *n*—interconnected or interlaced cracks forming a pattern which resembles an alligator's hide. **E 867, E17**

alligator (crocodile) cracking, *n*

alligator (crocodile) cracking, *n*—interconnected or interlaced cracks forming a pattern which resembles an alligator's hide.

E 1778, E17

alligator-grained leather—leather of various types, such as calf, sheep or cattlehide embossed to resemble the grain of alligator hide.

D 1517, D31

alligator hide—a defect characterized by an extreme roughness of the porcelain enamel surface: a severe case of orange peel. **C 286, B08**

alligatoring—the cracking of the surfacing bitumen on a built-up roof, producing a pattern of cracks similar to an alligator's hide; the cracks may not extend through the surfacing bitumen.

D 1079, D08

alligatoring—*in protective coatings*, surface cracking of coating film having an appearance similar to alligator hide. **D 4538, D33**

all-in-one cartridge—(also known as cartridge), a process unit that incorporates all the components, including a photoreceptor, toner compartment and charging devices, used in certain electrostatic imaging devices. **F 335, F05**

allogenic or allogenic, *adj*—cells, tissues, and organs in which the donor and recipient are genetically different individuals of the same species. Synonyms: *allograft* and *homograft*. **F 2312, F04**

allograft, *n*—a graft of tissue between individuals of the same species but of disparate genotype. Called also *allogeneic graft* and *homograft*. **F 2312, F04**

allotriomorphic crystal—a crystal whose lattice structure is normal, but whose outward shape is imperfect since it is determined to some extent by the surroundings; the grains in a metallic aggregate are allotriomorphic crystals. **E 7, E04**

allowable bearing value (allowable soil pressure), q_w, p_a (FL⁻²)—the maximum pressure that can be permitted on foundation soil, giving consideration to all pertinent factors, with adequate safety against rupture of the soil mass or movement of the foundation of such magnitude that the structure is impaired. **D 653, D18**

allowable load—capacity assigned to an anchor in accordance with allowable-stress design procedures. **E 2265, E06**

allowable pile bearing load, Q_w, P_a (F)—the maximum load that can be permitted on a pile with adequate safety against movement of such magnitude that the structure is endangered. **D 653, D18**

allowable properties—mechanical properties of materials as prepared for design use. Allowable properties of wood are identified with stress-grade descriptions and reflect the orthotropic structure of wood. Often considered synonymous with allowable unit stresses, working stresses, and design stresses. **D 9, D07**

allowance, *n*—*in construction design planning and estimating*, an allocation of money that is intended to be spent for a specific purpose. **E 833, E06**

alloy, *n*—a unique composition of two or more polymers that has one or more of the polymers treated or processed in a special way to confer enhanced performance characteristics on the resulting material. **D 1566, D11**

alloy, *n*—*in plastics*, two or more immiscible polymers united, usually by another component, to form a plastic vein having enhanced properties. (D20) **F 412, F17**

alloy groups—alloy group includes alloys considered to be chemically equivalent for general purpose use in specifying stainless steel bolts, hex cap screws, studs and nuts. **F 1789, F16**

alloy, *n* (in plastics)—two or more immiscible polymers united, usually by another component, to form a plastic resin having enhanced performance properties. **D 883, D20**

alloy phase, *n*—*in a shape memory alloy*, the crystal structure stable at a particular temperature and stress. **F 2005, F04**

alloy steel, *n*—a steel, other than a stainless steel, that conforms to a specification that requires one or more of the following elements, by mass percent, to have a minimum content equal to or greater than: 0.30 for aluminum; 0.0008 for boron; 0.30 for chromium; 0.30 for cobalt; 0.40 for copper; 0.40 for lead; 1.65 for manganese; 0.08 for molybdenum; 0.30 for nickel; 0.06 for niobium (columbium); 0.60 for silicon; 0.05 for titanium; 0.30 for tungsten (wolfram); 0.10 for vanadium; 0.05 for zirconium; or 0.10 for any

other alloying element, except sulphur, phosphorus, carbon, and nitrogen. **A 941, A01**

alloy steel—steel is considered to be alloy when the maximum range given for manganese exceeds 1.65 % or a definite minimum quantity for any of the following elements is specified or required within the limits of the recognized field of constructional alloy steels: chromium, molybdenum, nickel, or any other alloying element added to obtain a desired alloying effect. **F 1789, F16**

alloy system—a complete series of compositions produced by mixing in all proportions any group of two, or more, components, at least one of which is a metal. **E 7, E04**

all purpose compound, *n*—a compound formulated and manufactured to serve as a taping or finishing compound, or both. **C 11, C11**

all season radial, *n*—a highway tire designed to meet the weather conditions in all seasons of the year, that meets the Rubber Manufacturers Association definition of a mud and snow tire. **D 5681, D34**

alluvial channel—See *alluvial stream*. **D 4410, D19**

alluvial deposit—sediment deposited by the action of moving water. **D 4410, D19**

alluvial fans—sediment deposited in the shape of a segment of a cone formed because of a sudden flattening of a stream gradient especially at debouchures of tributaries on main stream flood plains. **D 4410, D19**

alluvial stream—a stream whose boundary is composed of appreciable quantities of the sediments transported by the flow and which generally changes its bed forms as the rate of flow changes. **D 4410, D19**

alluviation—the process of accumulating sediment deposits at places where the flow is retarded. **D 4410, D19**

alluvium—soil, the constituents of which have been transported in suspension by flowing water and subsequently deposited by sedimentation. **D 653, D18**

alluvium—a general term for all fluvial deposits resulting directly or indirectly from the sediment transport of (modern) streams, thus including the sediments laid down in riverbeds, flood plains, lakes, fans, and estuaries. **D 4410, D19**

allyl plastics—plastics based on allyl resins. **D 883, D20**

allyl resin—a resin made by polymerization of chemical compounds containing the allyl group. **D 883, D20**

alpaca, *n*—the fleece and fiber produced by the alpaca, an animal of the genus *Llama* (*Lama glama pacus*). **D 123, D13**

alpaca, *n*—the fleece and fiber produced by the alpaca, an animal of the genus *Llama* (*Lama glama pacus*). The fiber is obtained from several species, namely, Huacaya and Suri. **D 4845, D13**

alpha (α)—the temperature coefficient of resistance of a PRT over the range 0 to 100 °C. **E 344, E20**

alpha-amylase—enzyme that acts specifically to accelerate the hydrolysis of starch to dextrins. **E 1705, E48**

alpha brass—a solid solution phase of one or more alloying elements in copper and having the same crystal lattice as copper. **E 7, E04**

alpha-cellulose—(1) Historically, a term used to indicate the pure, relative undegraded cellulose found in pulps. (2) Alpha-cellulose content is often measured by TAPPI Method T 203 om-93 where alpha-cellulose is that portion of the pulp which does not dissolve under the test conditions. **D 1695, D01**

alpha complementation—the ability of a short amino-terminal fragment (alpha fragment) of β -galactosidase to form a functional complex with the carboxyl terminal fragment (omega fragment). **E 1705, E48**

alpha iron (Fe)—solid phase of pure iron which is stable at temperatures below 910°C and possesses the body-centered cubic lattice. It is ferro-magnetic below 768°C. **E 7, E04**

alpha (α) loss peak—*in dynamic mechanical measurement*, first peak in the damping curve below the melt, in order of decreasing temperature or increasing frequency, (D 4092, D20). **E 1142, E37**

alpha (α) loss peak (in dynamic mechanical measurement)—the first

- peak in the damping curve below the melt, in order of decreasing temperature or increasing frequency. **D 4092**, D20
- alphameric**—See **alphanumeric**. **F 149**, F05
- alpha-methylstyrene**—2-phenylpropene (C₉H₁₀) mol weight 119.16; colorless liquid; subject to polymerization by heat or catalysts; freezing point, -23.21°C; boiling point, 165.38°C. **D 4790**, D16
- alphanumeric**—term pertaining to both numbers and alphabetical characters, typically used to designate a device capable of handling both types of characters. **E 1316**, E07
- alphanumeric**—pertaining to a character set that contains letters, digits, and usually other characters such as punctuation marks. *Syn.* **alphameric**. **F 149**, F05
- alphanumeric character set**—a character set that contains both letters and digits and may contain control characters, special characters, and the space character. **F 149**, F05
- alphanumeric character subset**—a character subset that contains both letters and digits and may contain control characters, special characters, and the space character. **F 149**, F05
- alpha particle**—a positively charged particle emitted by certain radio-nuclides. It consists of two protons and two neutrons, and is identical to the nucleus of a helium atom. **E 1316**, E07
- alpha pulps**—see **chemical cellulose**. **D 1695**, D01
- alpine permafrost**—permafrost developed in temperate climate mountainous areas. **D 7099**, D18
- altazimuthal mount**—a supporting device that facilitates tracking of the sun and allows rotation about horizontal and vertical axes. It can be used to aim equipment such as heliostats, concentrating collectors, exposure specimens, or radiometers. **E 772**, E44
- alter**, *v*—*in building*, to make different, or to rearrange the layout. **E 631**, E06
- alter**—to change fastener properties such as hardness, tensile strength, surface finish, length, or other characteristics of the fastener through such processes as heat treatment, plating, and machining. **F 1789**, F16
- alteration distributor**—distributor of fasteners who alters a fastener prior to sale and assumes the full responsibilities of the alteration and its affected mechanical and performance characteristics. **F 1789**, F16
- altered tire**, *n*—a scrap tire which has been modified so that it is no longer capable of retaining air, holding water, or being used on a vehicle. **D 5681**, D34
- alternate grade reference line**, *n*—an optional internal line whose orientation is used for the “x” axis of a grade rule. **D 6963**, D13
- alternating force**—See **loading amplitude**. **E 1823**, E08
- alternative agricultural products**, *n*—bio-based industrial products (non-food, non-feed) manufactured from agricultural materials and animal by-products. **E 2114**, E06
- alternative energy**, *n*—see **renewable energy**. **E 2114**, E06
- altitudinal permafrost limit**—the lowest altitude at which mountain permafrost occurs in a highland area outside of the general permafrost region. **D 7099**, D18
- altitudinal permafrost zonation**—the vertical subdivision of mountain permafrost into zones based on mean annual temperatures. **D 7099**, D18
- alum**—aluminum sulfate, AL₂(SO₄)₃XH₂O (X = 14-18), a coagulant. **D 6161**, D19
- alumina-chromia brick**, *n*—a refractory brick, which may be burned or unburned, manufactured predominantly of a mixture of a high-alumina raw material and chromic oxide (Cr₂O₃), with the alumina (Al₂O₃) content being 50 % or greater by weight and with chromic oxide (Cr₂O₃) predominating by weight among the other constituent oxides. **C 71**, C08
- alumina porcelain**—See **alumina porcelain** under **porcelain**. **C 242**, C21
- alumina whiteware**—See **alumina whiteware** under **ceramic whiteware**. **C 242**, C21
- aluminized**—dipped in molten aluminum for coating purposes resulting in smooth, continuous, and adherent aluminum coating. **F 547**, F16
- aluminized**—*in chain link fabric*, describes fabric woven from steel wire that is coated with aluminum before weaving (see Specification A 491). **F 552**, F14
- aluminized coating**, *n*—a coating on steel consisting of either commercially-pure aluminum (Type 2) or aluminum-silicon alloy (Type 1), applied by the hot-dip process. **A 902**, A05
- aluminizing**—forming of an aluminum or aluminum alloy coating on a metal by hot dipping, hot spraying, or diffusion. **B 374**, B08
- aluminous cement**, *n*—deprecated term. **C 219**, C01
- aluminum common nail**—plain-shank, aluminum-alloy, 1 by 0.072 to 6 by 0.262-in. nails with flat 5/32 to 1/32-in. head and medium diamond point. **F 547**, F16
- aluminum enamel**—a porcelain enamel specifically designed for application to aluminum. **C 286**, B08
- alum leather**—leather produced by alum tannage, usually in combination with other substances. Before the invention of chrome-tanning this was the principal method of tanning with mineral agents. **D 1517**, D31
- ambient**, *adj*—surrounding on all sides. **D 1356**, D22
- ambient field**, *n*—when an object or light source is viewed, the complete area beyond the surround from which light might reach the observer’s eyes and influence the object’s appearance. See **surround**. **E 284**, E12
- ambient light**—light not provided by the visual testing system. **E 1316**, E07
- ambient light**—See **lighting**. **E 1480**, E06
- ambient light** (lumièreambiente)—surrounding light, such as that reaching an object in a room from all light sources in the room. **E 631**, E06
- ambient noise**—the composite of airborne sound from many sources near and far associated with a given environment. No particular sound is singled out for interest. **C 634**, E33
- ambient temperature**—the temperature of the surrounding atmosphere as determined by an instrument shielded from direct or reflected rays of the sun. **D 2864**, D27
- ambient temperature**—the temperature of the surroundings, generally assumed to be 20°–25°C. **D 6161**, D19
- ambient temperature**, *n*—the existing temperature of the air or of an object in thermal equilibrium with the surrounding atmosphere. **G 113**, G03
- ambulance**—a vehicle for transportation of the sick and injured, equipped and staffed to provide emergency medical care during transit. **F 1177**, F30
- ambulance service**—a qualified provider of medical transportation for patients requiring treatment or monitoring, or both, due to illness or injury. **F 1177**, F30
- ambulance service provider**—a person or organization, either public or private, responsible for operation, maintenance, and administration of an ambulance service. **F 1177**, F30
- American grain count**, *n*—a direct yarn numbering system for expressing linear density, equal to the mass in grains per 120 yards of sliver or roving. **D 123**, D13
- American grain count**, *n*—a direct yarn numbering system for expressing linear density, equal to the mass in grains per 120 yards of sliver or roving. **D 4849**, D13
- American method**, *n*—*in shingles*, a method of application for roofing shingles, generally rectangular in shape, to provide double coverage with head lap and no side lap. **C 1154**, C17
- American method**—method of application for roofing shingles, generally rectangular in shape, to provide double coverage with head lap and no side lap. **D 2946**, C17
- American Public Health Association (APHA) color**, *n*—see **platinum cobalt color scale**. **E 284**, E12
- American softwood lumber standard**—a voluntary product standard of the U. S. Department of Commerce which serves as a basis for the preparation and revision of industry-sponsored grading rules for lumber. **D 9**, D07
- American Standard Code for Information Interchange**—a data

communications code set consisting of a 7-bit-plus-parity code that can be translated with a leading "0" as an 8-bit set. (See **ASCII**.)
F 1457, F05

American standard lumber—lumber conforming to the basic provisions of the American Softwood Lumber Standard. **D 9, D07**

amino plastics, n—plastics based on amino resins. **D 883, D20**

amino resin, n—a resin made by polycondensation of a compound containing amino groups, such as urea or melamine, with an aldehyde, such as formaldehyde, or an aldehyde-yielding material.
D 883, D20

ammeter shunt—a low-resistance precision resistor with high current carrying capacity connected in parallel with an ammeter.
E 1316, E07

ammoniated ash, n—ash that contains ammonia and/or ammonium salts as a result of the addition of ammonia or ammonium salts to the flue gas at the power plant.
E 2201, E50

amorphous—noncrystalline, or devoid of regular structure.
B 374, B08

amorphous—non crystalline, devoid of regular cohesive structure.
D 6161, D19

amorphous alloy—a semiprocessed alloy produced by a rapid quenching, direct casting process resulting in metals with noncrystalline structure.
A 340, A06

amorphous peat—see **sapric peat**.
D 653, D18

amorphous regions—those regions within a cellulosic material which, on the basis of X-ray diffraction or other suitable technique, do not show any evidence of crystalline structure. The technique should be specified.
D 1695, D01

amorphous selenium (a-Se) radiation detector array—an array employing a biased amorphous selenium photo-conductor that directly converts incident radiation into electrical charge which can then be read to form a digital image.
E 1316, E07

amorphous silica fiber, n—a continuous filament of heat insulating material whose principal constituent is amorphous silica.
E 344, E20

amorphous silicon (α -Si) X-ray detector, n—an amorphous silicon (α -Si) X-ray detector consists of a glass substrate with a matrix of photodiodes fabricated from amorphous silicon and switches arranged in rows and columns upon it; the photodiodes are activated by light photons emitted from a scintillator which is activated by X rays and is usually in close contact with the diode matrix.
E 1316, E07

amosite, n—the acronym assigned to **grunerite asbestos**, and derived from the name of the first developers of a major deposit of this mineral.
D 2946, C17

amount, n—*in cottonfiber testing with the Length Analyzer*, a measure of the thickness or pneumatic density of the test beard, proportional to the number of fibers present at various distances from the base of the specimen clamp jaws.
D 123, D13

amount, n—*in cottonlength testing with the Fibrograph*, a measure of the thickness, or optical density, of the test beard, proportional to the number of fibers present at various distances from the comb(s).
D 123, D13

amount, n—*in cotton fiber testing with the Length Analyzer*, a measure of the thickness or pneumatic density of the test beard, proportional to the number of fibers present at various distances from the base of the specimen clamp jaws.
D 7139, D13

amount, n—*in cotton length testing with the Fibrograph*, a measure of the thickness, or optical density, of the test beard, proportional to the number of fibers present at various distances from the comb(s).
D 7139, D13

ampere—the current that will deposit silver at the rate of 0.0011180 g/s. Current flowing at the rate of 1 C/s.
B 374, B08

ampere per metre, A/m—the unit of magnetic field strength in the SI system of units.
A 340, A06

ampere (turn), A—the unit of magnetomotive force in the SI system of units. The symbol A represents the unit of electric current, ampere, in the SI system of units.
A 340, A06

ampere turns—the product of the number of turns of a coil and the current in amperes flowing through the coil. **E 1316, E07**

amphibole asbestos, n—asbestiform amphibole silicate minerals including the orthorhombic anthophyllite series and the monoclinic cummingtonite (grunerite asbestos [amosite]) series, the tremolite-actinolite series, and the alkali amphibole (riebeckite asbestos [crocidolite]) series, among others. **D 2946, C17**

ampholytic or amphoteric (zwitterionic) surfactant—a chemical compound capable of producing either (or both) positively or negatively charged surface active ions in an aqueous solution. The charge carried on the *ampholytic* surface active ions depends upon the pH of the solution but that on *amphoteric (zwitterionic)* surfactants does not.
D 459, D12

ampholytic surfactant or amphoteric surfactant—see **surface-active agent**.
D 459, D12

amphoteric—capable of acting as an acid or a base. **D 6161, D19**

amphoteric surfactant—a surface-active agent capable of forming, in aqueous solution, either surface-active anions or surface-active cations depending on the pH.
E 609, E35

amphoteric surfactant—a surface-active agent capable of forming, in aqueous solution, either surface-active anions or surface-active cations depending on the pH.
E 1519, E35

amplification factor—ratio of dynamic to static displacement.
D 653, D18

amplifier—a negative lens, used in lieu of an eyepiece, to project under magnification the image formed by an objective. The amplifier is especially designed for flatness of field and should be used with an apochromatic objective.
E 7, E04

ampliphon eyepiece—See **amplifier**.
E 7, E04

amplitude—the vertical pulse height of a signal, usually base to peak, when indicated by an A-scan presentation.
E 1316, E07

amplitude distortion—same as **harmonic distortion**. **E 1316, E07**

amplitude hologram—a recording of the variation of light intensity caused by the interference between the reference beam and the object beam, as light or dark areas on the recording medium. The light and dark interference lines in the recording medium diffract laser light to produce the reconstruction.
E 1316, E07

amplitude response—that property of a test system whereby the amplitude of the detected signal is measured without regard to phase. (See also **harmonic analysis and phase analysis**.)
E 1316, E07

ampoule—a glass container designed to be filled and sealed by fusion of the glass neck.
C 162, C14

ampoule, n—a hermetically sealed, small bulbous glass or plastic vessel. Opening is achieved by breaking the stem. (Also *ampule* or *ampul*.)
D 996, D10

ampule, n—a glass vessel for the storage of liquid materials, possessing a long narrow neck for the purpose of providing a flame-sealed closure.
D 4175, D02

amusement ride or amusement device—a device or combination of devices or elements that carry, convey, or direct a person(s) over or through a fixed or restricted course or within a defined area, for the primary purpose of amusement or entertainment.
F 747, F24

amylaceous, adj—pertaining to, or of the nature of, starch; starchy.
D 907, D14

anaerobe, n—an organism that cannot grow or proliferate in the presence of oxygen.
D 4175, D02

anaerobes—organisms that grow in the absence of air or oxygen and do not use molecular oxygen in respiration.
F 1600, F20

anaerobic, adj—(1) taking place in the absence of oxygen; (2) living or active in the absence of oxygen.
D 4175, D02

anaerobic, n—a condition in which no measurable volume of air is present in the incubation chamber or system.
D 4439, D35

anaerobic—living or active in an airless environment. **E 1705, E48**

anaerobic adhesive, n—an adhesive that is kept in the uncured state by oxygen, as in air, and that cures in the absence of oxygen when exposed to metal ions, especially copper or iron. **D 907, D14**

- anaerobic bacteria**—bacteria that do not use oxygen. Oxygen is toxic to them. See **bacteria, anaerobes**. **D 6161, D19**
- anaerobic bacteria**—microbes whose metabolisms require the absence of free oxygen. **E 1705, E48**
- anaerobic digester**—a chemical reactor in which anaerobic bacteria are used to decompose biomass or organic wastes to produce methane and carbon dioxide. **E 1705, E48**
- anaerobic digestion**—degradation of organic matter by microbes in the absence of air (oxygen) to produce methane and carbon dioxide (biogas). **E 1705, E48**
- anaerobic fermentation**—fermentation processes conducted in the absence of air. The following anaerobic fermentation processes are significant in obtaining useful forms of energy from biomass: (1) alcoholic fermentation, fermentation processes whereby certain microorganisms convert glucose and other substrates with alcohol as an end product, (2) methane fermentation, generally termed anaerobic digestion (See also **anaerobic digestion**). **E 1705, E48**
- analate addition**—a variation of the known addition measurement technique in which the sample (analate) is added to a reagent containing the ion being measured. The electrode is placed in the reagent, and the sample concentration is calculated from the change in electrode potential after the addition of the sample. **D 4127, D19**
- analate subtraction**—a variation of the known subtraction measurement technique in which the sample (analate) is added to a reagent containing an ion that reacts with the species being determined. The electrode is placed in the reagent, the change in electrode potential is observed when the sample is added, and the sample concentration calculated. **D 4127, D19**
- analog image**—an image produced by a continuously variable physical process (for example, exposure of film). **E 1316, E07**
- analog pH/mV meter**—an instrument that displays voltages, pH units, or other concentration units by means of a needle pointer and scale. **D 4127, D19**
- analog to digital converter (a/d)**—a device that changes an analog signal to a digital representation of the signal. **E 1316, E07**
- analysis, *n***—the activity to determine the proximate and ultimate analysis, fuel value and size specification of TDF. **D 5681, D34**
- analysis:**
- analysis area (specimen)*—two-dimensional region of a specimen surface measured in the plane of that surface from which the entire analytical signal or a specified percentage of that signal is detected.
- analysis volume (specimen)*—three-dimensional region of a specimen surface from which the entire analytical signal or a specified percentage of that signal is detected.
- analysis volume (spectrometer)*—three-dimensional region within a spectrometer from which the entire analytical signal or a specified percentage of that signal is detected. **E 673, E42**
- analysis, *n***—an act of inspecting the S/H image and associating this image with a known calibration reference. **F 538, F09**
- analysis bandwidth**—spectral band used in a photometric instrument, such as a densitometer, for the measurement of optical absorbance or reflectance. **E 170, E10**
- analysis cycle time, *n***—the period of time required to properly obtain and analyze a representative sample of the process stream material. **D 4175, D02**
- analysis of variance (ANOVA), *n***—a procedure for dividing the total variation of a set of data into two or more parts, one of which estimates the error due to selecting and testing specimens and the other part(s) possible sources of additional variation. **D 123, D13**
- analysis of variance (ANOVA), *n***—a procedure for dividing the total variation of a set of data into two or more parts, one of which estimates the error due to selecting and testing specimens and the other part(s) possible sources of added variation. **D 4175, D02**
- analysis of variance (ANOVA), *n***—a statistical method of decomposing (or breaking down) the total variance and estimating or testing its contributing component variances for statistical significance. **D 5681, D34**
- analysis run**—a period of measurement time on a given instrument during which data is calculated from a single calibration curve (or single set of curves). Recalibration of a given instrument produces a new analysis run. **E 631, E06**
- analysis sample**—See **analysis sample** under **sample**. **D 121, D05**
- analysis sample, *n***—the final subsample prepared from the air-dried laboratory sample but reduced in particle size by passing through a mill with a 0.5 mm (0.02-in.) size or smaller final screen. **D 5681, D34**
- analysis sample**—the final subsample prepared from the air-dried laboratory sample but reduced by passing through a mill with a 0.5 mm (0.02 in.) size or smaller final screen. **D 5681, D34**
- analysis sample**—final subsample prepared from the air-dried laboratory sample but reduced by passing through a mill with a 0.5-mm (0.02-in.) size or smaller final screen. **E 856, D34**
- analysis wavelength**—wavelength used in a spectrophotometric instrument for the measurement of optical absorbance or reflectance. **E 170, E10**
- analyte, *n***—a possible sample component whose presence and concentration is of interest. **D 1129, D19**
- analyte**—the constituent to be measured. **D 5681, D34**
- analyte, *n***—in *methods of chemical analysis*, the component determined by a method. **E 135, E01**
- analyte, *n***—chemical or element that is the subject of the testing or measurement in a sampling and analytical procedure, e.g. lead in paint. **E 1605, E06**
- analyte**—the specific component measured in an analysis. **E 2161, E37**
- analytical curve**—the graphical representation of a relation between some function of radiant power and the concentration or mass of the substance emitting or absorbing it. **E 131, E13**
- analytical curve**—see **calibration curve**. **E 135, E01**
- analytical detection limit, *n***—a number, expressed in units of concentration (or amount), that describes the lowest concentration level (or amount) that an analyst can determine to be different from an analytical blank (background level). **F 1494, F23**
- analytical gap, *n***—in *atomic emission spectrometry*, the region between two electrodes in which the specimen is excited and from which radiant energy is used for analysis. **E 135, E01**
- analytical line, *n***—the particular wavelength of an element used in determining the presence or concentration of that element. **E 135, E01**
- analytical technique, *n***—a procedure whereby the concentration of the test chemical in a collection medium is quantitatively determined. **F 1494, F23**
- analytical unit, *n***—the actual amount of the sample material analyzed in the laboratory. **D 5681, D34**
- analytical wavelength**—any wavelength at which an absorbance measurement is made for the purpose of the determination of a constituent of a sample. **E 131, E13**
- analyzer, *n***—the instrumental equipment necessary to perform automatic analysis of ambient air through the use of physical and chemical properties and giving either cyclic or continuous output signal.
- analyzer system, *n**—all sampling, analyzing, and readout instrumentation required to perform ambient air quality analysis automatically.
- full scale, *n**—the maximum measuring limit for a given range of an analyzer.
- lag time, *n**—the time interval from a step change in the input concentration at the analyzer inlet to the first corresponding change in the analyzer signal readout.
- linearity, *n**—the maximum deviation between an actual analyzer reading and the reading predicted by a straight line drawn between upper and lower calibration points.
- minimum detection limit, *n**—the smallest input concentration

that can be determined as the concentration approaches zero.

noise, n—random deviations from a mean output not caused by sample concentration changes.

open path analyzer, n—an analytical system that measures the average atmospheric or emission compound concentration along one or more monitoring paths open to the atmosphere. See **monitoring path**.

operating humidity range of analyzer, n—the range of ambient relative humidity of air surrounding the analyzer, over which the analyzer will meet all performance specifications.

operating temperature range of analyzer, n—the range of ambient temperatures of air surrounding the analyzer, over which the monitor will meet all performance specifications.

operational period, n—the period of time over which the analyzer can be expected to operate unattended within specifications.

output, n—a signal that is related to the measurement, and intended for connection to a readout or data acquisition device.

range, n—the concentration region between the minimum and maximum measurable limits.

readout instrumentation, n—output meters, recorder, or data acquisition system for monitoring analytical results.

response time, n—the time interval from a step change in the input concentration at the analyzer inlet to an output reading of 90 % of the ultimate reading.

rise time, n—response time minus lag time.

sample system, n—equipment necessary to provide the analyzer with a continuous representative sample.

span drift, n—the change in analyzer output over a stated time period, usually 24 h of unadjusted continuous operation, when the input concentration is at a constant, stated upscale value.

zero drift, n—the change in analyzer output over a stated time period of unadjusted continuous operation when the input concentration is zero; usually expressed as a percentage change of full scale over a 24-h operational period.

See also **point analyzer**. **D 1356, D22**

analyzer—an optical device, capable of producing plane polarized light, used for detecting the state of polarization. **E 7, E04**

analyzer—an optical device, capable of producing plane polarized light, used for detecting the state of polarization. **E 175, E41**

analyzer, n—an instrument designed to measure a property of the process, material, or environmental condition. **E 2363, E55**

analyzer lag, n—Deprecated term. Use the preferred term **instrument response time**. **D 4175, D02**

analyzer system—See **analyzer**. **D 1356, D22**

analyzer transmission—see **spectrometer transmission**. **E 673, E42**

anchor—in general, a metal shape inserted into a slot or hole in the stone that provides for the transfer of loads from the stone to the building structure, either directly or through an intermediate structure. **C 119, C18**

anchor, v—to secure firmly (*Webster*). **D 996, D10**

anchor, n—a device used to connect securely a **building component** to adjoining construction, to a supporting member, or to the ground. **E 631, E06**

anchor—cast-in-place or post-installed fastening device installed in the base material for the purpose of transferring loads to the base material. **E 2265, E06**

anchor—in a surface-micromachining process, the portion of the test structure where a structural layer is intentionally attached to its underlying layer. **E 2444, E08**

anchor, n—components that are directly attached to the bony elements of the spine (sacrum, lamina, pedicle, vertebral body, spinous process, transverse process, the pelvis, or ribs). **F 1582, F04**

anchorage—the system consisting of stone, anchor and primary

structure, secondary structure or back-up preventing lateral movement of the stone. **C 119, C18**

anchorage, n—a means of connecting securely, by using an **anchor**, a **building component** to adjoining construction, supporting member(s), or to the ground. **E 631, E06**

anchorage system—a group of interacting elements, components, and structures. **E 631, E06**

anchor bolt—steel rod or bar, one end of which is intended to be cast in concrete while the opposite end is threaded and projects from the concrete for anchoring other material to the concrete. The end cast in concrete may be either straight or provided with an anchor, such as a bent hook, forged head, or a tapped or welded attachment to resist forces imposed on the anchor bolt as required. **F 1789, F16**

anchoring point, n—a reference point against which other items are judged. **E 253, E18**

anchoring system—a group of interacting anchors and elements. **E 631, E06**

anchor lip—in a surface-micromachining process, the freestanding extension of the structural layer of interest around the edges of the anchor to its underlying layer. In some processes, the width of the anchor lip may be zero. **E 2444, E08**

anchor loading: axial—load applied concentrically with the anchor longitudinal axis. **E 2265, E06**

anchor loading: bending—flexure induced in the anchor by application of a shear load at a distance from the surface of the base material. **E 2265, E06**

anchor loading: combined—axial and shear loading applied simultaneously (oblique loading). **E 2265, E06**

anchor loading: shear—load applied parallel to the surface of the base material and perpendicular to the anchor's longitudinal axis. **E 2265, E06**

anchor point—structural point on the end connector or along the length of a boom section designed for the attachment of anchor or mooring lines. **F 818, F20**

anchor spacing—distance between anchors measured centerline to centerline. **E 2265, E06**

ancillary equipment—mechanical devices *essential* to the operation of a given boom system; for example, air pumps, hydraulic power supplies, control manifolds, and so forth. **F 818, F20**

andalusite—a polymorph, along with sillimanite and kyanite, of composition $Al_2O_3 \cdot SiO_2$ which on firing dissociates to yield principally mullite. **C 242, C21**

angle, n—see **aperture angle, aperture solid angle, azimuthal angle, entrance angle, observation angle, rotation angle, specular angle**. **E 284, E12**

angle:

collection—*SIMS*, the angle between the normal to the original specimen surface and the axis of the secondary ion collection optics.

of detector—*EIA, SIMS*, the angle between the incident beam direction and the direction pointing from the beam spot to the center of the detector.

of emission—*AES, XPS*, the angle of emission or ejection of electrons from a solid measured relative to the normal to the surface.

of incidence—the angle between the incident beam and the normal to the surface.

of scattering—*EIA*, the angle between the incident beam direction and the direction in which a particle is traveling after it is scattered. If the particle is incident on the detector, this angle will be the same as **angle of detector**.

solid, of detector—*EIA*, the solid angle intercepted by the detector, with the radius originating at the beam spot.

takeoff—*AES, XPS* the angle at which particles leave a specimen measured relative to the plane of the specimen surface. (see **angle of emission**). **E 673, E42**

angle—on countersunk head, total included angle formed by conical underportion or bearing surface. **F 547, F16**

angle—See **lead angle**. **F 547, F16**

angle beam—a term used to describe an angle of incidence or refraction other than normal to the surface of the test object, as in angle beam examination, angle beam search unit, angle beam longitudinal waves, and angle beam shear waves. **E 1316, E07**

angle lapping—a method specimen preparation in which a specimen is mechanically polished at an angle to the original surface.

NOTE—This angle may often be less than 1° so that depth information with respect to the original surface is transformed lateral information. **E 673, E42**

angle of attack, n —in *impingement erosion*, the angle between the direction of motion of an impinging liquid or solid particle and the tangent to the surface at the point of impact. **G 40, G02**

angle of bend, n —the change in the angle between the two legs of the specimen during a bend test, measured before release of the bending forces. **E 6, E28**

angle of external friction (angle of wall friction), δ (degrees)—angle between the abscissa and the tangent of the curve representing the relationship of shearing resistance to normal stress acting between soil and surface of another material. **D 653, D18**

angle of friction (angle of friction between solid bodies), ϕ (degrees)—angle whose tangent is the ratio between the maximum value of shear stress that resists slippage between two solid bodies at rest with respect to each other, and the normal stress across the contact surfaces. **D 653, D18**

angle of illumination, n —angle between the specimen normal and the illuminator axis. **E 284, E12**

angle of incidence, θ —the angle between an incident radiant beam and a perpendicular to the interface between two media. **E 131, E13**

angle of incidence, n —the angle between a ray impinging on a surface at a point and the perpendicular to the surface at that point. In *the description of a beam*, the angle of incidence of the ray at the center of the beam. **E 284, E12**

angle of incidence—the angle between a ray and the normal to the plane on which it is incident. (The plane of incidence may be the aperture plane, the collector, or any other plane of interest.) **E 772, E44**

angle of incidence, n —the angle between an incident ray and the normal to a surface at the point of contact. When referring to a scanner reading a printed symbol, the angle between the light source scanner beam and the symbol position. **F 1294, F05**

angle of incidence, n —in *impingement erosion*, the angle between the direction of motion of an impinging liquid or solid particle and the normal to the surface at the point of impact. **G 40, G02**

angle of inclination—an angle at which the test sheet and supporting base are inclined from the horizontal. (F 254) **F 221, F05**

angle of internal friction (angle of shear resistance), ϕ (degrees)—angle between the axis of normal stress and the tangent to the Mohr envelope at a point representing a given failure-stress condition for solid material. **D 653, D18**

angle of obliquity, $\alpha, \beta, \phi, \Psi$ (degrees)—the angle between the direction of the resultant stress or force acting on a given plane and the normal to that plane. **D 653, D18**

angle of placement of metal connector plate—angle of inclination of lengthwise axis of metal connector plate parallel to longitudinal axis of coiled metal strip, that is, main direction of metal connector plate to direction of test-load application to wood member of connection; with *zero-degree angle* defined as that of lengthwise plate axis being parallel to load direction; and *angle greater than zero* defined as that of lengthwise plate axis being rotated clockwise away from the loading axis when facing the plated connection. **E 631, E06**

angle of reflection: (I) reflection—the angle between the reflected beam and the normal to the reflecting surface.

(2) *diffraction*—the angle between the diffracted beam and the diffracting planes. **E 7, E04**

angle of reflection, n —the angle between a ray reflected from a surface at a point and the perpendicular to the surface at that point. **E 284, E12**

angle of reflection—the angle between the direction of propagation of a reflected ray and the normal to the surface at the point of reflection. **E 772, E44**

angle of refraction—the angle between the direction of propagation of a refracted ray and the normal to the interface at the point of refraction. **E 772, E44**

angle of repose, n —the basal angle of a pile formed by powder when freely poured under specified conditions onto a horizontal surface. **B 243, B09**

angle of repose, n —the acute angle measured from the horizontal to the slope of a cone-shaped pile of free-flowing material. **C 71, C08**

angle of repose, n —the greatest angle, measured from horizontal, attained by a coal so that material on the sides of top of the inverted cone or trench created in car top sampling remains stable, that is, will not shift or slide. Coal size and moisture content are contributing factors to this angle. In all cases, the coal shall be dug so that the physical angle is less than the angle of repose. **D 121, D05**

angle of repose, n —the maximum angle from horizontal at which a given material will rest on a particular stationary surface without sliding or rolling. **E 2201, E50**

angle of repose, α (degrees)—angle between the horizontal and the maximum slope that a soil assumes through natural processes. For dry granular soils the effect of the height of slope is negligible; for cohesive soils the effect of height of slope is so great that the angle of repose is meaningless. **D 653, D18**

angle of shear resistance—see **angle of internal friction**. **D 653, D18**

angle of twist (torsion test), n —the angle of relative rotation measured in a plane normal to the torsion specimen's longitudinal axis over the gage length. **E 6, E28**

angle of view, n —angle between the normal to the surface of the specimen and the axis of the receiver. **E 284, E12**

angle of wall friction—see **angle of external friction**. **D 653, D18**

angle ply—any filamentary lamina orientated in a direction other than that specified as 0° (that is, the reference axis) within a composite assembly. **E 631, E06**

angle ply—any filamentary lamina orientated in a direction other than that specified as 0° (that is, the reference axis) within a composite assembly. **E 1749, E06**

angleply laminate—any balanced laminate consisting of plus and minus theta plies where theta is an acute angle with respect to a reference direction. **D 3878, D30**

angle resolved AES—the recording of Auger electron spectra as a function of angle emission. **E 673, E42**

angle, rotation, n —see **rotation angle**. **E 284, E12**

angstrom (Å)—a unit of length equaling 10^{-10} metres, 10^{-4} μ metres, 10^{-8} centimetres and 3.937×10^{-9} in. The symbol is Å, Å or ÅU. **D 6161, D19**

ångström unit—a unit of linear measure named after A. J. Ångström. It is 1×10^{-10} metres; $1 \mu\text{m} = 10,000 \text{ Å}$. It is generally abbreviated as Å. in the United States; elsewhere, it is variously abbreviated Å, Å., Å.U., Å., or ÅU. **E 175, E41**

ångström unit (Å)— 10^{-8} cm. **B 374, B08**

angstrom unit (Å)—a unit of length which may be used to express the wavelength of electromagnetic radiation, that is, light. One angstrom unit is equal to 0.1 nanometres. ($1 \text{ nm} = 10^{-9} \text{ m}$).

E 1316, E07

Angstrom unit (abbreviation) = Å, Å., or Å. U—a unit of length equal to 10^{-8} cm. This is the standard unit of measurement in X-ray crystallography. **E 7, E04**

angular aggregate—aggregate, the particles of which possess well-defined edges formed at the intersection of roughly planar faces. **D 653, D18**

angular aperture—See **aperture, optical**. E 7, E04
angular aperture—see **aperture, angular**. E 175, E41
angular deviation—the angular displacement of a light ray from its original path caused by non-parallelism of opposite surfaces as it passes through a transparent material, which is expressed in units of angle (degree, minutes of arc, milliradians) and is a function of the angle of incidence at each surface of the material and the index of refraction of the material. F 2429, F07
angular displacement—the angular separation of the secondary image from the primary image as measured from the design eye position of a transparency. F 2429, F07
angular distribution of secondary ions—see **secondary ions**. E 673, E42
angular frequency, ω —the number of radians per second traversed by a rotating vector that represents any periodically varying quantity. E 1142, E37
angular strain, n —use **shear strain**. E 6, E28
angular subtense, n —*visual*, the angle subtended (by an object) at the first nodal point of the eye. E 284, E12
anhydrite, n —the mineral consisting primarily of anhydrous calcium sulfate, CaSO₄. C 11, C11
anhydrite, n —see **calcium sulfate**. C 219, C01
anhydroglucose units—the repeating unit of many polysaccharides, including cellulose; since the glucose molecules have combined with elimination of water, the unit is called “anhydroglucose” rather than “glucose.” D 1695, D01
anhydrous—a material that does not contain water either absorbed on its surface or as water of crystallization; a water-free product. E 1705, E48
anhydrous ethanol—100 % ethanol, neat ethanol, 199 + proof ethanol. E 1705, E48
anhydrous soap—under **soap**, see **anhydrous soap**. D 459, D12
anhydrous, without water—term used in chemistry to denote absence of water. 199 + proof ethanol is considered anhydrous ethanol. E 1705, E48
aniline dyed leather—leather which has been colored by transparent dyes as distinguished from leather treated by pigments or other opaque material. D 1517, D31
aniline finish—a clear finish with little or no pigmentation. D 1517, D31
aniline point—the minimum temperature for complete miscibility of equal volumes of aniline and the sample under test. See Test Methods D 611. In comparing two samples of similar molecular weight, the aniline point can be used as a means of comparing aromatic content of the two samples. A product of high aniline point will be low in aromatics and naphthenes, and therefore high in paraffins. D 2864, D27
aniline point, n —the minimum equilibrium solution temperature for equal volumes of aniline (aminobenzene) and sample. D 4175, D02
aniline point, n —the minimum equilibrium solution temperature for equal volumes of aniline and sample. D 4175, D02
animal fiber, n —any natural protein-base fiber. D 123, D13
animal fiber, n —any natural protein-base fiber. D 4845, D13
anion—a negatively-charged ion. B 374, B08
anion—negatively charged ion. D 6161, D19
anion—a negatively charged ion. G 15, G01
anion-exchange material, n —a material capable of the reversible exchange of negatively charged ions. D 1129, D19
anion exchange material—a material capable of the reversible exchange of negatively charged ions. D 6161, D19
anion exchange membrane—membrane containing fixed cationic charges and mobile anions that can be exchanged with other anions present in an external fluid in contact with the membrane. D 6161, D19

anionic detergent—under **detergent**, see **anionic detergent**. D 459, D12
anionic emulsion, n —a type of emulsion such that a particular emulsifying agent establishes a predominance of negative charges on the discontinuous phase. D 8, D04
anionic emulsion—an emulsion in which the emulsifying system establishes a predominance of negative charges on the discontinuous phase. D 1079, D08
anionic polyelectrolyte—usually acrylamide or acrylamide and acrylic copolymers, negatively charged, used for coagulation/flocculation. See **Polyelectrolyte**. D 6161, D19
anionic surfactant—a chemical compound that produces negatively charged surface active ions in solution. D 459, D12
anionic surfactant—a surface-active agent in which the active portion of the molecule containing the lipophilic segment forms exclusively a negative ion (anion) when placed in aqueous solution. E 609, E35
anionic surfactant—a surface-active agent in which the active portion of the molecule containing the lipophilic segment forms exclusively a negative ion (anion) when placed in aqueous solution. E 1519, E35
anisotropic, *adj*—as used in Test Method D 5061, exhibiting optical properties of different values when viewed with an optical microscope having mutually exclusive polarized light, for example, crossed nicols. D 121, D05
anisotropic—not isotropic; having mechanical or physical properties, or both, that vary with direction relative to natural reference axes in a material. E 631, E06
anisotropic—not isotropic; having mechanical or physical properties, or both, that vary with direction relative to natural reference axes in a material. E 1749, E06
anisotropic, *adj*—having different values for a specific property in different directions. F 1494, F23
anisotropic mass—a mass having different properties in different directions at any given point. D 653, D18
anisotropic material—a material in which the magnetic properties differ in various directions. A 340, A06
anisotropic membrane—a non-uniform structure in cross-section; typically the support substructure has pores much larger than the barrier layer. See **asymmetric membranes**. D 6161, D19
anisotropic (replaces anisotropy)—having different values for a property, in different directions. E 7, E04
anisotropy—having different properties in different directions. (ISRM) D 653, D18
anisotropy of loss—the ratio of the specific core loss measured with flux parallel to the rolling direction to the specific core loss with flux perpendicular to the rolling direction.

$$\text{anisotropy of loss} = \frac{P_{c(B:f)l}}{P_{c(B:f)t}}$$

where:

$P_{c(B:f)l}$ = specific core loss value with flux parallel to the rolling direction, W/lb [W/kg], and
 $P_{c(B:f)t}$ = specific core loss value with flux perpendicular to the rolling direction, W/lb [W/kg].

NOTE—This definition of anisotropy normally applies to electrical steels with measurements made in an Epstein frame at a flux density of 15 kG [1.5 T] and a frequency of 60 Hz (see Test Method A 343).

A 340, A06

anisotropy of permeability—the ratio of relative peak permeability measured with flux parallel to the rolling direction to the relative peak permeability measured with flux perpendicular to the rolling direction.

$$\text{anisotropy of permeability} = \frac{\mu_{prl}}{\mu_{prt}}$$

where:

μ_{prl} = relative peak permeability value with flux parallel to the rolling direction, and

μ_{prt} = relative peak permeability value with flux perpendicular to the rolling direction.

NOTE—This definition of anisotropy normally applies to electrical steels with measurements made in an Epstein frame at a flux density of 15 kG [1.5 T] and a frequency of 60 Hz (see Test Method A 343).

A 340, A06

ankle, n—*in anatomy*, the joint between the foot and the lower leg.

D 123, D13

ankle, n—the joint between the foot and the lower leg. D 5219, D13

ankle girth, n—*in body measurements*, the circumference of the leg over the greatest prominence of the ankle. D 123, D13

ankle girth, n—the maximum horizontal circumference of the ankle, taken over the greatest prominence of the anklebones.

D 5219, D13

ankle height, n—*in body measurements*, with the subject standing barefoot, the distance from the center of the prominent outside ankle bone to the floor. D 123, D13

ankle height, n—the vertical distance from the prominence of the outer ankle bone to the floor, taken with subject standing and without shoes.

ankle height (infant special case), n—the straight distance from the prominence of the outer ankle bone to the soles of the feet, taken with subject lying down flat with legs extended and the foot positioned at 1.57 rad (90°) to the leg.

D 5219, D13

anneal—to attain acceptably low stresses, or desired structure, or both, in glass by controlled cooling from a suitable temperature.

C 162, C14

anneal, v—to heat treat in order to remove the effects of cold-working or aging heat treatments, or both.

F 2005, F04

anneal (annealing)—a thermal treatment to change the properties or grain structure of the product. When applied to a cold-worked product having a single phase: to produce softening by recrystallization or recrystallization and grain growth, with the accompanying changes in properties. When applied to a product having two or more phases: to produce softening by changes in the phase relationship which may include recrystallization and grain growth.

B 846, B05

annealed—heated and subsequently cooled to provide increased ductility.

F 547, F16

annealed wire—see **soft wire**.

B 354, B01

annealing, n—a generic term covering any of several **heat treatments**.

A 941, A01

annealing—a controlled cooling process for glass designed to reduce residual stress to a commercially acceptable level and modify structure.

C 162, C14

annealing—see Terminology A 919.

C 286, B08

annealing—general term applied to a variety of thermal treatments applied to fasteners for the purpose of softening or homogenizing material properties.

F 1789, F16

annealing acid—see **acid annealing** and **annealing**. C 286, B08

annealing point (A.P.)—that temperature corresponding either to a specific rate of elongation of a glass fiber when measured by Test Method C 336, or a specific rate of midpoint deflection of a glass beam when measured by Test Method C 598. At the annealing point of glass, internal stresses are substantially relieved in a matter of minutes.

C 162, C14

annealing range—the range of glass temperature in which stress in glass can be relieved at a commercially practical rate. For purposes of comparing glasses, the annealing range is assumed to corre-

spond with the temperature between the annealing point (A.P.) and the strain point (St.P.).

C 162, C14

annealing-twin bands—See **twin bands**.

E 7, E04

annihilation radiation—gamma radiation produced by the annihilation of a positron and an electron. For particles at rest, two photons are produced, each having an energy corresponding to the rest mass of an electron (511 keV).

E 170, E10

annotation text, n—optional user text that can be specifically defined and displayed when the pattern piece is plotted. D 6963, D13

annually recurring costs—those costs that are incurred in a regular pattern each year throughout the study period.

apartment—See **dwelling unit**.

apartment building—See **building**.

E 631, E06

annually recurring costs, n—those costs that are incurred in a regular pattern each year throughout the study period. E 833, E06

annual ring—the growth layer produced by the tree in a single growth year, including earlywood and latewood. D 9, D07

annual space; annulus—the space between two concentric tubes or casings, or between the casing and the borehole wall. This would include the space(s) between multiple strings of tubing/casings in a borehole installed either concentrically or multi-cased adjacent to each other.

D 653, D18

annual value—a uniform annual amount equivalent to the project costs or benefits taking into account the time value of money throughout the study period (Syn. *annual worth, equivalentuniform annual value*).

annual worth—See **annual value**.

E 631, E06

annual value, n—a uniform annual amount equivalent to the project costs or benefits taking into account the time value of money throughout the study period (Syn. *annual worth, equivalent uniform annual value*).

E 833, E06

annual worth, n—See **annual value**.

E 833, E06

annular, adj—descriptor for directional illuminating (or viewing) geometry in which the illuminator provides radiation (or the receiver possesses responsivity) that is distributed continuously and uniformly throughout the 360° of azimuth of the measurement. (See also *circumferential*.)

E 284, E12

annular coil clearance—the mean radial distance between adjacent coil assembly and test part surface in electromagnetic encircling coil examination.

E 1316, E07

annular coils—see **encircling coils**.

E 1316, E07

annular space—the space between the inner surface of the female end and the outer surface of the male end of an assembled pipe joint.

C 822, C13

annular thread—multiple ring-like threads rolled completely around shank in planes perpendicular to nail axis; having a lead angle of zero degree.

F 547, F16

anode—the electrode in electrolysis, at which negative ions are discharged, positive ions are formed, or other oxidizing reactions occur.

B 374, B08

anode—positive electrode.

D 6161, D19

anode—the positive electrode of a discharge tube. In an X-ray tube, the anode carries the target.

E 1316, E07

anode—the electrode of an electrolytic cell at which oxidation is the principal reaction. (Electrons flow away from the anode in the external circuit. It is usually the electrode where corrosion occurs and metal ions enter solution.)

G 15, G01

anode aperture—See **aperture**.

E 7, E04

anode corrosion—dissolution of anode metal by the electrochemical action in an electrolytic cell.

B 374, B08

anode corrosion efficiency—the ratio of the actual corrosion (weight loss) of an anode to the theoretical corrosion (weight loss) calculated by Faraday's law from the quantity of electricity that has passed.

G 15, G01

anode current—the electrons passing from the cathode to the anode in an X-ray tube, minus the small loss incurred by the back scattered fraction.

E 1316, E07

anode efficiency

anode efficiency—current efficiency of a specified anodic process.

B 374, B08

anode fall—the potential difference between the anode and the electrical discharge plasma.

B 542, B02

anode film—(1) the layer of solution in contact with the anode that differs in composition from that of the bulk of the solution. (2) The outer layer of the anode itself consisting of oxidation or reaction products of the anode metal.

B 374, B08

anode polarization—See **polarization**.

B 374, B08

anodic (anode) material transfer—see **material transfer**.

B 542, B02

anodic coating—a protective, decorative, or functional coating, formed by conversion of the surface of a metal in an electrolytic oxidation process.

B 374, B08

anodic inhibitor—a corrosion inhibitor whose primary action is to slow the kinetics of the anodic reaction, producing a positive shift in corrosion potential.

G 15, G01

anodic polarization—the change of the electrode potential in the noble (positive) direction due to current flow. (See **polarization**.)

G 15, G01

anodic protection—a technique to reduce the corrosion rate of a metal by polarizing it into its passive region where dissolution rates are low.

G 15, G01

anodic stripping voltammetry—an electroanalytical technique in which the concentration of analyte metal species dissolved in solution is determined in the following manner. The analyte is first deposited (preconcentrated) electrochemically by reducing the dissolved ion in solution to immobilized metal species at a mercury electrode surface. The metal is deposited in the form of an amalgam (with Hg) at an applied potential (voltage) which is negative of the standard oxidation potential for the metal/ion redox couple. After deposition, the preconcentrated metal species is then “stripped” from the mercury electrode by applying a positive potential sweep, which causes anodic oxidation of the analyte metal species to dissolved ion. The current associated with this reoxidation is measured. The peak current is proportional to the original concentration of dissolved analyte species over a wide range of concentrations.

E 631, E06

anodic stripping voltammetry—an electroanalytical technique in which the concentration of a metal species analyte (such as lead) in a solution is determined by deposition (by reduction) on an electrode, then stripping from it (by oxidation). The peak electrical current is measured during stripping, and is proportional to the original metal concentration.

E 1605, E06

anodized aluminum—natural-colored or surface-colored aluminum having increased anodic corrosion resistance.

F 547, F16

anodizing—an electrolytic oxidation process in which the surface of a metal, when anodic, is converted to a coating having desirable protective, decorative, or functional properties.

B 374, B08

anolyte—the portion of electrolyte in the vicinity of the anode; in a divided cell, the portion of electrolyte on the anode side of the diaphragm.

B 374, B08

anolyte—the electrolyte adjacent to the anode of an electrolytic cell.

G 15, G01

anomaly, n—a change in the strain pattern of the rubber surface of a straining block as a result of applied stress brought about through a change in atmospheric pressure on the rubber surface.

F 538, F09

anosmia, n—lack of sensitivity to odor stimuli.

E 253, E18

A-not-A test, n—a method of discrimination testing comprised of at least two samples; at least one sample is a previously identified sample (“A”) and at least one is a test sample. All samples are presented blindly, and the assessor’s task is to assign the label “A” or “not-A” to each of the samples.

E 253, E18

ANOVA, n—in statistics, acronym for analysis of variance.

D 4175, D02

anoxic, adj—oxygen free.

D 4175, D02

antagonism, n—joint action of two or more stimuli whose combination elicits a level of sensation lower than that expected from combining the effects of each stimulus taken separately.

E 253, E18

antelope finish suede—applied to lambskin, goatskin, or calfskin, sueded and finished to resemble antelope.

D 1517, D31

antelope leather—a fine, soft leather made from an antelope skin, velvety in texture and sheen, sueded on the flesh side. This leather is so rare, that for practical purposes, it is virtually nonexistent.

D 1517, D31

anteroposterior—extending from the front to the rear.

F 869, F08

anthophyllite asbestos, n—asbestiform variety of the orthorhombic amphibole silicate minerals of the anthophyllite series.

D 2946, C17

anthracite—See **anthracite** under **rank**.

D 121, D05

anthracite—a granular hard coal used as a filtration media, commonly used as the coarser layer in dual and multimedia filters.

D 6161, D19

anthracite-coal-base carbon refractory, n—see **carbon refractory, anthracite-coal-base**.

C 71, C08

anthracitic class—See **anthracitic class** under **rank**.

D 121, D05

anthropometry—the science of the measurement of the human body and its parts.

F 869, F08

anti-aliasing filter, n—a low-pass analog filter applied to the original analog profile signal to suppress those components of the signal at frequencies higher than one half the intended digital sampling frequency.

E 867, E17

anticoagulant (natural rubber latex), n—a substance added to field latex to retard bacterial action which would otherwise cause rapid coagulation of the latex.

D 1566, D11

antidegradant, n—compounding material used to retard deterioration caused by oxidation, ozone, light, and combinations of these.

D 1566, D11

antidunes—bed forms that occur at a velocity higher than that velocity which forms dunes and plane beds. Antidunes commonly move upstream, and are accompanied by, and in phase with, waves on the water surface.

D 4410, D19

antiferromagnetic material—a feebly magnetic material in which almost equal magnetic moments are lined up antiparallel to each other. Its susceptibility increases as the temperature is raised until a critical (Neél) temperature is reached; above this temperature the material becomes paramagnetic.

A 340, A06

antiflex cracking agent, n—a compounding material used to retard cracking caused by cyclic deformations.

D 1566, D11

antifoam, n—a substance added to engine coolant concentrate, corrosion inhibitor packages, or supplemental coolant additives to prevent or suppress foam.

D 4725, D15

antifoaming agent, n—an agent that inhibits bubble formation in an agitated liquid, usually by reducing the surface tension.

D 1566, D11

antifoaming agent—a material used to inhibit or prevent the formation of foam.

E 1519, E35

antifoulant—see **antiscalant**.

D 6161, D19

antifreeze, n—a term frequently used in the marketplace for engine coolant concentrate. (See **engine coolant concentrate**.)

D 4725, D15

antifreeze—a material that lowers the freezing point of a liquid formulation.

E 609, E35

anti-knock index, n—the arithmetic average of the Research octane number (RON) and Motor octane number (MON).

D 4175, D02

antiknock index, n—the arithmetic average of the Research octane number (RON) and Motor octane number (MON), that is, (RON + MON)/2.

D 4175, D02

anti-lock braking system (ABS), n—a collection of sensing and control hardware installed on a vehicle to prevent wheel lock-up during brake application.

F 538, F09

antimicrobial, n—see **biocide**.

D 4175, D02

antimony—an industrial term for an oxide of antimony.

C 162, C14

antioxidant, n—compounding material used to retard deterioration caused by oxidation.

D 1566, D11

antioxidant—compounding ingredient used to retard deterioration caused by oxidation. (D11)

F 412, F17

- antioxidant*—see **stabilizer**. **F 1623, F05**
- antiozonant**, *n*—compounding material used to retard deterioration caused by ozone. **D 1566, D11**
- anti-pitting agent**—an addition agent for the specific purpose of preventing gas pits in a deposit. **B 374, B08**
- antiqued**—a worn surface produced by applying abrasive tools, sometimes in combination with acid and/or wet/dry abrasive. **C 119, C18**
- antiscalant**—a compound added to a water which inhibits the precipitation of sparingly soluble inorganic salts. **D 6161, D19**
- anti-scale compound**—a preparation that is applied to burning tools to protect them from scaling in service. **C 286, B08**
- anti-skid plate**—See **loading**. **D 996, D10**
- antistat**—a chemical additive, generally added to the back side or printhead side of thermal products, which enhances the conductivity of the coating, allowing static electric charges to be bled off during the production processes or during the operation of the product in a machine. **F 1623, F05**
- antistatic agent**, *n*—a material which reduces the tendency for accumulation of electric charge on the surface of an article. **D 1566, D11**
- antistatic agent**—a chemical compound which, when impregnated or formulated into or topically applied to a primary material or substrate, gives the primary material antistatic properties. See **antistatic property**. **D 5077, D10**
- antistatic property**—the prevention of triboelectric charge generation by effectively minimizing the production of a static charge when materials are separated from another surface. **D 5077, D10**
- anti-Stokes line (band)**—a Raman line (band) that has a frequency higher than that of the incident monochromatic beam. **E 131, E13**
- anti-telescoping device**—a plastic or metal device attached to the ends of a spiral wound cartridge to prevent movement of the cartridge leaves in the feed flow direction, due to high feed flows. **D 6161, D19**
- anti-thixotropy**—an increase of the apparent viscosity under constant shear stress or shear rate followed by a gradual recovery when the stress or shear rate is reduced to zero. **E 1142, E37**
- anvil**—the base on which objects for hardness test are placed. **E 7, E04**
- anvil**, *n*—the smooth, hardened surface upon which the test sample or cup containing the sample rests. **E 1445, E27**
- anvil**—tool arm against which staple legs are driven to form clinch. **F 592, F16**
- anvil effect**—the effect caused by use of too high a load or when testing the hardness of too thin a specimen, resulting in a bulge or shiny spot on the under side of the specimen. **E 7, E04**
- AOC**—assimilable organic carbon. **D 6161, D19**
- AOQL**, *n*—The average outgoing quality limit of a sampling plan is the maximum value of the proportion defective accepted on average by that plan. AOQL is the maximum value of the multiplicand of the proportion nonconforming and the probability of acceptance from the sampling plan operating characteristic. **C 1154, C17**
- APA bead**, *n*—alginate-poly-L-lysine-alginate bead. **F 2312, F04**
- apartment**—a separate part of a **building** intended as a **dwelling unit** for an individual, family, group, or small household (also used as a synonym for **apartment building**). **E 631, E06**
- apartment building**—a **building** containing more than two **dwelling units** not intended for individual unit ownership. **E 631, E06**
- aperture**—an opening in material, space, or time over which an element is considered to be active. **E 1316, E07**
- aperture angle**, 2κ , *n*—angle subtended at a point on a specimen by the maximum dimension of the illuminator or receiver, within which the flux in a directional beam is contained. **E 284, E12**
- aperture, angular**—the angle between the most divergent rays that can pass through a lens to form the image of an object. **E 175, E41**
- aperture area**—see **area, aperture**. **E 772, E44**
- aperture diaphragm**—a device to define the aperture. **E 7, E04**
- aperture, effective**—the diameter of the entrance pupil; it is the apparent diameter of the limiting aperture measured from the front. **E 175, E41**
- aperture, electron**:
- anode aperture**—the opening in the accelerating voltage anode shield of the electron gun through which the electrons must pass to illuminate or irradiate the specimen.
- condenser aperture**—an opening in the condenser lens controlling the number of electrons entering the lens and the angular aperture of the illuminating beam. The angular aperture can also be controlled by the condenser lens current.
- physical objective aperture**—a metal diaphragm, centrally pierced with a small hole, used to limit the cone of electrons accepted by the objective lens. This improves image contrast since highly scattered electrons are prevented from arriving at the Gaussian image plane and therefore can not contribute to background fog. **E 7, E04**
- aperture leak**—a leak of such geometric configuration that the length of the leakage path is much smaller than the shortest diameter of the path, so that the leak may be considered the equivalent of an opening in an infinitesimally thin wall. **E 1316, E07**
- aperture mode**, *n*—color seen through an aperture which prevents its association with a specific object or source. **E 284, E12**
- aperture of an IRE**, *A'*—that portion of the IRE surface that can be utilized to conduct light into the IRE at the desired angle of incidence. **E 131, E13**
- aperture, optical**—the working diameter of a lens or a mirror.
- angular aperture**—the angle between the most divergent rays which can pass through a lens to form the image of an object. **E 7, E04**
- aperture size**, *n*—the dimension defining an opening in a sieving medium. **E 1638, E29**
- aperture solid angle**, ω , *n*—solid angle subtended at a point on the specimen, defined by the sum of rays from the illuminator or the sum of directions in which the receiver is sensitive to incoming radiation. **E 284, E12**
- aperture stop**, *n*—the physical diameter that limits the size of the cone of radiation that an optical system will accept from an axial point on the object. **E 284, E12**
- apex**, *n*—the uppermost point of a character. **E 2195, E30**
- apex (aka pocket)**—pocket formed at the downstream end of a U, V, J, or W shaped configuration. **F 818, F20**
- API**—abbreviation for American Petroleum Institute. **D 4175, D02**
- API gravity**—an arbitrary scale developed by the American Petroleum Institute and frequently used in reference to petroleum insulating oil. The relationship between API gravity and specific gravity 60/60°F is defined by the following:
- $$\text{Deg API Gravity at } 60^\circ\text{F} = 141.5/(\text{sp gr } 60/60^\circ\text{F}) - 131.5$$
- D 2864, D27**
- API gravity**, *n*—a special function of relative density (specific gravity) 60/60°F (15.56/15.56°C), represented by:
- $$\text{API gravity, deg} = (141.5/\text{sp gr } 60/60^\circ\text{F}) - 131.5$$
- D 4175, D02**
- API gravity**, *n*—the gravity obtained from the following relationship:
- $$\text{API Gravity, deg} = 141.5/(\text{sp gr } 60/60^\circ\text{F}) - 131.5$$
- E 344, E20**
- aplanatic**—corrected for spherical aberration and coma. **E 175, E41**
- apochromatic objective**—an objective with longitudinal chromatic correction for red, green and blue, and spherical chromatic correction for green and blue. This is the best choice for high resolution or color photomicrography. **E 7, E04**

apochromatic objective

apochromatic objective—a lens system whose secondary chromatic aberrations have been substantially reduced. (See *achromatic*).

E 175, E41

apodization—modification of the ILS function by multiplying the interferogram by a weighting function the magnitude of which varies with retardation.

E 131, E13

apparent area of contact, n —*in tribology*, the area of contact between two solid surfaces defined by the boundaries of their macroscopic interface. (Contrast with **real area of contact**.)

G 40, G02

apparent attenuation—the observed ultrasound energy loss. In addition to the true loss, the apparent attenuation may also include losses attributable to instrumentation, specimen configuration, beam divergence, interface reflections, and measurement procedure. (E 664)

E 1316, E07

apparent cohesion—see **cohesion**.

D 653, D18

apparent density, n —the mass of a unit volume of powder, usually expressed as grams per cubic centimetre, determined by a specified method.

B 243, B09

apparent density—See **density, apparent**.

D 883, D20

apparent density, n —See **density, bulk**, the preferred term.

D 1566, D11

apparent density—the density calculated when the pycnometer is calibrated with water, weighed in air, and when the sample is weighed in air and no air buoyancy correction is used for either weighing, even though the density in vacuum of water is used in calculating the apparent volume of the pycnometer. D 4790, D16

apparent density—the weight per unit volume of a material including voids inherent in the material as tested.

F 412, F17

apparent density—see **density, apparent**.

F 1251, F04

apparent density at 60°F—the weight in air of a unit volume of sample at 60°F; in this method, the weight is in pounds and the volume in U.S. liquid gallons. Average air in this method is assumed to have a density of 0.0012 g/cm³.

D 4790, D16

apparent hardness, n —the hardness of a P/M material (including the effects of porosity), measured using macroindentation hardness equipment.

B 243, B09

apparent heat capacity—the amount of heat required to raise the temperature of a unit mass of frozen ground by one degree. It is expressed in Joules per kg per degree K.

D 7099, D18

apparent lead concentration (ALC)—the average of at least three XRF analyzer readings on a coated surface.

architectural program—See **facility program**.

E 631, E06

Apparent Lead Concentration (ALC)—The x-ray fluorescence (XRF) reading or average of more than one reading on a painted surface, not corrected for the substrate.

E 1605, E06

apparent opening size (AOS), O_{95} , n —*for a geotextile*, a property which indicates the approximate largest particle that would effectively pass through the geotextile.

D 4439, D35

apparent or pycnometric density—See *apparent or pycnometric density* under **density**.

C 242, C21

apparent porosity, n —specific to cemented carbides, microstructural features that appear to be pores in a properly prepared, unetched surface; these features may result from uncombined carbon or nonmetallic inclusions as well as actual porosity.

B 243, B09

apparent porosity—See *apparent porosity* under **porosity**.

C 242, C21

apparent power, P_a —the product (volt-amperes) of the rms exciting current and the applied rms terminal voltage in an electric circuit containing inductive impedance. The components of this impedance as a result of the winding will be linear, while the components as a result of the magnetic core will be nonlinear. The unit of apparent power is the volt-ampere, VA.

A 340, A06

apparent power, specific, $P_{a(B,f)}$ —the value of the apparent power divided by the active mass of the specimen, that is, volt-amperes per unit mass. The values of voltage and current are those developed at a maximum value of cyclically varying induction B and specified frequency f .

A 340, A06

apparent rank, n —*of coal*, the rank designation obtained on samples

other than channel samples, but otherwise conforming to procedures of Classification D 388.

D 121, D05

apparent solar time, apt—the hours of the day as computed from the position of the sun using the equation of time. (See ASHRAE *Handbook of Applications*, 1982, Chapter 57.)

E 772, E44

apparent surface resistivity—the surface resistance between two electrodes forming opposite sides of a square on the surface of the copy substrate or the electrical equivalent.

F 335, F05

apparent temperature—the temperature of an object as determined solely from the measured radiance, assuming an emissivity of unity.

E 1316, E07

apparent thermal conductivity, λ_a , k_a , n —a thermal conductivity assigned to a material that exhibits thermal transmission by several modes of heat transfer resulting in property variation with specimen thickness, or surface emittance. See **conductivity, thermal**.

C 168, C16

apparent thermal resistivity, r_a , n —a thermal resistivity assigned to a material that exhibits thermal transmission by several modes of heat transfer resulting in property variation with specimen thickness, or surface emittance. See **resistivity, thermal**.

C 168, C16

apparent viscosity, n —*in non-Newtonian behavior*, the ratio of the shearing stress to the rate of shear of a fluid, given at the corresponding shearing stress.

D 907, D14

apparent viscosity, n —*of a lubricating grease*, the ratio of shear stress to shear rate calculated from Poiseuille's equation, and is measured in poises.

D 4175, D02

apparent viscosity, n —the determined viscosity obtained by use of this test method.

D 4175, D02

appearance, n —(1) the aspect of visual experience by which things are recognized.

(2) *in psychophysical studies*, perception in which the spectral and geometric aspects of a visual stimulus are integrated with its illuminating and viewing environment.

E 284, E12

apple-box nail—coated, regular-stock-steel, 1½ and 1¾ by 0.080-in. nails with flat 1¼-in. head and medium diamond point.

F 547, F16

applicable or relevant and appropriate requirements (ARAR)

—those requirements, cleanup standards, standards of control, and other substantive environmental protection requirements, criteria, or limitations promulgated under federal or state law that show either a direct correspondence or address problems or situations sufficiently similar at a site to show that they are well suited for application.

D 5681, D34

applicable standards—those having the capability of being applied in some fashion to the host standard.

F 1789, F16

application rate—the quantity (mass, volume or thickness) of material applied per unit area.

D 1079, D08

application rate—the amount of any material applied per unit treated:

E 1102, E35

application temperature, n —the range of material temperature, as recommended by the manufacturer, that is to be used when installing sealant; for hot-applied sealants, the application temperature is any temperature between the minimum application temperature and safe heating temperature.

D 5535, D04

applicator—any device used to mechanically apply molten sealants that is capable of delivering the required volume at the specified application temperature.

C 717, C24

applied-K curve—a curve (a fixed-force or fixed-displacement crack-extension-force curve) obtained from a fracture mechanics analysis for a specific configuration. The curve relates the stress-intensity factor to crack size and either applied force or displacement.

E 1823, E08

approving authority—the individual official, board, department, or agency established and authorized by a state, county, city, or other political subdivision, created by law to administer and enforce specified requirements.

C 896, C04

approving authority—the individual official, board, department, or agency established and authorized by a state, county, city, or other

- political subdivision, created by law to administer and enforce specified requirements. **F 412, F17**
- approximate freezing index**—the cumulative number of degree-days below 0°C for a given period, calculated from the mean monthly temperatures for a given station without making corrections for positive degree-days in the spring and fall. **D 7099, D18**
- approximate thawing index**—the cumulative number of degree-days above 0°C for a given period, calculated from the mean monthly temperatures for a given station without making corrections for negative degree-days in the spring and fall. **D 7099, D18**
- apron leathers**—any one of several varieties of leather used in connection with textile machinery and blacksmith aprons. Comber and Gill Box apron leather is soft, mellow, tough leather, tanned from steerhides, heavily stuffed and boarded or otherwise softened. Rub Roll apron leather is a flexible but firm, dry, strong leather. **D 1517, D31**
- apron mark**—See **decating mark**. **D 3990, D13**
- aqueous extract**, *n*—*in wool testing*, the solution obtained by digesting a material with water or with a sodium chloride solution to dissolve soluble materials. **D 123, D13**
- aqueous extract**, *n*—*in wool testing*, the solution obtained by digesting a material with water or with a sodium chloride solution to dissolve soluble materials. **D 4845, D13**
- aquiclude**—a relatively impervious formation capable of absorbing water slowly but will not transmit it fast enough to furnish an appreciable supply for a well or spring. **D 653, D18**
- aquifer**—a geologic formation, group of formations, or part of a formation that is saturated and is capable of providing a significant quantity of water. **D 653, D18**
- aquifer**—a water-bearing geological formation that provides a ground water reservoir. **D 6161, D19**
- aquifer**, *n*—a water-bearing, permeable body of rock or granular material below the surface of the earth. **E 957, E44**
- aquifer**, *n*—a geologic formation, group of formations, or part of a formation that is saturated with water and capable of providing a significant quantity of water. **E 2201, E50**
- aquifer, confined**—an aquifer bounded above and below by confining beds and in which the static head is above the top of the aquifer. **D 653, D18**
- aquifer, unconfined**—an aquifer that has a water table. **D 653, D18**
- aquitard**—a confining bed that retards but does not prevent the flow of water to or from an adjacent aquifer; a leaky confining bed. **D 653, D18**
- araban**—a pentosan yielding essentially only arabinose on hydrolysis. **D 1695, D01**
- arabinogalactan**—a polysaccharide consisting of arabinose and galactose units, like the water-soluble polysaccharide of larch. **D 1695, D01**
- arabinomethylglucuronoxylan**—a hemicellulose containing arabinose, 4-O-methylglucuronic acid, and xylose groups in its structure. **D 1695, D01**
- arabinose**—a pentose that occurs as one of the sugar units in some hemicelluloses. **D 1695, D01**
- aramid**—a fully aromatic polyamide. **D 6161, D19**
- arbitration hardness location**—prescribed location on the fastener, such as at mid-radius, using 90° intervals taken through the cross section, one diameter from the threaded end for bolts and screws. **F 1789, F16**
- arc, anode**—the arc that occurs at less than a critical electrode spacing (see arc, cathode), and results in anode material loss. **B 542, B02**
- arc, cathode**—the arc that occurs at greater than a critical electrode spacing (see arc, anode), and results in cathode material loss. **B 542, B02**
- arc, condensed**—see **discharge, triggered capacitor**.
- continuous dc**, *n*—a self-maintaining dc discharge.
- noncapacitive ac**, *n*—*in atomic emission spectrometry*, a series of separate electrical discharges, individually self-initiating or initiated separately by another means, in which each current pulse has a polarity that is reversed from the previous one. **E 135, E01**
- arc discharge**—a self-sustaining, high current density, high temperature discharge, uniquely characterized by a cathode fall nearly equal to the ionization potential of the gas or vapor in which it exists. **B 542, B02**
- arc duration**, *n*—time duration of the arc(s). **F 819, F18**
- arc energy (vi dt)**, *n*—sum of the instantaneous arc voltage values multiplied by the instantaneous arc current values multiplied by the incremental time values during the arc, (J). **F 819, F18**
- arc gap**—distance between the arc electrodes (inch). **F 819, F18**
- arch**, *n*—a part of a melter; a crown. **C 162, C14**
- arch**, *v*—to heat a pot in a pot arch. **C 162, C14**
- arch**, *n*—the bony framework of the foot extending from the heel to the toes and sustained by the muscles and ligaments in the form of an arch. Also, the bottom curve of a shoe last from heel to ball. **F 1646, F13**
- arch-footwear**—the bottom curve of a shoe last from heel to ball. **F 869, F08**
- arching**—the transfer of stress from a yielding part of a soil or rock mass to adjoining less-yielding or restrained parts of the mass. **D 653, D18**
- architectural coatings**, *n*—coatings intended for on-site application to interior or exterior surfaces of residential, commercial, institutional or industrial buildings. **D 16, D01**
- architectural program**—See **facility program**. **E 1480, E06**
- architectural strip seal**—a preformed membrane or tubular extrusion, manufactured from a fully cured elastomeric alloy, having flanges or other means of mechanically or chemically securing it. **E 631, E06**
- architectural-use**, *n*—*in the building trade*, a descriptive term for fabrics used in fabric roof-systems or similar industrial applications. (See also **fabric roof-system**.) **D 123, D13**
- architectural-use**, *n*—*in the building trade*, a descriptive term for fabrics used in fabric roof-systems or similar industrial applications. (See also **fabric roof-system**.) **D 4850, D13**
- archival quality**—the ability of a print to retain specified characteristics and legibility over a period of use and storage under specified conditions. **F 221, F05**
- archival quality**—the properties of a copy or print necessary to retain specified information under specified conditions of storage, time and use. **F 335, F05**
- archive**, *n*—the organized collection of data and information derived from selected ITS-generated data flows and other data sources. **E 867, E17**
- archived data administrator**, *n*—the person who is responsible for the day-to-day operations and long-term management of an ADMS. **E 867, E17**
- archived data management subsystem (ADMS)**, *n*—a subsystem of the National ITS Architecture that provides a means for several organizations to collect, store, and subsequently, analyze and retrieve data from ITS data sources, usually by way of one or more ITS centers. **E 867, E17**
- archived data management system (ADMS)**, *n*—a system that is a specific implementation of an ADMS within the context of a local, regional, or statewide ITS architecture. **E 867, E17**
- archived data user service (ADUS)**, *n*—one of the ITS user services that defines the scope of the National ITS Architecture with regard to archiving and retrieving ITS-generated data. **E 867, E17**
- archive structure metadata**, *n*—descriptive data about the structure of the data archive itself and of the data and information in the archive that facilitate use of the archive. **E 867, E17**
- archiving**, *v*—collecting and actively managing original source and other data with the intent of saving the data as well as associated metadata. **E 867, E17**
- arch support**—a device of leather, metal, or other material shaped to

arch support

the contour of the longitudinal arch of the foot and inserted or built in a shoe. **F 869**, F08

arcing—in electron diffraction, the production of segments of circular patterns, indicating a departure from completely random orientation of the crystals of the specimen. **E 7**, E04

arc line—not recommended, see **atom line**. **E 135**, E01

Ar_{cm} , Ar_1 , Ar_2 , Ar_3 , Ar_4 —See **transformation temperature**. **A 941**, A01

arc propagation, n —the movement of an electric arc from its point of inception to another location. **D 1711**, D09

arc, shortest—a limiting state of an arc in which the total arc voltage approaches the sum of the cathode and anode falls. **B 542**, B02

arc strikes—localized burn damage to a part from an arc caused by making or breaking an energized electrical circuit. **E 1316**, E07

Arc thermal performance value (ATPV), n —in *arc testing*, the incident energy on a fabric or material that results in a 50 % probability that sufficient heat transfer through the tested specimen is predicted to cause the onset of a second-degree skin burn injury based on the Stoll curve. **F 819**, F18

arctic—the biogeographic realm that comprises the tundra and treeless grounds lying north of the timberline in the Northern hemisphere or south of the timberline in the Southern hemisphere. **F 1600**, F20

arc tracking, n —the process producing tracks when arcs occur on or close to the insulation surface. **D 1711**, D09

arc voltage, n —voltage across the gap caused by the current flowing through the resistance created by the arc gap, V . **F 819**, F18

arc welding—a group of welding processes wherein coalescence is produced by heating with an arc or arcs, with or without the application of pressure and with or without the use of filler metal. **B 846**, B05

area—See **space categories**.

area—See **space categories**. **E 631**, E06

area, A—the geometric cross-sectional area of a magnetic path which is perpendicular to the direction of the induction. **A 340**, A06

area, absorber—the total uninsulated heat transfer surface area of the absorber, including unirradiated as well as irradiated portions. **E 772**, E44

area amplitude response curve—a curve showing the changes in amplitude at normal incidence from planar reflectors of different areas located at equal distances from the search unit in an ultrasonic-conducting medium. **E 1316**, E07

area, aperture—of a flat plate collector, (1) the maximum projected area of a solar collector through which the unconcentrated solar radiant energy may be admitted to the absorber. (2) *effective aperture area*—the area as defined above projected normal to the sun's rays and corrected for any shading. Units: square metres (m²) [square feet (ft²)]. **E 772**, E44

area, collector panel—the total area of the panel assembly (with its containing box, if present), projected on the aperture plane. **E 772**, E44

area density—mass per unit area. **B 354**, B01

area, gross aperture—of a *concentrating collector*, the maximum projected area through which the unconcentrated solar radiant energy is admitted, including any area of the reflector or refractor shaded by the receiver and its supports, and including gaps between reflector segments within a collector module. **E 772**, E44

area, gross collector—the maximum area of the complete collector module, including integral mounting means, projected on the aperture plane. **E 772**, E44

area grouting—grouting a shallow zone in a particular area utilizing holes arranged in a pattern or grid. **D 653**, D18

area, net aperture—of a *concentrating collector*, the maximum projected area through which the unconcentrated solar radiant energy is admitted, excluding any area of the reflector or refractor shaded by the receiver and its supports, and excluding gaps between reflector segments within a collector module. **E 772**, E44

area of influence of a well, α (L²)—area surrounding a well within

which the piezometric surface has been lowered when pumping has produced the maximum steady rate of flow. **D 653**, D18

area of interest—the specific portion of the object image on the radiograph that is to be evaluated. **E 1316**, E07

area ratio of a sampling spoon, sampler, or sampling tube, A_r (D)—the area ratio is an indication of the volume of soil displaced by the sampling spoon (tube), calculated as follows:

$$A_r = [(D_e^2 - D_i^2)/D_i^2] \times 100$$

where:

D_e = maximum external diameter of the sampling spoon, and

D_i = minimum internal diameter of the sampling spoon at the cutting edge. **D 653**, D18

area reflector, n —reflector subtending a relatively large solid angle at the observer's eye, so that the observer can clearly distinguish its size and shape. **E 284**, E12

area samples—air samples that are collected at various stationary sites, but not for a person; area samples are therefore to be distinguished from personal air samples. **E 631**, E06

arithmetic mean sound pressure level—of *several related sound pressure levels measured at different positions or different times, or both, in a specified frequency band*, the sum of the sound pressure levels divided by the number of levels. **C 634**, E33

arm—cantilever part of tool to hold the clinching mechanism, permitting placement of fastener away from edges of the work. **F 592**, F16

armhole, n —in *garment construction*, the area of a garment through which the arm passes or into which a sleeve is fitted. (Compare **armscye**.) **D 123**, D13

armhole, n —the area of a garment through which the arm passes or into which a sleeve is fitted. **D 5219**, D13

armhole, n —in *garment construction*, the area of a garment through which the arm passes or into which a sleeve is fitted. (See **armscye**.) **F 1494**, F23

arm length, n —in *body measurements*, with the arm bent at 90 degrees and the clenched fist placed on the hip, the distance from the shoulder joint along the outside of the arm over the elbow to the greatest prominence on the outside of the wrist. **D 123**, D13

arm length, n —the distance from the top of the shoulder joint along the outside of the arm over the elbow to the prominent wrist bone, taken with the arm bent (1.57 rad or 90°) and the hand placed on the hip. **D 5219**, D13

armor—the artificial surfacing of bed, banks, shore, or embankment to resist erosion or scour. **D 653**, D18

armoring—the formation of a resistant layer of relatively large particles by erosion of the finer particles. **D 4410**, D19

armor stone—(generally one ton to three tons in weight) stone resulting from blasting, cutting, or by other methods to obtain rock heavy enough to require handling two individual pieces by mechanical means. **D 653**, D18

armpit, n —in *anatomy*, the hollow under the junction of the arm and the shoulder. **D 123**, D13

armpit, n —the hollow under the junction of the arm and the shoulder. **D 5219**, D13

armscye, n —in *garment construction*, the opening in a garment for the attachment of a fitted sleeve. (Compare **armhole**.) **D 123**, D13

armscye, n —the opening in a garment for the attachment of a fitted sleeve. **D 5219**, D13

armscye, n —in *garment construction*, the opening in a garment for the attachment of a fitted sleeve. (See **armhole**.) **F 1494**, F23

armscye circumference, n —in *body measurements*, with the arm hanging down, the distance from the shoulder joint through the front-break point, the armpit, the back-break point and to the starting point. **D 123**, D13

armscye girth, n —the circumference taken from the shoulder joint

through the front break-point, the armpit, the back break-point and to the starting point, taken with the arms down. **D 5219, D13**

aroma, n—perception resulting from stimulating the olfactory receptors; in a broader sense, the term is sometimes used to refer to the combination of sensations resulting from stimulation of the entire nasal cavity. **E 253, E18**

aromatic oil, n—a hydrocarbon process oil containing at least 35 %, by mass, of aromatic hydrocarbons. **D 1566, D11**

aromatic polyester, n—a polyester derived from monomers in which all the hydroxyl and carboxyl groups are linked directly to aromatic nuclei. **D 883, D20**

aromatics—that class of organic compounds which behave chemically like benzene. They are cyclic unsaturated organic compounds that can sustain an induced electronic ring current due to delocalization of electrons around the ring. **D 2864, D27**

array—an arrangement of devices connected to common feed, product and reject headers; that is, a 2:1 array. **D 6161, D19**

array, n—a group of two or more AE sensors positioned on a structure for the purposes of detecting and locating sources. The sources would normally be within the array. **E 1316, E07**

array processor—a special purpose logical processing device that performs extremely fast mathematical operation on digital arrays. **E 1316, E07**

arrest—that portion of a cooling curve in which temperature is invariant with time (for example, thermal or eutectic arrest). **E 7, E04**

arrester, n—a term for an air cleaning device. **D 1356, D22**

arrest mark—See **dwelt mark**. **C 162, C14**

arrhenius equation—a mathematical relationship between the specific reaction rate and the temperature given as

$$k = Ae^{-E/RT}$$

where:

k is the reaction rate constant, A is the frequency factor, E is the energy of activation, R is the gas constant, and T is the absolute temperature. **E 1142, E37**

Arrhenius equation— $k = Ze^{-E/RT}$ where k is the specific reaction rate constant in reciprocal minutes for first order, Z is the pre-exponential factor in reciprocal minutes, E is the Arrhenius activation energy in J/mol, R is the gas constant, 8.32 J/mol K, and T is the temperature in kelvin. **E 1445, E27**

Arrhenius plot, n—a graph of the logarithm of thermal life as a function of the reciprocal of absolute temperature. **D 1711, D09**

arris—the junction of two planes of the same stone forming an external edge. **C 119, C18**

arris (of an arch), n—the outside corner or angle formed by the meeting of a wall surface with the curved surface of an arch. **C 11, C11**

arrival time interval (Δt_{ij})—see **interval, arrival time**. **E 1316, E07**

arsenic—an industrial term for an oxide of arsenic. **C 162, C14**

artifact—a false microstructural feature that is not an actual characteristic of the specimen; it may be present as a result of improper or inadequate preparation, handling methods, or optical conditions for viewing. **E 7, E04**

artifact, n—an object (as a tool, ornament, or element of a structure) showing human workmanship or modification. **E 631, E06**

artifact—spurious indication on a radiograph arising from, but not limited to, faulty manufacture, storage, handling, exposure, or processing. **E 1316, E07**

artifact, n—a change in a PDD tracing that is not attributable to a review test question, stimulus, recovery, or homeostasis. **E 2035, E52**

artificial aging, n—aging above room temperature. **A 941, A01**

artificial climbing wall (ACW), n—a wall exclusively designed and built for climbing. The ACWs may be designed and used for lead climbing, top rope climbing or bouldering. The ACWs may be transportable or permanent. **F 1773, F08**

artificial daylight, n—an artificial light that has a spectral power distribution approximating that of a phase of natural daylight. **E 284, E12**

artificial discontinuity—reference discontinuities, such as holes, grooves, or notches that are introduced into a reference standard to provide accurately reproducible sensitivity levels for electromagnetic test equipment. **E 1316, E07**

artificial ground freezing—the process of freezing earth materials by artificial means. **D 7099, D18**

artificially soiled cloth (sometimes called “standard soiled cloth”)—cloth soiled with one or more materials and used to evaluate the effectiveness of detergents or washing equipment. **D 459, D12**

artificial weathering—exposure to laboratory conditions, which may be cyclic, involving changes in temperature, relative humidity, radiant energy, and any other elements found in the atmosphere in various geographical areas. **D 883, D20**

artificial weathering, v—exposure to conditions, which may be cyclic, involving temperature, relative humidity, radiant energy, and/or any other conditions or pollutants found in the atmosphere in various geographical areas, which may accelerate changes in properties of materials over those of natural weather conditions. **D 1079, D08**

artificial weathering—exposure to laboratory conditions, which may be cyclic, involving temperature, relative humidity, radiant energy, or any other conditions or pollutants found in the atmosphere in various geographical areas; or both. **F 412, F17**

artificial weathering, n—exposure of a material to laboratory conditions that simulate outdoor weathering. **F 1251, F04**

as-analyzed moisture—synonym for **as-determined moisture**. **D 121, D05**

asbestiform—having an inherent fine-textured morphology, resulting from unequal relative development of the principal crystal axes in a silicate mineral, that predetermines subdivision into strong flexible fibers having microscopic to submicroscopic thickness and a high length to width ratio when the mineral is subjected to comminution. **D 2946, C17**

asbestos—see **industrial talc and industrial talc, nonasbestos type**. **D 16, D01**

asbestos—a group of natural fibrous impure silicate materials. **D 1079, D08**

asbestos, n—the generic term for naturally occurring inorganic hydrated silicates, occurring in layered structures composed of chains of silicon and oxygen tetrahedra, that can subdivide into flexible fibers. **D 2946, C17**

asbestos—six naturally occurring fibrous minerals found in certain types of rock formations. Of the six, the minerals chrysotile, amosite, and crocidolite have been most commonly used in building products. When mined and processed, asbestos is typically separated into very thin fibers. Because asbestos is strong, incombustible, and corrosion-resistant, asbestos was used in many commercial products beginning early in this century and peaking in the period from World War II into the 1970s. When inhaled in sufficient quantities, asbestos fibers can cause serious health problems. **D 5681, D34**

asbestosboard nail—galvanized, hardened-steel, helically threaded, 1¼ and 1½ by 0.083-in. screw nails with flat, slightly countersunk, ¾-in. head and blunt diamond point. **F 547, F16**

asbestos-containing material (ACM)—any material or product that contains more than 1 % asbestos. **D 5681, D34**

asbestos fiber, n—acicular silicate mineral, with a structure based upon silicon-oxygen tetrahedra, that fits the definition of a fiber, and is composed of single crystals in predominantly parallel orientation. **D 2946, C17**

asbestos-shingle nail—See **shingle nail**. **F 547, F16**

as-built, adj—pertaining to the as-constructed, **as-fabricated**, **as-manufactured**, or **as-furnished** state of a finished product relating to size, shape, materials, and finish regardless of drawings or specifications. **E 631, E06**

as-built drawing—See **drawing**. **E 631, E06**

as-built drawing—See **drawing**.

E 1480, E06

A-scan—a method of data presentation utilizing a horizontal base line that indicates distance, or time, and a vertical deflection from the base line which indicates amplitude.

E 1316, E07

ascender, *n*—a stroke that rises above the height of the body of the letter formation.

E 2195, E30

ascender, *n*—a device used to ascend a rope.

F 1773, F08

ascending fork point—in a ternary phase diagram, the configuration at the convergence of the three bivariant curves upon each of the four phases associated in Class II univariant equilibrium; for example, the union of two ascending liquidus surface valleys to form one ascending liquidus surface valley.

E 7, E04

ascent rate, *n*—the speed of vertical movement toward the water's surface.

F 1549, F32

ASCII—American Standard Code for Information Interchange.

F 1457, F05

as-determined basis—See *as-determined basis* under **reporting bases**.

D 121, D05

as-determined basis, *n*—analytical data obtained from an analysis sample after conditioning and preparation which represent the numerical values obtained at the particular moisture and ash level in the sample at the time of analysis.

D 5681, D34

as-determined basis—analytical data obtained from the analysis sample after conditioning and preparation in accordance with Method E 829. As-determined basis data represent the numerical values obtained at the particular moisture and ash level in the sample at the time of analysis.

E 856, D34

aseptic—as applied to aseptic packaging, synonymous with commercially sterile.

F 17, F02

aseptic, *adj*—sterile, free from viable microbiological contamination.

F 1494, F23

aseptic packaging—filling of a commercially sterilized product into presterilized containers, followed by hermetic sealing in a commercially sterile atmosphere.

F 17, F02

aseptic packaging—See Terminology F 17.

F 1327, F02

aseptic sampling—sampling process in which no extraneous microorganisms or substances are introduced into the sample or its original bulk material as a result of the sampling system and activity.

E 1705, E48

as-fabricated, *adj*—(1) of a milled metal product, pertaining to the surface appearance and texture or temper produced by the original forming process. (2) of a formed metal product, pertaining to the surface appearance of the product to removal of disfigurations caused by the forming process.

E 631, E06

ash, *n*—in carbon and graphite technology, the residue remaining after oxidation of a carbon or graphite.

C 709, D02

ash, *n*—inorganic residue remaining after ignition of combustible substances, determined by definite prescribed methods.

D 121, D05

ash, *n*—the residue from incineration of a material under specified conditions.

D 1566, D11

ash—the inorganic residue obtained by igniting a specimen of pulp, paper, or other cellulosic material in such a way that all combustible and volatile compounds are removed. Conditions of ashing should be specified.

D 1695, D01

ash, *n*—in wood, pulp, or paper; general term, the residue after the ignition of a specimen of wood, pulp, or paper at a specified temperature for a specified time so as to remove combustible and volatile components.

D 1968, D06

ash—residue after the combustion of a substance under specified conditions.

D 2652, D28

ash, *n*—in carbon and graphite technology, the residue remaining after oxidation of a carbon or graphite.

D 4175, D02

ash—the residue remaining after ignition of refuse-derived fuel determined by definite prescribed methods. The ash may not be identical in composition or quantity with the inorganic substances present in the refuse-derived fuel before ignition.

E 856, D34

ash—the residual inorganic matter obtained on ignition of a sample in air at a specified temperature.

E 1547, E15

ash—inorganic residue remaining after combustion, determined by definite prescribed methods.

E 1705, E48

ash content—the percentage by dry weight of material remaining after an oven dry organic soil or peat is burned by a prescribed method.

D 653, D18

ash content, *n*—the residue from an engine coolant concentrate, antirust, or engine coolant that remains after evaporation, charring, and ignition at strong heat.

D 4725, D15

ash content of paper, *n*—the solid residue remaining after combustion of the paper under specified conditions, expressed as a percentage of the dry mass of the original paper.

D 1711, D09

ash fusion temperature—melting point of ash, usually expressed in degrees Fahrenheit. Variations include oxidizing atmosphere or reducing atmosphere, initial softening, or final fluid temperature. Some specifications include two intermediate points between initial softening and final fluid.

E 1705, E48

ashlar—(1) a squared block of building stone; (2) a masonry of such stones; (3) a thin-dressed rectangle of stone for facing of walls (often called ashlar veneer).

C 119, C18

ash *n*—the residue remaining after ignition of a substance as determined by definite prescribed methods.

D 5681, D34

ash pond, *n*—an impoundment or surface impoundment used to store or dispose of ash primarily from the combustion of coal. See **surface impoundment**.

E 2201, E50

as is basis—as received.

D 2652, D28

askarel—a generic term for a group of synthetic, fire-resistant, chlorinated aromatic hydrocarbons used as electrical insulating liquids. They have a property under arcing conditions such that any gases produced will consist predominantly of noncombustible hydrogen chloride with lesser amounts of combustible gases.

D 2864, D27

as-mined coal—for the purpose of Test Method D 4749, same as **run-of-mine (ROM) coal**.

D 121, D05

aspect, *n*—of serviceability, a broad component of serviceability, comprising several related topics of serviceability.

E 631, E06

aspect ratio—the length-to-width ratio of a microstructural feature in a two-dimensional plane.

E 7, E04

aspect ratio—a ratio of long side to short side of glass plate.

E 631, E06

aspect ratio, *n*—in a bar code symbol, the ratio of bar height to symbol length.

F 1294, F05

aspecular, *adj*—away from the specular direction.

E 284, E12

aspecular angle, *n*—viewing angle measured from the specular direction, in the illuminator plane unless otherwise specified.

E 284, E12

aspergillus niger—one of the most common mold growths found on vegetable tanning vats and on leather, usually greenish or blackish in color.

D 1517, D31

asperity, *n*—in tribology, a protuberance in the small-scale topographical irregularities of a solid surface.

G 40, G02

asphalt, *n*—a dark brown to black cementitious material in which the predominating constituents are bitumens which occur in nature or are obtained in petroleum processing.

D 8, D04

asphalt—a dark brown to black cementitious material in which the predominating constituents are bitumens that occur in nature or are obtained in petroleum processing.

D 1079, D08

asphalt, *n*—a dark brown-to-black cementitious material in which the predominating constituents are bitumens.

D 4175, D02

asphalt, air blown—an asphalt produced by blowing air through molten asphalt at an elevated temperature to raise its softening point and modify other properties.

D 1079, D08

asphalt cement, *n*—a fluxed or unfluxed asphalt specially prepared as to quality and consistency for direct use in the manufacture of bituminous pavements, and having a penetration at 25°C (77°F) of between 5 and 300, under a load of 100 g applied for 5 s.

D 8, D04

- asphaltene**—a high molecular weight hydrocarbon fraction precipitated from asphalt by a designated paraffinic naphtha solvent at a specified temperature and solvent-asphalt ratio. **D 1079**, D08
- asphaltenes, *n***—the high molecular weight hydrocarbon fraction precipitated from asphalt by a designated paraffinic naphtha solvent at a specified solvent-asphalt ratio. **D 8**, D04
- asphaltenes, *n***—wax-free organic material insoluble in heptane, but soluble in hot toluene (benzene). **D 4175**, D02
- asphalt felt**—an asphalt-saturated felt. **D 1079**, D08
- asphalt felt, breather type, *n***—an underlayment sheet material saturated with asphalt, which allows the transmission of water vapor. **C 1154**, C17
- asphalt felt, breather type**—an underlayment sheet material, saturated with asphalt, which allows the transmission of water vapor. **D 2946**, C17
- asphaltite**—a natural asphalt found below ground level. **D 1079**, D08
- asphalt mastic**—a mixture of asphaltic material and graded mineral aggregate that can be poured when heated, but requires mechanical manipulation to apply. **D 1079**, D08
- asphalt rock (rock asphalt), *n***—a naturally occurring rock formation, usually limestone or sandstone, impregnated throughout its mass with a minor amount of bitumen. **D 8**, D04
- asphalt rock (rock asphalt)**—a naturally occurring rock formation, usually limestone or sandstone, containing throughout its mass a minor amount of asphalt. **D 1079**, D08
- asphalt roof cement, *n***—a trowelable mixture of asphalt, solvents, mineral stabilizers, fillers or fibers, or both. See Specifications D 2822 and D 4586. **D 1079**, D08
- asphalt roof cement, *n***—see *flashing cement*. **D 1079**, D08
- asphalt-rubber, *n***—a blend of asphalt cement, reclaimed tire rubber, and certain additives in which the rubber component is at least 15 % by weight of the total blend and has reacted in the hot asphalt cement sufficiently to cause swelling of the rubber particles. **D 8**, D04
- asphalt-shingle nail**—See *roofing nail*. **F 547**, F16
- asphalt, steam blown**—an asphalt produced by blowing steam through molten asphalt to modify its properties. **D 1079**, D08
- asphalt tile, *n***—an obsolete floor surfacing unit composed of asphalt or hydrocarbon resins, or both, crysotile asbestos fibers, mineral fillers, and pigments. **F 141**, F06
- aspirated psychrometer**—See *psychrometer*. **D 1356**, D22
- aspirating nozzle**—see *siphon nozzle*. **E 1620**, E29
- aspirator, *n***—any apparatus such as a squeeze bulb, fan, pump, or venturi that produces a movement of a fluid by suction. **D 1356**, D22
- aspirator valve**—a valve in which the propellant vapor is aspirated through an orifice in the valve chamber, causing a suction effect that draws the product up the dip tube and into the valve. **D 3064**, D10
- a-spot**—the areas of two mating contacts through which current flows from one contact to the other. **B 542**, B02
- as-received basis**—See *as-received basis* under *reportingbases*. **D 121**, D05
- as-received basis, *n***—test data calculated to the condition of the sample as it arrived in the laboratory and before any laboratory processing or conditioning. **D 5681**, D34
- as-received basis**—the test data calculated to the moisture condition of the sample as it arrived in the laboratory and before any laboratory processing or conditioning. **E 856**, D34
- assay, *n***—analysis of a mixture to determine the presence or concentration of a particular component. **F 1494**, F23
- assay fluid, *n***—a sterile liquid used to wash the test specimen surface to determine microbiological penetration. **F 1494**, F23
- assembled button, *n***—a decorative button consisting of combinations of similar or dissimilar materials, such as plastic and metal or metal and metal, which have been joined together by such processes as gluing, swedging or metal stamping. **D 5497**, D13
- assembly, *n***—see *adhesive assembly*. **D 907**, D14
- assembly, *n***—a unit or structure composed of a combination of materials or products, or both. **E 176**, E05
- assembly, *n***—a unit or structure composed of a combination of materials or products, or both. **E 176**, E05
- assembly**—a number of parts or subassemblies joined together. **E 2135**, E53
- assembly, *n***—a complete implant configuration (not including spine, pelvis, ribs, or substitute material) as intended for surgical use. **F 1582**, F04
- assembly adhesive, *n***—an adhesive that can be used for bonding parts together, such as in the manufacture of a boat, airplane, furniture, and the like. **D 907**, D14
- assembly (for adhesives), *n***—a group of materials or parts, including adhesive, placed together for bonding or which has been bonded together. **D 907**, D14
- assembly lot**—assembly lot may consist of a combination of different products. As long as the products that make up the assembly are in accordance with *lot*, the quantity of assemblies determine the sample size. Example: ten assemblies consisting of a bolt, nut, and a washer would have a lot size of ten if the bolts, nuts, and washers meet the criteria of *lot*. However, if any of the components in the assembly are not in accordance with *lot* then the ten assemblies will have to be separated into lots that meet all the requirements of *lot*. **F 1789**, F16
- assembly time, *n***—the time interval between applying the adhesive on the substrate and the application of pressure, or heat, or both, to the assembly.
- closed assembly time, *n***—the time interval between the closing together of substrates after the adhesive has been applied, and the application of pressure, heat, or both, to the assembly.
- open assembly time, *n***—the time interval between applying adhesive on the substrates and closing them together before bonding. **D 907**, D14
- assessment monitoring**—an investigative monitoring program that is initiated after the presence of a contaminant in ground water has been detected. The objective of this program is to determine the concentration of constituents that have contaminated the ground water and to quantify the rate and extent of migration of these constituents. **D 653**, D18
- assessment, of a laboratory**—the activity of evaluating a laboratory's compliance with accreditation criteria. **E 1187**, E36
- assessor, *n***—a general term for any individual responding to stimuli in a sensory test. **E 253**, E18
- assessor, of a laboratory**—an individual who carries out some or all functions related to laboratory assessment, (ISO Guide 2, *B*). **E 1187**, E36
- asset**—(1) anything owned having monetary value; (2) tangible or intangible items owned by an entity that have probable economic benefits that can be obtained or controlled by the entity. **E 2135**, E53
- as-shipped or produced coal**—for the purpose of Test Method D 4749, raw or prepared coal in any state or condition at which it leaves the mine property or loading facility. **D 121**, D05
- assignable area**—See *space categories*. **E 631**, E06
- assignable area**—See *space categories*. **E 1480**, E06
- assignable cause, *n***—a factor which contributes to variation and is feasible to detect and identify. **D 123**, D13
- assignable cause, *n***—a factor that contributes to variation and that is feasible to detect and identify. **D 4175**, D02
- assignable cause, *n***—a factor that contributes to variation, and which is feasible to detect and identify.
- NOTE—Many factors will contribute to variation but it may not be feasible (economically or otherwise) to identify some of them. **E 456**, E11
- assigned test value (ATV), *n***—the average of all results obtained in

assigned test value (ATV), *n*

the several laboratories which are considered acceptable based on the reproducibility of the test method. **D 4175, D02**

assisted hand signature, *n*—a signature executed by a writer while the writer's hand, arm, or writing instrument is steadied or stabilized by another. **E 2195, E30**

associated gas—natural gas, also known as gas-cap gas or dome gas, that overlies and is in immediate contact, but not in solution, with crude oil in a reservoir. **D 4150, D03**

associate instructor—an individual who possesses the qualifications and education/training of a course instructor/coordinator, but, in a specific course, assumes a supportive or assisting role to the course instructor/coordinator. This individual may substitute for the course instructor/coordinator in case of necessity or, in other courses, serves as a course instructor/coordinator. **F 1177, F30**

associative evidence, *n*—that evidence which tends to link a person, place, or thing with another person, place, or thing. **E 1732, E30**

associative thickener, *n*—water-soluble polymers containing hydrophobic groups that are capable of nonspecific hydrophobic association similar to surfactants that elevate viscosity presumably by association between thickener particles or thickener and dispersed particles that may be present in the aqueous system such as latex particles rather than through high molecular weight or chain stiffness of the thickener molecules themselves. **D 16, D01**

assurance of conformity—procedure resulting in a statement giving confidence that a product, process or service fulfills specified requirements, (ISO Guide 2). **E 1187, E36**

A-stage, *n*—an early stage in the preparation of certain thermosetting resins in which the material is still soluble in certain liquids, and may be liquid or capable of becoming liquid upon heating. **D 883, D20**

A-stage, *n*—an early stage in the preparation of certain thermosetting resins, in which the material is still soluble in certain liquids, and fusible. **D 907, D14**

A-stage—an early stage in the reaction of certain thermosetting resins in which the material is fusible and still soluble in certain liquids. (Syn. *resol.*) (Compare with **B-stage** and **C-stage**.) **E 631, E06**

A-stage—an early stage in the reaction of certain thermosetting resins in which the material is fusible and still soluble in certain liquids. (Syn. *resol.*) (Compare with **B-stage** and **C-stage**.) **E 1749, E06**

asterism—a lengthening of diffraction spots usually in the radial direction. **E 7, E04**

astigmatism—a defect in a lens or optical system which causes rays in one plane parallel to the optical axis to focus at a distance different from those in the plane at right angles to it. **E 7, E04**

ASTM cement types—Portland cements meeting the requirements of Specifications C 150. Cement types have slightly different formulations that result in various characteristics which address different construction conditions and different physical and chemical environments. They are as follows:

Type I (Portland)—a general-purpose construction cement with no special properties.

Type II (Portland)—a construction cement that is moderately resistant to sulfates and generates a lower head of hydration at a slower rate than Type I

Type III (Portland: high early strength)—a construction cement that produces a high early strength. This cement reduces the curing time required when used in cold environments, and produces a higher head of hydration than Type I.

Type IV (Portland)—a construction cement that produces a low head of hydration (lower than Types I and II) and develops strength at a slower rate.

Type V (Portland)—a construction cement that is a high sulfate resistant formulation. Used when there is severe sulfate action from soils and ground water. **D 653, D18**

ASTM color, *n*—the name of an empirical scale of expressing of the color of a petroleum liquid darker than Saybolt color based on a scale of 0.5 (lightest) to 8.0 Dil (darkest) and determined by Test Method D 1500. **D 4175, D02**

ASTM grain size number—See **grain size**. **E 7, E04**

ASTM supercharge octane number of a fuel below 100, *n*—the whole number nearest the percentage by volume of *isooctane* (equals 100) in a blend with *n*-heptane (equals 0) that matches the knock characteristics of the fuel when compared by this test method. **D 4175, D02**

ASTM supercharge rating of a fuel above 100, *n*—the amount of tetraethyllead (TEL) in *isooctane*, expressed in millilitres per U.S. gallon. **D 4175, D02**

astringency, *n*—the complex of sensations due to shrinking, drawing, or puckering of the epithelium as a result of exposure to substances such as alums or tannins. **E 253, E18**

as-welded condition—a condition created as a result of forming annealed sheet or plate into tubular form and welding without subsequent heat treatment or cold work. **B 846, B05**

asymmetrical—this refers to a snowboard shape that does not have a longitudinal line of symmetry. Heel-side and toe-side sidecuts shaped and offset differently from each other; they are not mirror images of each other. This typically requires that a different snowboard be utilized for regular-foot (left foot forward) and goofy-foot (right foot forward) snowboard binding mounting positions. **F 1107, F27**

asymmetrical arc current, *n*—the total arc current produced during closure; it includes a direct component and a symmetrical component, *A*. **F 819, F18**

asymmetrical offset, *O_s, O_h*—the distance along the longitudinal axis that each side of an asymmetrical shape is offset from the other side. Offset may be different at the shoulder and heel. **F 1107, F27**

asymmetric membrane—membrane which has a change in pore structure. See **anisotropic membranes**. **D 6161, D19**

asymmetry potential—the potential across a glass pH electrode membrane when the inside and outside of the membrane are in contact with solutions of identical pH. This term has also been used to define the observed potential differences between identical electrode pairs placed in identical solutions. **D 4127, D19**

asynchronous, *adj*—a data transmission in which the time between transmitted characters can vary, it is controlled by start and stop codes at the beginning and end of data sets. (See **synchronous**.) **F 1457, F05**

ATD—see **anti-telescoping device**. **D 6161, D19**

athermal—not isothermal, with changing rather than constant temperature conditions. **E 7, E04**

at-line analysis—analytical procedure performed in a process environment using manually entered samples. **D 4790, D16**

at-line instrument—instrument requiring operator interaction to sample gas directly from the pipeline. **D 4150, D03**

at-line measurements, *n*—measurement where the sample is removed, isolated from, and analyzed in close proximity to the process stream. **E 2363, E55**

atmosphere, *n*—the gaseous envelope which surrounds the earth and includes ambient air, indoor air, and workplace air. See also **air at normal conditions**.

*synthetic atmosphere, *n**—a specific gaseous mass containing any number of constituents and in any proportion produced for a special purpose. **D 1356, D22**

atmosphere for testing, *n*—air at ambient conditions of relative humidity and temperature in which tests or experiments are conducted. (See also **standard atmosphere for testing**.) **D 123, D13**

atmosphere for testing, *n*—air at ambient conditions of relative humidity and temperature in which tests or experiments are conducted. (See also **standard atmosphere for testing**.) **D4920, D13**

atmosphere for testing geosynthetics, *n*—air maintained at a relative humidity between 50 to 70 % and a temperature of 21 ± 2°C (70° ± 4°F). **D 4439, D35**

atmosphere for testing textiles, *n*—for glass, air maintained at a relative humidity of at least 48 % and no greater than 67 % and at

- a temperature of at least 20°C (68°F) and no greater than 25°C (77°F). **D 123, D13**
- atmosphere for testing textiles, *n***—for glass, air maintained at a relative humidity of at least 48 % and no greater than 67 %, and at a temperature of at least 20°C (68°F) and no greater than 25°C (77°F). **D 7018, D13**
- atmosphere, standard**—air maintained at a specified temperature, relative humidity, and standard atmospheric pressure. **E 41, G03**
- atmosphere (standard)**—the pressure exerted by a mercury column 760 mm in height at 0°C under standard acceleration of gravity; equivalent to 101 325 Pa. **E 1316, E07**
- atmospheric pressure**—the pressure due to the weight of the atmosphere. It is the pressure indicated by a barometer that registers actual atmospheric pressure which is not corrected to sea level equivalence. Standard atmospheric pressure is a pressure of 76 cm Hg (101325 Pa) having a density of 13.5951 g/cm³, under standard gravity of 980.665 cm/s². **E 41, G03**
- atmospheric pressure**—the pressure of the atmosphere at a specified place and time. **E 1316, E07**
- atomic absorption**—the absorption of radiant energy by ground state atoms. Substances when dispersed as an atomic vapor will absorb characteristic radiations identical to those which the same substances can emit. This property is the basis for analysis by atomic absorption spectroscopy. **D 2864, D27**
- atomic absorption**—absorption of radiant energy by groundstate atoms. **E 631, E06**
- atomic absorption**—absorption of radiant energy by ground-state atoms. **E 1605, E06**
- atomic emission spectrometry (AES), *n***—pertaining to emission spectrometry in the ultraviolet, visible, or infrared wavelength regions of the electromagnetic spectrum. **E 135, E01**
- atomic mass unit (amu)**—the unit of measure of the mass of a particle (atom, molecule, ion, and so forth), defined as 1/12 of the mass of carbon-12. The numerical value of the mass of a particle in terms of amu is identical with the older atomic weight. **E 1316, E07**
- atomic replica**—See **replica**. **E 7, E04**
- atomic scattering factor**—the ratio of the amplitude of the wave scattered by an atom to that scattered by a single electron. Symbol = *f*. **E 7, E04**
- atomic weight**—the relative mass of an atom based on a scale in which a specific carbon atom (carbon 12) is assigned a mass value of 12. **D 6161, D19**
- atomization, *n***—the dispersion of a molten metal into particles by a rapidly moving gas or liquid stream or by mechanical means. **B 243, B09**
- atomization, *n***—the separation process of liquid into small particles. **D 6655, D10**
- atomization, *n***—the process of atomizing. **E 1620, E29**
- atomize, *v***—to transform bulk liquid or slurry into particles. **E 1620, E29**
- atomized metal powder, *n***—metal powder produced by the dispersion of a molten metal by a rapidly moving gas, or liquid stream, or by mechanical dispersion. **B 243, B09**
- atomizer, *n***—a device for atomizing. **E 1620, E29**
- atom line, *n***—a spectral line resulting from radiation emitted during electron transition as an excited atom returns to a lower energy level. **E 135, E01**
- ATP**—adenosine triphosphate. **D 6161, D19**
- atraumatic**—teeth that would interdigitate except for being spaced apart a predesigned distance so they will not stress, crush, or otherwise traumatize the tissue being grasped. **F 1638, F04**
- attached cushion, *n***—for pile yarn floor covering, a material, bonded to the backing fabric side of a pile yarn floor covering to provide additional dimensional stability, thickness, and padding. **D 123, D13**
- attached cushion, *n***—for pile yarn floor covering, a material, bonded to the backing fabric side of a pile yarn floor covering to provide additional dimensional stability, thickness, and padding. **D 5684, D13**
- attached dwelling, *n***—two or more dwelling units, each with an independent means of entry and means of egress, that are connected to each other at a common wall, but not by a common floor/ceiling. **E 2151, E06**
- attached upholstery fabric, *n***—the exterior fabric covering secured to a furniture unit by the furniture manufacturer or custom upholsterer. (See **furniture coverings**) **D 123, D13**
- attached upholstery fabric, *n***—the exterior fabric covering secured to a furniture unit by the furniture manufacturer or custom upholsterer. (See **furniture coverings**.) **D 7023, D13**
- attachment**—structural element (fixture) external to the surface of the base material, and which transmits loads to the anchor. **E 2265, E06**
- attachment area, *n***—portion of the needle where the attachment of the suture takes place. For example, eyed, drilled, and channel. **F 1840, F04**
- attachment hub**—a device featuring an industry-standard square drive, that supports and powers ancillary devices such as a vegetable slicer or chopping attachment. **F 1827, F26**
- attachment points, *n***—points where alternate pairs of coil loops are joined around the circumference creating the concertina effect. **F 1379, F14**
- attapulgite clay**—a chain-lattice clay mineral. The term also applies to a group of clay materials that are lightweight, tough, matted, and fibrous. **D 653, D18**
- attenuated total reflection (ATR)**—reflection that occurs when an absorbing coupling mechanism acts in the process of total internal reflection to make the reflectance less than unity. **E 131, E13**
- attenuation**—reduction of amplitude with time or distance. **D 653, D18**
- attenuation, *n***—the decrease in AE amplitude per unit distance, normally expressed in dB per unit length. **E 1316, E07**
- attenuation**—a factor that describes the decrease in ultrasound intensity with distance. Normally expressed in decibel per unit length. **E 1316, E07**
- NOTE**—The attenuation parameter is sometimes expressed in nepers (Np) per unit length. The value in decibels (dB) is 8.68 times the value in nepers. If the loss over a path is 1 Np, then the amplitude has fallen to 1/e of its initial value ($e = 2.7183\dots$). (E 664) **E 1316, E07**
- attenuation coefficient**—for a parallel beam of specified particles or radiation, the quantity μ in the expression $\mu\Delta x$ for the fraction removed in passing through a thin layer Δx of a substance in the limit as Δx approaches zero, where Δx is measured in the direction of the beam. **E 673, E42**
- attenuation coefficient**—related to the rate of change in the intensity of a beam of radiation as it passes through matter. (See **linear and mass attenuation coefficient**.) **E 1316, E07**
- attenuation cross section**—the probability, expressed in barns, that a neutron will be totally absorbed by the atomic nucleus. **E 1316, E07**
- attenuation index, κ** —a measure of the absorption of radiant energy by an absorbing material. κ is related to the absorption coefficient by: $n\kappa = \alpha c_o / 4\pi v$, where c_o = the speed of light in vacuo, v = the frequency of radiant energy, and n = the refractive index of the absorbing medium. **E 131, E13**
- attenuation period, *n***—in cavitation and liquid impingement erosion, a less-preferred term for **deceleration period**. **G 40, G02**
- attenuator**—a device for altering the amplitude of an ultrasonic indication in known increments, usually decibels. **E 1316, E07**
- attic, *n***—an accessible enclosed space in a building immediately below the roof and wholly or partly within the roof framing. **E 176, E05**
- attic**—See **building space**. **E 631, E06**
- attic, *n***—an accessible enclosed space immediately below the roof and wholly or partly within the roof framing. **E 631, E06**

attitude, *n*

attitude, *n*—a predisposition to respond in a characteristic way toward a class of objects, concepts, or stimuli. E 253, E18

attitude scale, *n*—a means for eliciting indications of the attitudes or opinions held, usually on a measuring system using marks or value designations. E 253, E18

attractant—an agent that increases the attentive frequency of an organism. E 609, E35

attractant—a material that attracts specific pests. E 1519, E35

attraction—a response towards or to facilitate contact with a material or condition. E 943, E47

attribute, *n*—a specific characteristic of a thing. (See **attribute data**.) D 123, D13

attribute, *n*—a quality of samples or a population. D 5681, D34

attribute, *n*—a perceived characteristic. E 253, E18

attribute data, *n*—observed values or determinations which indicate the presence or absence of specific characteristics. D 123, D13

attribute data, *n*—observed values or determinations which indicate the presence or absence of specific characteristics. E 456, E11

attribute data, *n*—observed values or determinations which indicate the presence or absence of specific characteristics. F 1773, F08

attributes, method of, *n*—measurement of quality by the method of attributes consists of noting the presence (or absence) of some characteristic or attribute in each of the units in the group under consideration, and counting how many units do (or do not) possess the quality attribute, or how many such events occur in the unit, group, or area. E 456, E11

attributes of color—(1) for the object mode of appearance, hue, lightness, and saturation. In the Munsell system, Munsell Hue, Munsell Value, and Munsell Chroma.

(2) for the illuminant or aperture mode, hue, brightness, and saturation. E 284, E12

attrital coal—See **attrital coal** under **coal**. D 121, D05

A-tuft, *n*—a single-pass process for aligning hook free fibers on the Fibroliner FL-101. D 123, D13

A-tuft, *n*—a single-pass process for aligning hook free fibers on the Fibroliner FL-101. D 7139, D13

ATV—in statistics, abbreviation for assigned test value. D 4175, D02

audible leak indicator—an accessory to a leak detector which converts the output signal to an audible note whose frequency is a function of the leakage rate. E 1316, E07

audition, *n*—the sense of hearing. E 253, E18

Auger:

analysis volume—see **volume** under **analysis**.

chemical effects—AES, see **chemical**.

chemical shift—AES, see **chemical**.

current—the electron current due to the emission of Auger electrons.

electron—an electron emitted as the result of an Auger process.

electron yield—the probability that an atom with a vacancy in a particular inner shell will relax by an Auger process.

line scan—a plot of Auger signal strength as a function of displacement along a designated line on the specimen surface. Normally, the abscissa is the line along which the signal is measured and the ordinate is directly proportional to signal strength.

line shape—the energy distribution in an Auger spectrum for a particular Auger transition.

map—two dimensional image of the specimen surface showing the location of emission of Auger electrons from a particular element. A map is normally produced by rastering the incident electron beam over the specimen surface and simultaneously recording the Auger signal strength for a particular transition as a function of position.

matrix effects—see **matrix effects**, Auger.

parameter—XPS, the kinetic energy of the sharpest Auger peak in the spectrum minus the kinetic energy of the most intense photoelectron peak from the same element; the energy of the

ionizing photons must be specified.

peak energy for $dN(E)/dE$, $N(E)$ —the designation of the energy of the Auger electron distribution. In dN/dE spectra, peak energies should be measured at the most negative excursions of the Auger features. In $N(E)$ spectra, peak energies are measured at peak maxima. (Peak energies in dN/dE spectra are not the same as those in $N(E)$ spectra.)

process—the relaxation, by electron emission, of an atom with a vacancy in an inner electron shell.

signal strengths—AES, XPS, in dN/dE spectra, signal strengths are measured as the peak-to-peak heights of the Auger features. In $N(E)$ spectra, signal strengths are measured as the heights of the Auger peaks above background. In $I(E)$, signal strengths are measured as the areas under the electron energy distribution, $N(E)$.

spectrum, $dN(E)/dE$, $N(E)$, $I(E)$ —AES, the display of Auger signal strength as a function of electron energy. Auger spectra from solids may be measured as the first derivative of the electron energy distribution and may be designated by dN/dE . The Auger electron energy distribution may be designated as $N(E)$. With certain type analyzers (for example, the CMA) the displays are $dEN(E)/dE$ and $EN(E)$. The area under Auger peaks may be designated as $I(E)$ with background subtraction method, and integration limits specified.

transition—transitions involved in electron emission by an Auger process are designated by indicating the electron shells. The first letter designates the shell containing the initial vacancy and the last two letters designate the shells containing electron vacancies created by Auger emission (for example, KLL, and LMN). When a bonding electron is involved the letter V is used (for example, LMV and KVV). When a particular subshell involved is known this can also be indicated (for example, KL_1L_2). Coupling terms may also be added where known ($L_3M_{4,5}M_{4,5};^1D$). More complicated Auger processes (such as, multiple initial ionizations and additional electronic excitations) can be designated by separating the initial and final states by a dash (for example, LL-VV and K-VVV). When an Auger process involves an electron from the same principal shell as the initial vacancy (for example, L_1L_2M) it is referred to as a Coster-Kronig transition. If both electrons are from the same principal shell as the initial vacancy (for example, $M_1M_2M_3$) it is called a super Coster-Kronig transition.

transition rate—the probability per unit time for two bound electrons to undergo energy state transitions such that one will fill an initial core hole vacancy and the other will go to a final state in the positive energy continuum. E 673, E42

auger increment, *n*—the retained portion of one extraction operation of the auger. D 121, D05

ausferrite, *n*—a cast iron matrix microstructure, produced by a controlled thermal process, which consists of predominantly acicular ferrite and high carbon austenite. (See **austempered ductile iron**.) A 644, A04

austempered ductile iron, *n*—a ductile cast iron that has been produced by a controlled thermal process which results in a matrix microstructure consisting of predominately acicular ferrite and high carbon austenite. A 644, A04

austempering, *n*—heat treatment involving quenching a steel object from a temperature above the transformation range in a medium maintained at a temperature above the martensite range sufficiently fast to avoid the formation of high temperature transformation products, and then holding it at that temperature until transformation is complete. A 941, A01

austenite—a face-centered cubic solid solution of carbon or other elements in gamma iron. E 7, E04

austenite, *n*—the highest temperature phase in Ni-Ti shape memory alloys. F 2005, F04

austenite finish temperature (A_f), *n*—the temperature at which the

martensite to austenite transformation is completed on heating in a single-stage transformation or the temperature at which the R-phase to austenite transformation is completed on heating in a two-stage transformation. **F 2005, F04**

austenite grain size—the grain size which exists or existed in austenite at a given temperature. See Test Methods E 112. **E 7, E04**

austenite peak temperature (A_p), *n*—the temperature of the endothermic peak position on the differential scanning calorimeter (DSC) curve upon heating for the martensite to austenite transformation in a single-stage transformation or the temperature of the endothermic peak position on the DSC curve upon heating for the R-phase to austenite transformation in a two-stage transformation. **F 2005, F04**

austenite start temperature (A_s), *n*—the temperature at which the martensite to austenite transformation begins on heating in a single-stage transformation or the temperature at which the R-phase to austenite transformation begins on heating in a two-stage transformation. **F 2005, F04**

austenitic stainless alloys—steel alloys that contain a minimum of 15 % chromium and from a residual to 20 % nickel. Some alloys may contain as much as 18 % manganese. The metal is predominantly face centered cubic in structure and hardenable only by cold working. Essentially nonmagnetic in its wire form, it may become slightly magnetic from cold working. Austenitic stainless steels can be grouped into three categories: 300 series alloy, Cr-Ni-Mn alloys, and Cr-Ni-Mo-Ti. **F 1789, F16**

austenitize, *vt*—to convert the matrix of a ferrous alloy to austenite by heating above the transformation temperature. **A 644, A04**

austenitizing, *n*—forming austenite by heating a steel object above the transformation range. **A 941, A01**

authority—the person (organization) authorizing the testing. **C 717, C24**

authority—body that has legal powers and rights, (EN 45020). **E 1187, E36**

authority having jurisdiction, *n*—the organization, office, or individual responsible for approving any equipment, installation, or procedure. **F 1494, F23**

autocatalytic plating—deposition of a metal coating by a controlled chemical reduction, catalyzed by the metal or alloy being deposited. **B 374, B08**

autoclave—a closed vessel for producing an environment of fluid pressure, with or without heat, to an enclosed object undergoing a chemical reaction or other operation. **E 631, E06**

autoclave—a closed vessel for producing an environment of fluid pressure, with or without heat, to an enclosed object undergoing a chemical reaction or other operation. **E 1749, E06**

autoclave cure—means for accelerating the cure reaction at elevated temperature and pressure in saturated steam, where reactive siliceous material has been incorporated into the cementitious matrix, such that a hydrothermal reaction takes place between the cement and silica yielding calcium silicate. **D 2946, C17**

autoclaved products, *n*—those that have been treated in a saturated steam atmosphere at between 620 and 1517 kPa (90 and 220 psi,) for at least 6 h, and that contain portland cement as defined in Specifications C 150 and C 618 together with silica in the ratio of 3:2 that can react to form calcium silicate reaction products. **C 1154, C17**

autoclaved products, *n*—for asbestos-cement, those that have been treated in a saturated steam atmosphere at between 689 and 1517 MPa (100 and 200 psi) for at least 8 h, and that contain portland cement as defined in Specifications C 150 and C 618, together with silica in the ratio of 3:2, that can react to form calcium silicate reaction products. **D 2946, C17**

autoclave molding—a process where the lay-up or other assembly is covered by a vacuum bag and placed in an autoclave capable of providing heat and pressure for curing the part. **E 631, E06**

autoclave molding—a process where the lay-up or other assembly is covered by a vacuum bag and placed in an autoclave capable of providing heat and pressure for curing the part. **E 1749, E06**

autoclave (rubber), *n*—a pressure vessel used for vulcanizing rubber products by means of steam under pressure. **D 1566, D11**

autodeposition, *n*—a single-step immersion metal finishing process in which an organic coating is applied by means of unique surface chemical reactions carried out in an aqueous latex dispersion, also referred to as chemiphoresis. Components within the bath give rise to chemical reactions that slightly solubilize the metallic surface and lead to destabilization, deposition, and coalescence of the dispersed latex particles at that surface. **D 16, D01**

autodiscrimination, *n*—the ability of a symbol reader to automatically recognize and decode multiple symbologies. **F 1294, F05**

auto-fill—a water height sensor device that activates a fresh water fill solenoid if the water level in the cooking vessel drops below predetermined height. **F 1827, F26**

autograft, *n*—a graft of tissue derived from another site in or on the body of the organism receiving it. **F 2312, F04**

autographic dilatometer—a dilatometer that automatically records instantaneous and continuous changes in dimensions and some other controlled variable such as temperature or time. **E 7, E04**

autographic pyrometer—See **pyrometer**. **E 7, E04**

autohesion, *n*—adhesion developed by interdiffusion of the molecules of two surfaces of the same material and consequent obliteration of the interface between them. (Sometimes called “autoadhesion.”) (Compare **blocking**.) **D 907, D14**

autoignition, *n*—the ignition of a material caused by the application of pressure, heat, or radiation, rather than by an external ignition source, such as a spark, flame, or incandescent surface. **D 4175, D02**

autoignition, *n*—the ignition of a material commonly in air as the result of heat liberation due to an exothermic oxidation reaction in the absence of an external ignition source such as a spark or flame. **E 1445, E27**

autoignition temperature, *n*—the minimum temperature at which autoignition occurs. **D 4175, D02**

autoignition temperature, *n*—the minimum temperature at which autoignition occurs under the specified conditions of test. **E 1445, E27**

autoignition temperature (AIT), *n*—the lowest temperature at which a material will spontaneously ignite in an oxygen-enriched atmosphere under specific test conditions. **G 126, G04**

autologous, *adj*—cells, tissues, and organs in which the donor and recipient is the same individual. Synonyms: *autogenous*, *autograft*, or *autotransfusion*, a *self-to-self graft*. **F 2312, F04**

automatic density control, *n*—the process whereby the toner layer deposited on the substrate is controlled by the printer. (See **ADC**.) **F 1457, F05**

automatic image analysis—the separation and quantitative evaluation of an image into its elements with or without operator interaction. It includes the enhancement, detection, and quantification of the features contained in an image through the use of optical, geometrical, and stereological parameters and a computer program. Image analysis data output can provide individual measurements on each separate feature (feature specific) or totals for all features of a particular type in the field (field specific). **E 7, E04**

automatic image analyzer—a device which can be programmed to detect and measure features of interest in an image. It may include accessories such as automatic focus and an automatic traversing stage to permit unattended operation. **E 7, E04**

automatic lock slider, *n*—in *zippers*, a slider that provides involuntary, positive locking action on the chain when the pull is released. **D 123, D13**

automatic lock slider, *n*—a slider that provides involuntary, positive locking action on the chain when the pull is released. **D 2050, D13**

automatic machine (or conveyor)—a machine for mechanically processing parts through treatment cycles, such as cleaning, anodizing, or plating. **B 374, B08**

automatic plating: (1) full—plating in which the cathodes are

automatic plating: (1) full

- automatically conveyed through successive cleaning and plating tanks. (2) *semi*—plating in which the cathodes are conveyed automatically through only one plating tank. **B 374, B08**
- automatic trip**—machine-activated tool mechanism providing continuous cycling while trip is in contact with the work. **F 592, F16**
- automobile leather*—see **upholstery leather**. **D 1517, D31**
- automotive, adj**—descriptive of equipment associated with self-propelled machinery, usually vehicles driven by internal combustion engines. **D 4175, D02**
- automotive wheel bearing grease, n**—a lubricating grease specifically formulated to lubricate automotive wheel bearings at relatively high grease temperatures and bearing speeds. **D 4175, D02**
- auto nail**—nail of ¼ to 5/4-in. length, sheared off bright, smooth, knurled, or helically fluted, regular-stock-steel or stiff-stock, 0.032-in. (21-gage) to 0.162-in. (8-gage) wire and driven subsequently by the same machine at a rapid rate. This nail has a sheared-bevel or sheared-square point. **F 547, F16**
- autopsy**—the dissection of a membrane module or element to investigate causes of unsatisfactory performance. **D 6161, D19**
- autoradiograph**—the image of an object containing a radioelement obtained, on a recording medium, by means of its own radiation. **E 1316, E07**
- auxiliary anode**—a supplementary anode employed during electrodeposition to achieve a desired thickness distribution of the deposit. **B 374, B08**
- auxiliary cathode**—See **thief**. **B 374, B08**
- auxiliary electrode*—See **counter electrode**. **G 15, G01**
- auxiliary energy subsystem**—in solar energy applications, equipment using nonsolar energy sources to supplement or backup the output provided by a solar energy system. **E 772, E44**
- auxiliary solvent**—liquid material used in addition to the primary solvent. It is generally used to replace part of the primary solvent to produce a specific effect, or, as a matter of economics. **D 3064, D10**
- auxiliary variable, n**—the secondary characteristic or measurement of interest. **D 5681, D34**
- availability**—the on-stream time or rated operating capacity of a water treatment system. **D 6161, D19**
- available chlorine in cleaning compounds**—the oxidizing power of chlorine present as hypochlorite or other oxidizing chlorine moieties in solution, expressed as chlorine of equivalent weight 35.45, and as determined by thiosulfate titration. **D 459, D12**
- available lime index**—those constituents of a lime which enter into a desired reaction under the conditions of a specific method or process. **C 51, C07**
- available program, n**—a qualifying term which can be used in the definition of recyclable, reusable, refillable, returnable, compostable, establishing limits; for example, by population and access within geographic area. **D 996, D10**
- a-value**—membrane water permeability coefficient. The coefficient is defined as the amount of water produced per unit area of membrane per unit of net driving pressure (NDP); units of measurement are $\text{m}^3/\text{hr}/\text{m}^2/\text{kPa}$. **D 6161, D19**
- aventurine**—glass containing colored, opaque spangles of nonglassy material. **C 162, C14**
- average, n**—for *series of observations*, the total divided by the number of observations. **D 123, D13**
- average background reflectance**—expressed as a percent, is the simple arithmetic average of the background reflection readings from at least five different points on a sheet. **F 149, F05**
- average breaking stress (ABS)**—the average maximum principal tensile stress (MPTS) at failure, representative of the glass under test. The ABS is dependent on a number of factors including geometry, time history of load, surface condition, etc. Glasses with residual surface stresses, such as heat-strengthened or fully tempered, must have their residual stresses added to the state of stress at the specified load. As defined for use in the standard, the ABS is for annealed glass. **E 631, E06**
- average coating thickness**—determined as either the value obtained by analytical methods or the mean value of a specified number of local thickness measurements that are evenly distributed over the significant surface. **F 1789, F16**
- average coefficient of cubical expansion**—average change in unit volume of a substance per unit change in temperature over a specified range of temperature. **E 7, E04**
- average coefficient of linear expansion**—average change in unit length of a body per unit change in temperature over a specified range of temperature. **E 7, E04**
- average coefficient of thermal expansion**—general term. (See also **average coefficient of cubical expansion** and **average coefficient of linear expansion**.) **E 7, E04**
- average diameter, n**—the average of the maximum and minimum outside the diameters, as determined at any one section of the pipe or tube. **B 899, B02**
- average diameter (for round tubes only)**—the average of the maximum and minimum outside diameters or the maximum and minimum inside diameters, whichever is applicable, as determined at any one cross section of the tube. **B 846, B05**
- average discharge (corona) current (I_d), n**—the sum of the absolute magnitudes of the individual discharges during a certain time interval divided by that time interval. **D 1711, D09**
- average dynamic air permeability (ADAP), n**—for *inflatable restraints*, the average of all of DAP measurements within a specified range of pressure differentials. **D 6799, D13**
- average edge**—an imaginary line bisecting the irregularities of the character edge. **F 149, F05**
- average emission function decay length**—the negative reciprocal slope of the logarithm of a specified exponential approximation to the emission depth distribution function over a specified range of depths, as determined by a straightline fit to the emission depth distribution function plotted on a logarithmic scale versus depth on a linear scale. **E 673, E42**
- average erosion rate, n**—a less preferred term for **cumulative erosion rate**. **G 40, G02**
- average fiber diameter, n**—in *wool and other animal fibers*, the average width of a group of fibers when measured on a projected image. **D 123, D13**
- average fiber diameter, n**—in *wool and other animal fibers*, the average width of a group of fibers when measured on a projected image. **D 4845, D13**
- average grade*—See **grade**. **E 631, E06**
- average grade*—the arithmetic mean of the elevations of various ground surfaces within a stated area of **building construction**. **E 631, E06**
- average grain diameter*—See **grain size**. **E 7, E04**
- average injection velocity, n**—the mean value of the velocity of the molten plastic flow front within a cavity during the injection time that is calculated from the shot volume and injection time. **D 883, D20**
- average interstitial velocity**—see **velocity, average interstitial**. **D 653, D18**
- average outgoing quality (AOQ)**—the average percent defective of outgoing product including all accepted lots or batches, after any defective units found in them are replaced by acceptable units, plus all lots or batches which are not accepted after such lots or batches have been effectively 100 % inspected and all defective units replaced by acceptable units. **E 456, E11**
- average outgoing quality limit (AOQL)**—the maximum of the AOQs for all possible incoming percentages defective for the process, for a given acceptance sampling plan. **E 456, E11**
- average particle size**—a single value representing the entire particle-size distribution. **C 242, C21**
- average quality protection**—a type of protection in which there is prescribed some chosen value of average percent defective in the product after inspection (average outgoing quality limit (AOQL), that shall not be exceeded in the long run no matter what may be

- the level of percent defective in the product submitted to the inspector. **E 456**, E11
- average regression rate** (*apparent burn rate*), *n*—the average rate at which the burning/solid-metal interface advances along the test sample length. **G 126**, G04
- average run length (ARL)**—(1) *sample sense*, *n*—the average number of times that a process will have been sampled and evaluated before a shift in process level is signaled, and (2) *unit sense*, *n*—the average number of units that will have been produced before a shift in level is signaled. **E 456**, E11
- average signal level**, *n*—the rectified, time averaged AE logarithmic signal, measured on the AE amplitude logarithmic scale and reported in dB_{ac} units (where 0 dB_{ac} refers to 1 μV at the preamplifier input). **E 1316**, E07
- average sound pressure level**—of several related sound pressure levels measured at different positions or different times, or both, in a specified frequency band, ten times the common logarithm of the arithmetic mean of the squared pressure ratios from which the individual levels were derived. **C 634**, E33
- average standard deviation**, \bar{s} , *n*—arithmetic average of sample standard deviations. **E 456**, E11
- average tire tread depth [L]**, *n*—the average of all tire groove (void) depth measurements. **F 538**, F09
- aversion**, *n*—feeling of dislike provoking avoidance of a stimulus. **E 253**, E18
- aviation gasoline**, *n*—gasoline possessing specific properties suitable for fueling aircraft powered by reciprocating spark ignition engines. **D 4175**, D02
- avicide**—a chemical used to kill, control, or cause other adverse effects on birds. **E 609**, E35
- avoidance**—a response away from or to limit contact with a material or condition. **E 943**, E47
- avulsion**—a sudden, natural change of a stream channel, so that the water flows elsewhere than in its previous course. **D 4410**, D19
- awkward hand**, *n*—see **unaccustomed hand**. **E 2195**, E30
- AWWA**—American Water Works Association. **D 6161**, D19
- AWWARF**—American Water Works Association Research Foundation. **D 6161**, D19
- axial ratio**—the ratio of the length of one axis to that of another (for example, *c/a*) or the continued ratio of three axes (for example, *a:b:c*). **E 7**, E04
- axial strain**, *n*—linear strain in a plane parallel to the longitudinal axis of the specimen. **E 6**, E28
- axillary temperature**, *t_{ba}*, *n*—temperature at the apex of either axilla (armpit) as measured by a *contact thermometer*. **E 344**, E20
- axis (crystal)**—the edge of the unit cell of a space lattice. Any one axis of any one lattice is defined, in length and direction, with respect to the other axes of that lattice. **E 7**, E04
- axis, optic**—the direction, or directions in an anisotropic crystal along which light is not doubly refracted. **E 175**, E41
- axis, optical**—the line formed by the coinciding principal axes of a series of optical elements comprising an optical system. It is the line passing through the centers of curvature of the optical surfaces. **E 175**, E41
- axle**, *n*—the axis oriented transversely to the nominal direction of vehicle motion, and extending the full width of the vehicle, about which the wheels(s) at both ends rotate. **E 867**, E17
- axle efficiency [nd]**, *n*—in a vehicle, the ratio of the sum of the wheel torques at the driven wheels to the product of driveshaft torque and axle ratio. **F 538**, F09
- axle-group load [lb (kg)]**, *n*—the sum of all tire loads on a group of adjacent axles a portion of the gross vehicle weight. **E 867**, E17
- axle load [lb (kg)]**, *n*—the sum of all tire loads of the wheels on an axle; a portion of the gross-vehicle weight. **E 867**, E17
- azeotrope**—constant boiling mixture, for ethanol-water, the azeotrope of 95.6 % ethanol and 4.4 % water (both percentages by volume) boils at one atmosphere pressure. **E 1705**, E48
- azeotropic distillation**—the use of an organic solvent to create a new constant boiling point mixture, a method used to produce anhydrous ethanol from the ethanol water azeotrope. **E 1705**, E48
- azimuthal angle, η**, *n*—angle between the plane containing the axis of the illuminator (or the path of illumination) and the specimen normal and the plane containing the axis of the receiver (or the path of reception) and the specimen normal. The origin and direction of measure of the angle should be specified when required. **E 284**, E12
- azimuthal viewing**, *n*—deprecated term; do not use. Replace *azimuthal* by *annular* or *circumferential*. **E 284**, E12
- azimuth angle, n**—an angle of a plane to the horizon measured clockwise to the object. **G 113**, G03
- azlon**—a manufactured fiber in which the fiber-forming substance is composed of any regenerated naturally occurring proteins. **D 123**, D13

B

- b**—length of cantilevered shear wall, in metres (feet). **E 631, E06**
- b**—depth of diaphragm, in. (or mm) **E 631, E06**
- Δ_b —bending deflection of diaphragm, in. (or mm) **E 631, E06**
- Babo's law**—the vapor pressure over a liquid solvent is lowered approximately in proportion to the quantity of a nonvolatile solute dissolved in the liquid. **E 7, E04**
- back**—the side reverse to the face of a panel, or the poorer side of a panel in any grade of plywood calling for a face and back. **D 1038, D07**
- back**—a crop with the head trimmed off behind the horn holes. **D 1517, D31**
- back bedding, n*—See **bedding**. **C 717, C24**
- back bedding*—See **windows and doors**. **E 631, E06**
- back breakpoint, n**—*in anatomy*, the location on the back of the body where the arm separates from the body. **D 123, D13**
- back-break point, n**—the location on the back of the body where the arm separates from the body. **D 5219, D13**
- back coating, n**—*in textile floor covering*, an adhesive compound applied for such purpose as locking pile yarn tufts into a carpet backing, bonding a secondary backing to a primary backing, or increasing fabric body or stiffness and increasing dimensional stability. **D 123, D13**
- back coating, n**—*in textile floor covering*, an adhesive compound applied for such purpose as locking pile yarn tufts into a carpet backing, bonding a secondary backing to a primary backing, increasing fabric body or stiffness and increasing dimensional stability. **D 5684, D13**
- back coating, n**—*in textile floor covering*, an adhesive compound applied for such purpose as locking pile yarn tufts into a carpet backing, bonding a secondary backing to a primary backing, or increasing fabric body or stiffness and increasing dimensional stability. **D 7023, D13**
- backdrafting, n**—the reversal of the normal (upward) direction of air flow in a vent for a vented combustion appliance (boiler, fireplace, furnace, or water heater), when the vented appliance is operating. **D 1356, D22**
- backed exposure, n**—a technique of weathering in which the test specimens being exposed are mounted onto a solid backing material, of sufficient strength to hold the specimen. When the specimen and the backing are in direct contact the backing material must be of a type that will not contaminate the specimen. When two materials are intimately joined together to form one composite, the materials below the top surface are not considered as a backing. **G 113, G03**
- back emf (electromotive force)**—the potential set up in an electrolytic cell that opposes the flow of current, caused by such factors as concentration polarization and electrode films. See **emf (electromotive force)**. **B 374, B08**
- back emission**—the electrical breakdown of air due to excessive charge build-up in the porcelain enamel powder film during powder application. This is due to the self-limiting characteristic of electrostatic powders. **C 286, B08**
- backer material, n**—a compressible material that is placed in joints or cracks before applying sealant to prevent bonding of the sealant on the bottom of the joint, control sealant depth, and prevent sagging of the sealant. **D 5535, D04**
- backer printing**—printing on the reverse side of the sheet. For OCR forms, the paper should have sufficient opacity so that printing on the back can't be seen on the front by the optical scanner. **F 149, F05**
- backer strip**—water-repellent strip of asphalt-coated felt applied behind each joint where the vertical edges of two shingles meet. **D 2946, C17**
- backer strips, n**—*in shingles*, water-repellent strips of asphalt-coated felt applied behind each joint where the vertical edges of two shingles meet. **C 1154, C17**
- back-face strain, n**—the strain as measured with a strain gage mounted longitudinally on the compressive surface of the specimen, opposite the crack or notch mouth (often this is the top surface of the specimen as tested). **C 1145, C28**
- backfill**—all the material used to fill the trench from bedding to finished surface. **C 896, C04**
- backfill**—all material used to fill the trench from bedding to finished surface. **F 412, F17**
- backfill, final**—material used to fill the trench from initial backfill to finished surface. **C 896, C04**
- backfill, final**—material used to fill the trench from initial backfill to finished surface. **F 412, F17**
- backfill, initial**—material used to fill the trench from top of bedding to a designated height over the pipe. **C 896, C04**
- backfill, initial**—material used to fill the trench from top of bedding to a designated height over the pipe. **F 412, F17**
- backfill, unconsolidated**—non-compacted material in place in the trench. **C 896, C04**
- backfill, unconsolidated**—noncompacted material in place in trench. **F 412, F17**
- backflush**—temporary reversal of the permeate or retentate flow. **D 6161, D19**
- back flushing, n**—a process by which liquid is forced in the reverse direction to the flow direction. **D 4439, D35**
- background**—apparent absorption caused by anything other than the substance for which the analysis is being made. **E 131, E13**
- background:**
- inelastic*—*ISS*, the response of the energy filtering and detection system to probe ions that have undergone inelastic scattering events at the specimen surface.
 - instrumental*—*ISS*, the response of the energy filtering and detection system to events other than those induced by bombardment of the specimen surface by a beam of probe ions.
 - secondary ion*—*ISS*, the response of the energy filtering and detection system to secondary ions produced by bombardment of the target material with probe ions.
 - signal*—*for a specific measurement*, any signal present at a particular position due to processes or sources other than those of primary interest. **E 673, E42**
- background**—the surface of the test part against which the indication is viewed. It may be the natural surface of the test part or the developer coating on the surface. **E 1316, E07**
- background**—in magnetic particle examination, the appearance of the surface of the test part against which indications are viewed. **E 1316, E07**
- background**—the reflectance of the receptor virgin surface. **F 221, F05**
- background,, n**—a measure of the reflectance or density of the unimaged portion of a thermal paper; typically measured using a densitometer, reflectometer, or opacimeter. **F 1623, F05**
- background blackening**—a continuous, slowly varying blackening of photographic film which has been exposed to diffracted X-rays, on which the blackening due to diffracted spots or lines is superimposed. **E 7, E04**
- background noise**—noise from all sources unrelated to a particular sound that is the object of interest. Background noise may include airborne, structureborne, and instrument noise. **C 634, E33**
- background potential**—applies only to charged area development process, see **charged area development**. See **residual potential**. **F 335, F05**
- background potential*—see **residual potential**. **F 335, F05**
- background radiation**—all radiation received by the infrared sensing device that was not emitted by the specified area of the surface being examined. **E 1316, E07**
- background reflectance**—a measurement of the brightness of paper referring to the amount of light reflected back from the paper at a

- particular point when that point is flooded with light, as compared with the known value representing absolute white (such as BaSO_4). **F 149, F05**
- background signal**—in leak testing, the steady or fluctuating output signal of the leak detector caused by the presence of residual tracer gas or other substance to which the detecting element responds. **E 1316, E07**
- background, target**—that portion of the background which is confined to the field of view. **E 1316, E07**
- backing, n**—for *pile yarn floor covering*, all materials in a pile yarn floor covering other than pile yarn. **D 123, D13**
- backing, n**—in *pile yarn floor covering*, all materials in a pile floor covering other than the pile yarn. **D 5684, D13**
- backing board, n**—a board with the same dimensions as the specimen and used to back the specimen so as to represent end-use conditions. **E 176, E05**
- backing board, n**—a noncombustible insulating board, mounted behind the specimen during actual testing to satisfy the theoretical analysis assumption of no heat loss through the specimen. It shall be roughly 25 ± 5 mm thick with a density no greater than 200 ± 50 kg/m³. **E 176, E05**
- backing fabric, n**—in *textiles*, a fabric into which a pile yarn is inserted, or a reinforcing layer which is adhered to the reverse side of a fabric. **D 123, D13**
- backing fabric, n**—in *textile conservation*, a support textile fabric located behind the textile artifact. **D 123, D13**
- backing fabric, n**—in *textiles*, a fabric into which a pile yarn is inserted; or a reinforcing layer which is adhered to the reverse side of a fabric. **D 5684, D13**
- backing film**—a film used as auxiliary support for the thin replica or specimen-supporting film. **E 7, E04**
- backing pump**—Same as **fore pump**. **E 1316, E07**
- backing space**—the space between a backing pump (fore pump) and the associated diffusion pump (or other type of pump requiring a fore pump). (See also **ballast**.) **E 1316, E07**
- backing space technique**—a method of testing for leaks in which the leak detector is connected to the backing space to take advantage of the compression of gas that occurs between the vacuum system and the backing pump, due to the action of the diffusion pump (or other type of pump of high speed relative to its backing pump). **E 1316, E07**
- back ionization**—see **back emission**. **C 286, B08**
- back joint**—a vertical mortar joint, parallel to the vertical substrate, between a chemical-resistant construction unit and a substrate or another chemical-resistant construction unit. **C 904, C03**
- backnailing**—the practice of blind-nailing roofing felts to a substrate in addition to hot-mopping to prevent slippage. **D 1079, D08**
- backpack grouting**—the filling with grout of the annular space between a permanent tunnel lining and the surrounding formation. **D 653, D18**
- back-packing**—any material (usually granular) that is used to fill the empty space between the lagging and the rock surface. (ISRM) **D 653, D18**
- backpart molding**—a preparatory shaping operation to heel seat prior to lasting, usually performed on the thermoplastic counters where backpart components are heated on a metal heel form and molded into the backpart heel shape combining counter, upper and lining before the actual lasting operation is performed on the backpart of the shoe. **F 869, F08**
- back pressure**—Same as **forepressure**. **E 1316, E07**
- back pressure test**—Same as **pressure-evacuation test**. **E 1316, E07**
- backpulse**—pumping treated water with or without added chemicals in the reversed direction from the lumen to the feed side of the membrane (inside-out). **D 6161, D19**
- back putty, n**—See **bedding**. **C 717, C24**
- back putty**—See **windows and doors**. **E 631, E06**
- back reflection**—the diffraction of X-rays at a Bragg angle approaching 90°. **E 7, E04**
- back reflection**—indication of the echo from the far boundary of the material under test. **E 1316, E07**
- backrinding, n**—a molding defect in which the rubber adjacent to the spew line shrinks below the surface of the molded product, with the spew line often being ragged and torn. **D 1566, D11**
- backscattered electrons**—AES, electrons originating in the incident beam which are emitted after interaction with the target. By convention, electrons with energies greater than 50 eV are considered as backscattered electrons. **E 673, E42**
- back scattered radiation**—radiation which is scattered more than 90° with respect to the incident beam, that is, backward in the general direction of the radiation source. **E 1316, E07**
- backscattering:**
- energy*—EIA, energy of a particle from the analyzing beam after it has undergone a backscattering collision and escaped the specimen.
- factor*—AES, the fractional increase in the Auger current due to backscattered electrons.
- spectrum*—EIA, a plot of backscattering yield (ordinate) versus backscattering energy (abscissa).
- yield*—EIA, the number of particles detected (counts) per unit backscattering energy per incident ion. **E 673, E42**
- backscatter peak**—a peak in the observed photon spectrum (normally below about 0.25 MeV) resulting from large-angle (>110°) Compton scattering of gamma rays from materials near the detector. This peak will not have the same shape as the full-energy peaks (being wider and skewed toward lower energy). **E 170, E10**
- backset**—the liquid portion of the thin stillage that is recycled as part of the process liquid in mash preparation. **E 1705, E48**
- backshelf**—used for counter-height equipment typically located against a wall, but could be freestanding. **F 1827, F26**
- back side, n**—*intextile materials*, the side of the material that faces inward in the completed object. (Ant. **face side**.) **D 123, D13**
- back side, n**—*intextile materials*, the side of the material that faces innermost in the completed product. (Ant. **face side, right side**. Syn. *wrong side*.) **D 4965, D13**
- backside density, n**—the optical density of ink image on topside of a substrate as measured from the backside of the media on which it was printed. **F 1857, F05**
- back surface**—the end of a reference block that is opposite the entry surface. (E 127) **E 1316, E07**
- back titration**—a titration in which an excess of reagent is added to the sample to complex or precipitate the species being determined. The excess reagent is then determined by second titration, usually with the species that was originally in the sample. Back titrations are useful for increasing accuracy in the analysis of very dilute solutions. **D 4127, D19**
- back-up material**—See **sealant backing**. **C 717, C24**
- back waist length, n**—in *body measurements*, the vertical distance along the spine from the cervicale to the waist. **D 123, D13**
- back waist length, n**—in *body measurements*, the vertical distance along the spine from the cervical to the waist. **F 1494, F23**
- back wall**—the wall at the charging end of a melter. **C 162, C14**
- backwash**—reversing the flow of water with/without air either across or through a medium or membrane. Designed to remove the collected foreign material from the bed or membranes. **D 6161, D19**
- back width, n**—in *body measurements*, the distance from back-breakpoint to back-breakpoint. **D 123, D13**
- back width, n**—the horizontal distance across the back from back break-point to back break-point over the shoulder blades, taken with the arms down. **D 5219, D13**
- back wrapping, n**—a deprecated term. See **wrap**. **E 2110, E06**
- bacteria**—any of a class of microscopic single-celled organisms

bacteria

- reproducing by fission or by spores. Characterized by round, rod-like, spiral, or filamentous bodies, often aggregated into colonies or mobile by means of flagella. Widely dispersed in soil, water, organic matter, and the bodies of plants and animals. Either autotrophic (self-sustaining, self-generative), saprophytic (derives nutrition from non-living organic material already present in the environment), or parasitic (deriving nutrition from another living organism). Often symbiotic (advantageous) in man, but sometimes pathogenic. **D 6161, D19**
- bactericide**—agent capable of killing bacteria. **D 6161, D19**
- bacteriophage**—a virus that infects bacteria. **E 1705, E48**
- bacteriophage, n**—a type of virus which infects bacteria. **F 1494, F23**
- bacteriostat**—substance that prevents bacterial growth and metabolism but does not necessarily kill them. **D 6161, D19**
- bacterium (pl. bacteria), n**—a single cell microorganism characterized by the absence of defined intracellular membranes that define all higher life forms. **D 4175, D02**
- BAF (bioaccumulation factor), n**—the quotient obtained by dividing the concentration of a substance in an organism (or specified tissue) by its concentration in a specified exposure medium, for example, air, food, sediment, soil, water, when several media are possible sources (see **bioaccumulation**). **E 943, E47**
- baffle**—a mold part used to close the delivery or baffle hole in a blank mold. **C 162, C14**
- baffle**—a pier, weir, sill, fence, wall, or mound built on the bed of a stream to parry, deflect, check, or regulate the flow or to float on the surface to dampen the wave action. **D 653, D18**
- baffle**—a deflector plate in a vessel that disperses the inlet fluid. **D 6161, D19**
- baffle filters**—a series of vertical baffles designed to capture grease and drain it away to a container. The filters are arranged in a channel or bracket for easy insertion into, and removal from, the hood for cleaning, and are usually constructed of aluminum, steel, or stainless steel and they come in various standard sizes. See **exhaust hood**. **F 1827, F26**
- baffle mark**—a mark or seam on a bottle resulting from a mold joint between blank mold and baffle. **C 162, C14**
- baffle wall**—a wall used to deflect gases or flames in a melter. See **shadow wall**. **C 162, C14**
- bag, n**—a preformed **container** of tubular construction made of flexible material, generally enclosed on all sides except one forming an opening that may or may not be sealed after filling. (See also **pouch**.)
- paper multiwall-sack**—a flexible **container** made of several plies, usually of kraft paper. The various plies may be specially treated, such as waxed paper, glassine, greaseproof, polyethylene, **wet strengthpaper**, or other specialty sheets. The particular nature of the sack depends upon the material to be packed and the type of transportation to be employed.
- bag liner**—See **liner**. **D 996, D10**
- bag, n**—for **sampling**, any quantity of asbestos fiber corresponding to one particular grade that is packed in a suitable container. **D 2946, C17**
- bagasse**—residue remaining after extraction of a sugar-containing juice from plants like sugar cane. **E 1705, E48**
- bag cure, n**—a method of vulcanization in which an inflated flexible bag is used to impart positive internal pressure on the article being vulcanized. **D 1566, D11**
- bagging, n**—any fabric, of any fiber content, used to protect commodities during shipment and/or storage. **D 123, D13**
- bagging, n**—any material, such as fabric or other suitable material used to protect commodities during shipment and/or storage. **D 4850, D13**
- baggy cloth**—See **wavy cloth**. **D 3990, D13**
- baggy selvage**—See **slack selvage**. **D 3990, D13**
- baghouse**—a chamber containing bag filters for the removal of particles from a process exhaust stream. **C 162, C14**
- baghouse, n**—a facility that removes fly ash from the flue gas by the use of fabric filter bags. **E 2201, E50**
- bag leather**—a general term for leathers used in traveling bags and suitcases. It does not include the light leathers employed for women's fancy handbags. The staple material for bag and case leather at present is leather made from the hides of animals of the bovine species, but heavy sealskins and goatskins are also used. **D 1517, D31**
- bag modeling**—a method of molding or laminating which involves the application of fluid pressure, usually by means of air, steam, water or vacuum, to a flexible barrier material which transmits the pressure to the material being molded or bonded. **D 883, D20**
- bag molding, n**—a method of molding or bonding involving the application of fluid pressure, usually by means of air, steam, water, or vacuum, to a flexible cover which, sometimes in conjunction with the rigid die, completely encloses the material to be bonded. **D 907, D14**
- bag molding**—a method of molding or bonding involving the application of fluid pressure, usually by means of air, steam, water, or vacuum, to a flexible cover which, sometimes in conjunction with a rigid die, completely encloses the material to be bonded. (Compare with **vacuum bag molding**.) **E 631, E06**
- bag molding**—a method of molding or bonding involving the application of fluid pressure, usually by means of air, steam, water, or vacuum, to a flexible cover which, sometimes in conjunction with a rigid die, completely encloses the material to be bonded. (Compare with **vacuum bag molding**.) **E 1749, E06**
- bag sampler**—a sampler that utilizes a collapsible bag as the sample collection container. **D 4410, D19**
- bail, n**—in **zippers**, a portion or portions of the slider to which the pull or pulls are attached. **D 123, D13**
- bail, n**—the usually arched handle of a pail or can. **D 996, D10**
- bail, n**—a portion or portions of the slider to which the pull or pulls are attached. (*Syn. lug*.) **D 2050, D13**
- bailer**—a hollow tubular receptacle used to facilitate withdrawal of fluid from a well or borehole. **D 653, D18**
- bail-out bottle, n**—A diver-carried supply of air or mixed gas (as appropriate) sufficient under standard operating conditions to allow the diver to reach the surface or another source of breathing gas, or to be reached by a safety diver. **F 1549, F32**
- bainite—upper, lower, intermediate**—metastable microstructure or microstructures resulting from the transformation of austenite at temperatures between those which produce pearlite and martensite. These structures may be formed on continuous (slow) cooling if the transformation rate of austenite to pearlite is much slower than that of austenite to bainite. Ordinarily, these structures may be formed isothermally at temperatures within the above range by quenching austenite to a desired temperature and holding for a period of time necessary for transformation to occur. If the transformation temperature is just below that at which the finest pearlite is formed, the bainite (upper bainite) has a feathery appearance. If the transformation temperature is just above that at which martensite is produced, the bainite (lower bainite) is acicular, resembling slightly tempered martensite. At the higher resolution of the electron microscope, upper bainite is observed to consist of plates of cementite in a matrix of ferrite. These discontinuous carbide plates tend to have parallel orientation in the direction of the longer dimension of the bainite areas. Lower bainite consists of ferrite needles containing carbide platelets in parallel array cross-striating each needle axis at an angle of about 60°. Intermediate bainite resembles upper bainite; however, the carbides are smaller and more randomly oriented. **E 7, E04**
- bait**—the tool dipped into molten glass to start any drawing operation. **C 162, C14**
- bake-out**—in leak testing, the degassing of a vacuum system by heating during the pumping process. **E 1316, E07**
- baking, n**—heating to a low temperature in order to remove gases. **A 941, A01**
- baking**—heating to a temperature at least 50°F below the tempering

or aging temperature of the metal or alloy to remove hydrogen before embrittlement occurs by the formation of microcracks.

F 2078, F07

baking duration—time measured from when the plated product reaches a specified temperature in the baking furnace or oven until it is removed.

F 1789, F16

baking finish, *n*—a paint or varnish that requires baking at temperatures above 150°F (65°C) for the development of desired properties.

D 16, D01

baking temperature, *n*—a temperature above 150°F (65°C).

D 16, D01

balance—See **windows and doors**.

E 631, E06

balanced construction—See under **construction**.

D 1038, D07

balanced design, *n*—a statistical study where replication in each of the levels of ANOVA is identical.

D 5681, D34

balanced filters (X-rays)—a pair of filters used to eliminate all but a narrow range of wavelengths. The filter materials and thicknesses are chosen so that their absorption edges lie very close together and so that they have the same absorption except for wavelengths lying in the range between their absorption edges. When these filters are used alternately, the difference in effect, if any, is due to X-rays that have wavelengths in this range. Balanced filters thus can be made to serve as a crude monochromator.

E 7, E04

balanced incomplete block design (BIB), *n*—an incomplete block design in which each block contains the same number *k* of different versions from the *t* versions of a single principal factor arranged so that every pair of versions occurs together in the same number, λ , of blocks from the *b* blocks.

E 456, E11

balanced incomplete block design (BIB), *n*—an incomplete block design in which each block contains the same number *k* of different versions from the *t* versions of a single principal factor arranged so that every pair of versions occurs together in the same number, λ , of blocks from the *b* blocks.

E 1325, E11

balanced laminate—any laminate that contains one ply of minus theta orientation with respect to the laminate principal axis for every identical ply with a plus theta orientation.

D 3878, D30

balanced laminate—a composite laminate in which all laminae occur in pairs symmetric about the midplane (but not necessarily adjacent to each other). See **symmetrical laminate**.

E 631, E06

balanced laminate—a composite laminate in which all laminae occur in pairs symmetric about the midplane (but not necessarily adjacent to each other). See **symmetrical laminate**.

E 1749, E06

balancing, *n*—a process to correct for heavy or light areas of a tire and wheel assembly.

F 538, F09

balata, *n*—a hard thermoplastic consisting of approximately equal proportions of trans-polyisoprene and resin, obtained from trees of the *Sapotaceae* family.

D 1566, D11

bald roof—See **smooth-surfaced roof**.

D 1079, D08

bale, *n*—in packaging a shaped unit, bound with cord or metal ties under tension, and containing compressed articles or materials. It may be wrapped.

D 996, D10

bale coating, *n*—a coating applied to surfaces of rubber bales that inhibits adhesion to other surfaces.

D 1566, D11

bale (jute), *n*—a bag, sack, etc., containing packages of yarn.

D 123, D13

baling, *n*—a method of volume reduction whereby tires are compressed into bales.

D 5681, D34

ballast—materials used to provide stability to a buoyant object (such as casing within a borehole filled with water).

D 653, D18

ballast—in leak testing, a backing space large enough to maintain a low forepressure when the fore pump is temporarily stopped.

E 1316, E07

ballast—weight applied to the skirt to improve boom performance.

F 818, F20

ball burnishing—See **barrel burnishing**.

B 374, B08

ball clay—a secondary clay, commonly characterized by the presence of organic matter, high plasticity, high dry strength, long vitrification range, and a light color when fired.

C 242, C21

ball cratering—a method of specimen preparation in which a specimen is polished by a sphere in order to expose compositional changes below the original surface of a specimen with the intent that the depth of these layers can be related to the position on the surface created by the ball.

E 673, E42

ball element—an element used in an impact printing device in which the fully formed characters are located on the outer surface of a sphere-like device. Frequently called *golf-ball element*.

F 909, F05

ball head—spherical head.

F 547, F16

balling up—See **fuzz ball**.

D 3990, D13

ballistic point—bullet-shaped point.

F 547, F16

ball measurement—the line running completely around the foot or last coplanar to the joints of large and small toes.

F 869, F08

ball mill—in *porcelainenamels*, a dense, ceramic-lined rotating cylinder in which ceramic materials are wet or dry ground, generally using pebbles or porcelain balls as grinding media.

C 286, B08

ball mill, *n*—a closed rotating cylinder containing hard balls (or other shaped members) that serves to grind coarse materials to a finer particle size.

D 1566, D11

ball milling—a method of grinding and mixing material, with or without liquid, in a rotating cylinder or conical mill partially filled with grinding media such as balls or pebbles.

C 242, C21

ball or spherical valve, *n*—depending on the design of the pump, it may be used as the upper or lower valve, or both.

D 6655, D10

ball point—spherical point on shank of nail, having a diameter equal to that of shank.

F 547, F16

ball printer—an impact printing device utilizing a ball element. The paper on the carriage remains stationary while the element is positioned and caused to strike the paper to produce characters in their proper positions.

F 909, F05

balsam, Canada—a resin from the balsam fir *Abies balsamea*. Dissolved in xylene, toluene, or benzene it is used as a mountant for permanent microscopical preparations. Its refractive index may vary from 1.530 to 1.545 and its softening point from room temperature to 100°C, these properties varying with age and solvent content. If impure it discolors with age.

E 175, E41

baluster—See **railing systems**.

E 631, E06

baluster, *n*—(baluster bar). Synonym for **picket**.

E 631, E06

baluster, baluster bar, *n*—one of a series of closely spaced, upright, and parallel infill members of a balustrade, located between top rail or handrail and bottom rail or tread or floor beneath balustrade. Synonym for **picket**.

E 1481, E06

baluster casting—an ornamental cast element attached to a baluster. Also, cast element designed to attach baluster to top and bottom rails.

E 1481, E06

baluster (picket), *n*—one of a series of closely-spaced upright members that support the handrail in a railing system.

balustrade—See **railing systems**.

E 631, E06

baluster (picket), *n*—one of a series of closely-spaced upright members that support the handrail in a railing system.

E 1605, E06

baluster railing system—a system consisting of posts, balusters, top rail, and bottom rail.

E 1481, E06

balustrade, *n*—a railing system consisting of a row of pickets capped by a rail or handrail.

E 631, E06

balustrade, *n*—a railing system consisting of a row of balusters capped by a rail or handrail.

E 1481, E06

band—in electron diffraction, a broad intensity maximum with sharp edges.

E 7, E04

band—the light frequency spectrum between two defined limits; also light band.

F 149, F05

band, *n*—a flexible anchor component with a noncircular cross section that connects the bony elements of the spine, pelvis, or ribs to each other or to other implant components using a knot or similar tying mechanism, forming a locked, closed loop.

F 1582, F04

band aid sealant joint, n

band aid sealant joint, n—Use **bridge sealant joint** (preferred term).
C 717, C24

band application—an application of a pesticide to a continuous restricted area such as in or along a crop row rather than over the entire field area.
E 609, E35

band application—an application of a pesticide to a continuous restricted area such as in or along a crop row rather than over the entire field area (see Definitions E 609).
E 1102, E35

banded coal—See **banded coal** under **coal**.
D 121, D05

banded cryogenic fabric—a distinct soil morphology in which soil particles form subhorizontal layers as the result of freezing and thawing.
D 7099, D18

banded structure (banding)—alternate bands parallel with the direction of working resulting from the elongation of segregated areas.
E 7, E04

banding—Use **strapping**.
D 996, D10

banding, n—a non-uniformity of color appearance on a scale much larger than colorant particles, characterized by a band or several nearly parallel indistinct stripes differing slightly in color from the remaining area.
E 284, E12

banding, n—uniform density variations or voids in a given color which appear in the direction that the printhead travels.
F 1857, F05

banding (railing)—a portion of wood or other material extending around one or more edges of a plywood panel.
D 1038, D07

band pass filter—a wave filter having a single transmission band; neither of the cut-off frequencies being zero or infinity.
E 1316, E07

band printer—a type of printer that employs an endless steel band containing fully formed characters. The band transverses the width of the paper form. Hammers strike the back of the form, synchronized in such a way as to produce the desired characters in their proper position.
F 909, F05

band width or span (Δ), n—the temperature difference defined by the equation:

$$\Delta = SB - SR$$

E 344, E20

band width or span (Δ), n—the temperature difference defined by the following equation:

$$\Delta = T^{470} - T^{650}$$

E 344, E20

bandwidth [1/ T], n—the range of frequencies within which certain performance characteristics occur; specific limits normally apply.
F 538, F09

bank—a grouping of devices. See **array, block, train**.
D 6161, D19

bank gravel, n—gravel found in natural deposits, usually more or less intermixed with fine material, such as sand or clay, or combinations thereof; gravelly clay, gravelly sand, clayey gravel, and sandy gravel indicate the varying proportions of the materials in the mixture.
D 8, D04

banking—the alignment of the first graphic shape in a line with respect to the left (right) margin, by certain devices (that is, typewriters, line printers, etc.).
F 149, F05

bank (mill, calender, or spreader), n—a reservoir of material at the opening between rolls (mill or calender), or at the spreader bar.
D 1566, D11

bar, n—solid wrought product that is long in relation to its cross section, is square or rectangular with sharp or rounded corners/edges (excluding plate and flattened wire), or is a regular hexagon or octagon, and in which at least one perpendicular distance between parallel faces is 0.375 in. or greater [over 10.00 mm].

bus bar, n—rigid electric conductor in the form of a bar.

extruded bar, n—bar brought to final dimensions by hot extruding.

rolled bar, n—bar brought to final dimensions by hot rolling.

saw-plate bar, n—bar brought to final thickness by hot or cold rolling and to final width by sawing.
B 881, B07

bar, n—an elongated, forged or rolled metal product with uniform strength, length and section (such as rectangular, square, round, oval or hexagonal).

NOTE—In the following standards the term “bar” has a similar definition, but with greater and more specific detail.
B 899, B02

bar—unit of pressure; 14.50 lbs/in.², 1.020 kg/cm², 0.987 atm, 0.1 MPa.
D 6161, D19

bar, n—a round, square, rectangular, or other polygonal solid member having a length greater than its width or thickness; and usually of rolled, drawn, or extruded metal (if of steel, having dimensions of 0.204 in. (5.2 mm) or more in thickness, and 8.0 in. (20.3 mm) or less in width).
E 631, E06

bar—See **type bar**.
F 909, F05

bar, n—one of two types of elements comprising a bar code symbol. An element of a bar code symbol whose reflectance is less than the Global Threshold.
F 1294, F05

bar—solid rolled or forged section that is long in relationship to its cross-sectional dimensions with a relatively constant cross-section throughout its length. Carbon and alloy steel bars are produced from hot rolled or cast billets, or from blooms rolled single strand into coils.
F 1789, F16

barb, n—*as related to barbed wire*, a short length of wire, with exposed ends cut on a bias to produce sharp points.
A 902, A05

barb, n—*in down*, the primary structure of plumage emanating from a quill point of a down cluster.
D 123, D13

barb, n—*in feathers*, the primary structure of plumage emanating from the quill of a feather.
D 123, D13

barb, n—*in down*, the primary structure of plumage emanating from a quill point of a down cluster.
D 7022, D13

barb, n—*in feathers*, the primary structure of plumage emanating from the quill of a feather.
D 7022, D13

barb—as related to barbed wire— a short length of wire, with exposed ends cut on a bias to produce sharp points.
F 552, F14

barbed—shank provided with repetitive, shallow or deep, symmetrical or nonsymmetrical, cross-wise or oblique, diagonal or perpendicular indentations and ridges, excluding grip marks.
F 547, F16

barbed tape—strip of metal, machined to produce clusters of sharp points.
F 552, F14

barbed tape, n—strip of metal, machined to produce clusters of sharp points.
F 1379, F14

barbed wire, n—a fabricated wire product consisting of two line wires twisted to form a two-wire strand, into which 2-point or 4-point barbs are tightly wrapped and locked into place at specified intervals.
A 902, A05

barbed wire—a fabricated wire product consisting of two line wires twisted to form a two-wire strand, into which 2-point or 4-point barbs are tightly wrapped and locked into place at specific intervals. (*Syn.* barbwire).
F 552, F14

barbed wire arm—a post fitting used to hold barbed wire in place. May be vertical or angled to hold three or more strands of barbed wire, or “V” shaped to hold six or more strands of barbed wire.
F 552, F14

barbed wire arm base—a casting of aluminum, malleable iron, or steel, used in combination with one or two barbed wire extension arms held in place by a bolt and nut.
F 552, F14

barbed wire extension arm—pressed aluminum or pressed galvanized steel used in combination with barbed wire arm base to hold three strands of barbed wire either vertically or angled in or out from the fence line. Also used in pairs in a “V” configuration to hold 6 strands of barbed wire.
F 552, F14

barb length, n—measured from the barb point to the center line of the barb cluster.
F 1379, F14

barb length classification, n—commonly used barbed types describing length and shape; such as long barb, medium barb, and short barb.
F 1379, F14

barb spacing, *n*—the circumferential or linear distance between the center lines of the barb clusters. **F 1379, F14**

bar code—a binary coding system consisting of vertical marks or bars that, when read by an optical scanner, can be converted to machine language. **F 149, F05**

bar code, *n*—an array of parallel rectangular marks and spaces in a predetermined pattern. **F 1294, F05**

bar code density, *n*—the number of characters that can be represented in a lineal inch. (See **symbol density**.) **F 1294, F05**

bar code label, *n*—an adhesive-backed carrier bearing printed bar code information suitable for affixing to an apparatus, equipment, or container surface. **F 1294, F05**

bar code reader—see **bar code scanner**. **F 1294, F05**

bar code scanner, *n*—a device used to identify and decode a bar code symbol. **F 1294, F05**

bar code symbol, *n*—an array of rectangular bars and spaces, arranged in a predetermined pattern, following specific rules that represent elements of data referred to as characters. **F 1294, F05**

bare conductor—a conductor having no nonmetallic covering. **B 354, B01**

barefoot, *adv or adj*—with the feet uncovered or unclothed; without shoes or stockings. **F 1646, F13**

bare soil, *n*—soil or sand not covered by grass, sod, other live ground covers, wood chips, gravel, artificial turf, or similar covering. **E 1605, E06**

bar height, *n*—the dimension of a symbol element perpendicular to its width. **F 1294, F05**

barium sulfate (BaSO₄)—a standard reflecting agent used to calibrate instruments for measuring the whiteness and reflectance of papers. **F 149, F05**

bark—the layer of a tree outside the cambium comprising the inner bark and the outer bark.

inner bark—the layer of living bark (phloem) that separates the outer bark from the cambium and which in the living tree generally is moist and soft.

outer bark—the layer of dead bark outside the inner bark, forming the exterior surface of the tree stem. The outer bark frequently is corky and dry.

bark product—an opening between annual growth rings that contains bark. Bark pockets appear as dark streaks on radial surfaces and as rounded areas on tangential surfaces. **D 9, D07**

barkometer—a hydrometer used for determining the specific gravity of tanning solutions. A specific gravity of 1.000 is equivalent of 0 deg barkometer (Bk), and each additional degree Bk is equivalent to an increase of 0.001 in specific gravity. **D 1517, D31**

bark tannage—leather tanned by use of vegetable tannins found in barks, wood, and other plant derivatives, as distinguished from mineral tannages. **D 1517, D31**

barn—a unit of area used for expressing the area of nuclear cross sections.

$$1 \text{ barn} = 10^{-24} \text{ cm}^2$$

E 1316, E07

barometric efficiency—the ratio of the change in depth to water in a well to the inverse of water-level change in barometric pressure, expressed in length of water. **D 653, D18**

bar printer—an impact printer in which the type slugs are carried on a **type bar**. *Syn.* print bar. **F 909, F05**

barré, *n*—an unintentional, repetitive visual pattern of continuous bars and stripes usually parallel to the filling of woven fabric or to the courses of circular knit fabric. (Compare **warp streaks** and **mixedfilling**, see **filling blend**.) **D 123, D13**

barré, *n*—an unintentional, repetitive visual pattern of continuous bars and stripes usually parallel to the filling of woven fabric or to the courses of circular knit fabric. (Compare **warp streak**, **mixed filling**) **D 3990, D13**

barré, *n*—a defect characterized by bars or streaks, fillingwise in

woven fabrics or coursewise in weft-knit fabrics, caused by uneven tension in knitting, or defective yarn, improper needle action, or other similar factors. **E 284, E12**

bar reflectance (R_b), *n*—the smallest reflectance value in a bar. **F 1294, F05**

barrel—the cylindrical portion of a vitrified clay pipe exclusive of branches, spurs, joints, and handling rings or lugs. **C 896, C04**

barrel, *n*—a bulged cylindrical container of greater length than breadth, made of wooden **staves** bound together with hoops and having two flat ends of equal diameter. (Compare **drum**.)

cask, *n*—a term used synonymously with **barrel** but usually of large size or capacity.

keg, *n*—a small slack or tight **barrel** of 30-gal capacity or less. **D 996, D10**

barrel burnishing—the smoothing of surfaces by means of tumbling the work in rotating barrels in the presence of metallic or ceramic shot, and in the absence of abrasive. In ball burnishing, the shot consists of hardened steel balls. **B 374, B08**

barrel distortion—See **distortion**. **E 7, E04**

barrel electroplating—an electroplating process in which electrodeposits are applied to articles in bulk in a rotating, oscillating, or otherwise moving container. **B 374, B08**

barrel finishing (or tumbling)—bulk processing in barrels, in either the presence or absence of abrasives or burnishing shot, for the purpose of improving the surface finish. **B 374, B08**

barrel-galvanized—See **hot-galvanized**. **F 547, F16**

barrel, glass container—{archaic} See **sidewall, glass container**. **C 162, C14**

barrel nail—bright or coated, regular-stock-steel, $\frac{3}{8}$ by 0.067 to 1½ by 0.092-in. nails with flat 0.148 to 0.219-in. head and medium diamond point. **F 547, F16**

barrel plating (or cleaning)—plating or cleaning in which the work is processed in bulk in a rotating container. **B 374, B08**

barrel-plating process—fastener-coating process which employs a containment vessel called a barrel that is designed to move a given batch of fasteners together through each of the process steps, allowing ready ingress and egress of processing solutions and rinses. As the barrel moves through the process steps, it is rotated or oscillated, causing the fasteners to cascade over one another, and in the electrocleaning and electroplating steps, and electric current is applied. **F 1789, F16**

barrel processing—mechanical, chemical, cleaning, or electrolytic treatment of articles in bulk or in a rotating, oscillating, or otherwise moving container. **B 374, B08**

barrens—areas of discontinuous vegetation cover in the polar semi-desert of the High Arctic. **D 7099, D18**

barrier—any material limiting passage through itself of solids, liquids, semisolids, gases, vapors, or forms of energy such as ultraviolet light. **F 17, F02**

barrier—See Terminology **F 17**. **F 1327, F02**

barrier layer—in *anodizing aluminum*, the thin, pore-free, semiconducting aluminum oxide region nearest the metal surface and distinct from the main anodic oxide coating which has a pore structure. **B 374, B08**

barrier material—

grease-resistant barrier—a material that prevents or retards the transmission of grease or oils.

water-resistant barrier—a material that retards the transmission of liquid water.

water-vapor-resistant barrier—a material that retards the transmission of water vapor. **D 996, D10**

barrier materials—specialized porous or nonporous packaging materials that provide environmental protection to the package contents as well as protection to the environment from the package contents: (1) gas, vapor, humidity, liquid, microbial, or light resistant materials that control or eliminate the amount of those environmental constituents that pass into or out of a package; (2)

barrier materials

- a porous material preventing the passage of microorganisms that might contaminate the contents of the package. **F 1327, F02**
- bar-size section**—a hot-rolled steel angle, channel, tee, or zee having a maximum cross-section dimension of less than (76 mm) (3.0 in.) **E 631, E06**
- bartack**, *n*—in garment construction, a reinforcement at points of strain. **F 1494, F23**
- bar width**, *n*—the thickness of a bar measured from the edge closest to the symbol start character to the trailing edge of the same bar. **F 1294, F05**
- bar width ratio**, *n*—in symbologies having two widths, the ratio of the widest to the narrowest width within the bar code symbol. (See also **wide to narrowratio**.) **F 1294, F05**
- bar width reduction**, *n*—a diminution of the nominal bar width dimension on film masters or printing plates to compensate for systematic errors in some printing processes. **F 1294, F05**
- basal application**—application of a chemical to the base of a plant. **E 1102, E35**
- basal cryopeg**—a layer of unfrozen ground, forming the basal portion of permafrost, in which the temperature is perennially below 0°C (32°F). **D 7099, D18**
- basal cryostructure**—the structural characteristics of a frozen deposit of boulders that is saturated with ice. **D 7099, D18**
- basal-layered cryostructure**—the structural characteristics of a frozen layered deposit of gravel and boulders that is saturated with ice. **D 7099, D18**
- basal plane**—that plane of a hexagonal or tetragonal crystal which is perpendicular to the axis of highest symmetry. Its Miller indices are (0001) or (001), respectively. **E 7, E04**
- basalt ware**—a black unglazed vitreous ceramic ware having the appearance of basalt rock. **C 242, C21**
- base**—{archaic} the bottom of a bottle. **C 162, C14**
- base**—in grouting, main component in a grout system. **D 653, D18**
- baseball leather**—leather used for covers of baseballs. The better grades of balls have covers of alum-tanned horsehide front leather. Some cheaper grades are made of kip and sheepskins. **D 1517, D31**
- baseboard**, *n*—a molding covering the juncture of a wall and the adjoining floor. **E 631, E06**
- baseboard**, *n*—a molding covering the juncture of a wall and the adjoining floor. **E 1605, E06**
- baseboard application**—application to a building on the lower portion of the inside walls. **E 1102, E35**
- base building**, *n* (immeublede base)—a general-purpose office building intended, but not yet adapted, to suit the operational requirements of a specific tenant. **E 631, E06**
- base building**, *n* (immeublede base)—a general-purpose office building intended, but not yet adapted, to suit the operational requirements of a specific tenant. **E 1480, E06**
- basecoat**, *n*—a coating applied to a base substrate to produce a level surface for the application of the active coat; may also function to improve the heat/energy transfer of the active coat layer. **F 1623, F05**
- basecoat**, *n*—the first layer or layers of plaster applied over lath or other substrate. **C 11, C11**
- base coat**—for two coat-one fire application, the thin layer of bonding frit applied first and used to promote adherence after firing to the metal substrate. **C 286, B08**
- base coat**, *n*—the initial wet-state material, either factory or field-mixed, used to encapsulate the nonmetallic reinforcing mesh or fasten the insulation to the substrate. **E 2110, E06**
- base conditions**—temperature and pressure conditions at which natural gas volumes are determined for purposes of custody transfer. In natural gas measurement the properties of interest are temperature, pressure, and composition. Assuming ideal gas properties, for simplicity, tables of pure compounds can be prepared for use in calculating gas properties for any composition at “base conditions.” These “base conditions” are chosen near ambient. **D 4150, D03**
- base course (base)**—a layer of specified or selected material of planned thickness constructed on the subgrade or subbase for the purpose of serving one or more functions such as distributing load, providing drainage, minimizing frost action, etc. **D 653, D18**
- base date**—See **base time**. **E 631, E06**
- base date**, *n*—See **base time**. **E 833, E06**
- base exchange**, *n*—a surface property exhibited by colloidal inorganic materials, usually clays, whereby adsorbed surface cations are replaced by other cations. **C 1145, C28**
- base exchange**—the physicochemical process whereby one species of ions adsorbed on soil particles is replaced by another species. **D 653, D18**
- base flow**—stream flow that is sustained by ground water and other delayed sources. **D 4410, D19**
- baselength**, *n*—the length of a segment of a pavement macrotexture profile being analyzed required to be 100 mm. **E 867, E17**
- baseline**—any line drawn on an absorption spectrum to establish a reference point representing a function of the radiant power incident on a sample at a given wavelength. **E 131, E13**
- base line**—the time of flight or distance trace (horizontal) across the A-scan CRT display (for no signal condition). **E 1316, E07**
- baseline**—the resultant analytical trace when no test specimen is present. **E 2161, E37**
- baseline**, *n*—the ruled or imaginary line upon which writing or typewriting appears to rest. **E 2195, E30**
- base line**—a reference line used to specify the nominal relative vertical position of OCR characters printed on the same line. **F 149, F05**
- baseline plan**, *n*—an established scope, cost, schedule, and technical performance plan against which the status of resources and the effort of the overall program or project activities are measured, assessed, and controlled. **E 833, E06**
- base material**—material in which anchor is installed, such as concrete or masonry. **E 2265, E06**
- basement**—See **building space**. **E 631, E06**
- basement**—See **space categories**. **E 631, E06**
- basement**—a space partly below **average grade** having less than one half of its clear height (measured from floor level to ceiling level) below **average grade**. **E 631, E06**
- basement**—See **space categories**. **E 1480, E06**
- base metal**, *n*—as related to **metallic-coated steel**, the steel to which the coating is applied, as distinguished from the coating metal. **A 902, A05**
- base metal**—(1) See **basis metal**; (2) in **diffusion coatings**, the metal present in the largest proportion in an alloy. **B 374, B08**
- base metal**—the sheet or plate from which the pipe is formed. **B 846, B05**
- base metal**—the metal to which porcelain enamel is applied. **C 286, B08**
- base metal thermocouple**, *n*—thermocouple whose thermoelements are composed primarily of base metals and their alloys. (See also **noble metal thermocouple**; **refractory metal thermocouple**.) **E 344, E20**
- base number**, *n*—the quantity of an acid, expressed in terms of the equivalent number of milligrams of potassium hydroxide per gram of sample, that is required to titrate a sample dissolved in the specified solvent to a specified end point (for example, Test Method D 4739). **D 4175, D02**
- base number**, *n*—the quantity of acid, expressed in milligrams of potassium hydroxide per gram of sample that is required to titrate a sample to a specified end point. **D 4175, D02**
- base oil**, *n*—a base stock or a blend of two or more base stocks used to produce finished lubricants, usually in combination with additives. **D 4175, D02**

base paper, *n*—the fiber network existent prior to the application of any material onto the surface of that fiber network. **D 1968**, D06

base ply—the bottom or first ply in a built-up roofing membrane when additional plies are to be subsequently installed.

D 1079, D08

base sheet—a product intended to be used as a base ply in a built-up roofing system.

D 1079, D08

base side, *adj*—when referring to a film master, the nonimage bearing side (See also the reverse, **emulsion side**.)

F 1294, F05

base size, *n*—the digitized or created size of a style. (See **sample size**.)

D 6963, D13

base stock, *n*—a hydrocarbon lubricant component, other than an additive, that is produced by a single manufacturer to the same specifications (independent of feed source or manufacturer's location), and that is identified by a unique formula number or product identification number, or both.

D 4175, D02

base stock—see **conductive base stock**.

F 335, F05

base substrate—a material upon which films, treatments, adhesives, sealants, membranes, and coatings are applied. The base substrate can also be considered to be the actual material of construction that the surface is attached to. This does not refer to the layers of paint under the outermost or surface layer.

E 631, E06

base time—the date to which all future and past benefits and costs are converted when a present value method is used (usually the beginning of the study period) (Syn. *base date*).

E 631, E06

base time, *n*—the date to which all future and past benefits and costs are converted when a present value method is used (usually the beginning of the study period) (Syn. *base date*).

E 833, E06

base weight—the weight of a specified area of paper stock expressed in grams per square metre or in pounds per ream, where the size and number of sheets per ream may vary for each particular grade of paper. Common ream sizes used in electrostatic papers are:

25 by 38 in. by 500 sheets (3300 ft²)

24 by 36 in. by 500 sheets (3000 ft²)

17 by 22 in. by 500 sheets (1300 ft²)

F 335, F05

basic color terms, *n*—a group of eleven color names found in anthropological surveys to be in wide use in fully developed languages: white, black, red, green, yellow, blue, brown, gray, orange, purple, pink.

E 284, E12

basic fiber—unprocessed glass fibers directly from the forming equipment.

C 162, C14

basic hydrolysis—the chemical addition of water to a compound.

E 1705, E48

basicity, *n*—the quality, state or degree of being basic.

D 4175, D02

basic life support (BLS)—medically accepted non-invasive procedures used to sustain life.

F 1177, F30

basic life support/cardiopulmonary resuscitation (BLS/CPR)—a set of skills that includes airway management, chest compressions, and others as defined by the American Heart Association.

F 1177, F30

basic NMR frequency, ν_0 —the frequency, measured in hertz (Hz), of the oscillating magnetic field applied to induce transitions between nuclear magnetic energy levels.

E 131, E13

basic refractories, *n*—see **refractories, basic**.

C 71, C08

basic stress (*archaic*)—the term once used for an allowable property for clear, straight-grained lumber.

D 9, D07

basil—uncolored vegetable-tanned sheepskin and lambskin.

D 1517, D31

basis—See **reporting bases**.

D 121, D05

basis metal—see **base metal**.

C 286, B08

basic metal (or material)—material upon which coatings are deposited.

B 374, B08

basis weight—deprecated term (do not use in the sense of mass per unit area).

D 4439, D35

basis weight—the weight in pounds of a ream cut to a specified basic size. The number of sheets in a ream is usually 500. The basic size for writing papers commonly used in OCR applications is 17 by 22

in. Also measured metrically in grams per square metre (g/m²) and referred to as grammage.

F 149, F05

basis weight of paper, *n*—basis weight is expressed in grams per square metre. In countries where the metric system is not universal, basis weight is also expressed in pounds per ream.

D 4175, D02

basket, *n*—a semirigid container usually open at the top and provided with one or two handles for carrying. (Compare **hammer**.)

D 996, D10

basket nail—bright, regular-stock-steel, 5/8 and 3/4 by 0.048-in. nails with large flat head and medium needle point.

F 547, F16

basket, pickle—see **pickle basket** and **pickling**.

C 286, B08

bast and leaf fiber, *n*—fiber derived from the inner fibrous bark and the hard coarse leaves of dicotyledonous plants such as flax, hemp, jute, and abaca.

D 123, D13

bast fibers, *n*—*in flax stems*, fibers found in the layer of phloem of the flax stem between the inner xylem tissue and the epidermis tissue.

D 123, D13

bast fibers, *n*—*in flax stems*, fibers found in the layer of phloem of the flax stem between the inner xylem tissue and the epidermis tissue.

D 6798, D13

bat, *v*—to reject or discard a brick or shape.

C 71, C08

BAT—best available technology.

D 6161, D19

batch, *n*—the component raw materials properly weighed, proportioned, and mixed for delivery to a processing unit. Also, the product output from a processing unit in which there is essentially no product output until all component materials are charged and processed.

A 644, A04

batch—(1) the recipe of batch ingredients.

(2) the raw materials weighed but unmixed.

(3) the raw materials, properly proportioned and mixed, for delivery to the furnace.

C 162, C14

batch, *n*—the total quantity of a material produced in a single final mixing operation after all production processes are complete, or just prior to filling.

D 16, D01

batch—*in grouting*, quantity of grout mixed at one time.

D 653, D18

batch, *n*—the manufactured unit or a blend of two or more units of the same formulation and processing. (Compare **manufactured unit**.)

D 907, D14

batch, *n*—the product of one mixing operation.

D 1566, D11

batch, *n*—a definite quantity of some product or material produced under conditions that are considered uniform.

NOTE—A batch is usually smaller than a lot.

E 456, E11

batch—a group of field or quality control (QC) samples that are processed together using the same reagents and equipment.

E 631, E06

batch—a group of samples ($n > 2$) that are obtained in a similar environment (for example, a set of area or personal samples) and are processed together using the same reagents and equipment.

E 631, E06

batch—the quantity of material that has been formulated in a single continuous operation and subjected to chemical processing or physical mixing to produce a homogeneous material.

E 631, E06

batch—a group of field or quality control samples that are processed together using the same reagents and equipment.

E 1605, E06

batch—the quantity of material that has been formulated in a single continuous operation and subjected to chemical processing or physical mixing to produce a homogeneous material.

E 1749, E06

batch, *n*—quantity of concrete, mortar, ash grout, or flowable fill mixed at one time.

E 2201, E50

batch average thickness—calculated average thickness of a coating if it were uniformly distributed on the surfaces of the items.

F 1789, F16

batch charger—a mechanical device for introducing batch to the melter.

C 162, C14

batch coating, *n*—*of metallic coated steel products*, the process of discontinuous-sequential passage of steel articles through the

batch coating, n

various steps of the coating process, such as, cleaning, pickling, fluxing, and coating. **A 902, A05**

batch feeder—See **batch charger**. **C 162, C14**

batch fermentation—batch of nutrient mixture and microorganisms mixed in a vessel and allowed to ferment. **E 1705, E48**

batch furnace, n—a heating device within which steel objects are held stationary or oscillated during the thermal processing cycle. **A 941, A01**

batch house—the place where batch materials are received, handled, weighed, and mixed. **C 162, C14**

batch method—*in grouting*, a quantity of grout materials are mixed or catalyzed at one time prior to injection. **D 653, D18**

batch mixer—*in grouting*, a machine that mixes batches of grout, in contrast to a continuous mixer. **D 653, D18**

batch mixer samples—those obtained during or immediately after the discharge of the mortar from the batch mixer. **C 1180, C12**

batch number, n—a combination of numbers, letters, and/or symbols that uniquely identifies a batch and from which the production and distribution history can be determined. **E 2363, E55**

batch sampling—sampling over some time period in such a way as to produce a single test sample for analysis. **E 176, E05**

batch smelter—any smelter that operates as a periodic unit, being charged, fired, and discharged according to a predetermined cycle. **C 286, B08**

bate—to treat unhaired hides or skins with a warm aqueous solution of an enzyme in order to remove certain undesirable nitrogenous constituents. **D 1517, D31**

bath—synonymous with **float bath**. **C 162, C14**

bath—see **suspension**. **E 1316, E07**

bath gradient error, n—the error caused by temperature differences in the working space of the bath. (The bath or temperature equalizing blocks should be explored to determine the work areas in which the temperature gradients are insignificant.) **E 344, E20**

bath mat, n—an absorbent textile floor covering normally used in the bathroom as a pad on which to step when getting out of the tub or shower. **D 123, D13**

bathochromic shift, n—change of a spectral band to longer wavelength (lower frequency) because of structural modifications or environmental influence; also known as “red shift.” **E 131, E13**

bathroom—See **building space**. **E 631, E06**

bathroom—a room containing a bathtub or shower, or both, and usually a lavatory (wash basin) and toilet (water closet). **E 631, E06**

bathroom soil—the soil composed of water insoluble, or practically insoluble, materials or a mixture of these materials, present on typical bathroom surfaces other than those of floors and toilets. A major component of this soil is the insoluble precipitate, commonly referred to as “soap scum,” that is deposited when soap is used in hard water. **D 459, D12**

bath rug, n—a scatter rug used in the bathroom. **D 123, D13**

bath sheet, n—a textile terry product with end hems or fringes and side hems or selvages that is generally much larger than a bath towel. **D 123, D13**

bath sheet, n—a textile terry product with end hems or fringes and side hems or selvages that is generally much larger than a bath towel. **D 7023, D13**

bath towel, n—a textile terry product with end hems or fringes and side hems or selvages, which is used to dry a person’s body after bathing or swimming. **D 123, D13**

bath towel, n—a textile terry product with end hems or fringes and side hems or selvages, which is used to dry a person’s body after bathing or swimming. **D 7023, D13**

batt, n—blanket insulation manufactured to dimensions as required by a specific application. **C 168, C16**

batten, n—a long narrow strip, either flat or corrugated, used to conceal the joints in butt joint application of flat or corrugated sheets. **C 1154, C17**

batten—a narrow strip of lumber for covering the adjoining edges of roofing or siding, often designated as “batts.” **D 9, D07**

batten—See **box**. **D 996, D10**

batten—long narrow strip of asbestos-cement, either flat or corrugated, used to conceal the joints in butt joint application of flat or corrugated sheets. **D 2946, C17**

batten lugs, n—protrusions on the underside of tile designed to engage over the upper edge of tiling battens. **C 43, C15**

battery charger, n—an electrical circuit designed to restore the electrical potential of a battery. **E 344, E20**

batting, n—a textile filling material consisting of a continuous web of fibers formed by carding, garnetting, air laying, or other means. **D 123, D13**

batting, n—a textile filling material consisting of a continuous web of fibers formed by carding, garnetting, air laying, or other means. **D 7022, D13**

batting integrity, n—the ability of a textile filling material to resist distortion or change when subjected to multiple home launderings or drycleanings. **D 123, D13**

batting integrity, n—the ability of a textile filling material to resist distortion or change when subjected to multiple home launderings or drycleanings. **D 7022, D13**

batting integrity, n—the ability of a textile filling material to resist distortion or change when subjected to multiple home launderings or drycleanings. **D 7022, D13**

baud, n—a measure of data transmission speed; ideally one baud equals one bit per second. **F 1457, F05**

Baumé gravity—a unit of density based on specific gravity and defined by the following equation:

$$\text{Baumé gravity} = 145 - [145/\text{sp gr}] \text{ at } 15.5/15.5^{\circ}\text{C} (60/60^{\circ}\text{F})$$

See also **density** and **specific gravity**. **E 1547, E15**

baume scale, Be—a measure of the density of a solution relative to water.

$${}^{\circ}\text{BE} = 145 - \frac{145}{\text{specific gravity}^*}$$

United States for densities greater than unity.

$${}^{\circ}\text{BE} = \frac{140}{\text{specific gravity}^*} - 130$$

For densities less than unity.

*at 60°F

D 6161, D19

Bayard-Alpert ionization gage—see **ionization vacuum gage**.

E 1316, E07

BCD—abbreviation for **block circuit diagram**. **F 1457, F05**

bead—(1) an enlarged, rounded raised section on a glass article.

(2) a small piece of glass tubing bonded around a wire lead.

(3) in fiber glass, a tear drop-shaped glass mass which forms as a result of the interruption of the fiber forming process below an orifice. **C 162, C14**

bead, n—*in building construction*, in sealants and glazing, a strip of applied sealant, glazing compound, or putty. **C 717, C24**

bead, n—*in a separatelement zipper*, an enlarged section on inner edge of each tape to which interlockable elements are affixed. **D 123, D13**

bead, n—*in continuouselement zippers*, an optional enlarged section of the tape located at the outer edge of the continuous interlockable elements and against which the slider flanges bear. **D 123, D13**

bead, n—*in a separatelement zipper*, an enlarged section on the inner edge of each tape to which interlockable elements are affixed. **D 2050, D13**

bead, n—*in continuouselement zippers*, an optional enlarged section of the tape located at the outer edge of the continuous interlockable elements and against which the slider flanges bear. **D 2050, D13**

bead, n—the anchoring part of the tire which is shaped to fit the rim and is constructed of bead wire wrapped by the plies. **D 5681, D34**

bead, n—the anchoring part of the tire, which is shaped to fit the rim. The bead is constructed of high tensile steel wires wrapped by the plies. **D 5681, D34**

- bead**—See **windows and doors**. E 631, E06
- bead**, n —of a tire, the part of a tire that comes in contact with the rim and is shaped to secure the tire to the rim. F 538, F09
- beadboard**, n —molded expanded polystyrene thermal insulation board; also called MEPS. E 631, E06
- bead carryover**—beads of developer appearing on a print or copy, or both; a deletion around each particle is common. F 1457, F05
- beaded selvage**—See **loopy selvage**. D 3990, D13
- beaded stream**—a characteristic pattern of small streams underlain by ice wedges. “Beads,” or pools, occur at junctions of wedges. The pools are linked by narrow channels. D 7099, D18
- beading**—(1) the application of porcelain enamel, usually of a contrasting color, to the edge or rim of porcelain enameled articles. (2) Removal of excess slip from the edge of dipped ware. (3) In dry processing enameling, a bead of porcelain enamel along the edge of ware. C 286, B08
- beading enamel**—any of the special porcelain enamels used for beading. C 286, B08
- bead separation**, n —a breakdown of bond between tire components in the bead area. F 538, F09
- bead wire**, n —a high tensile steel wire surrounded by rubber, which forms the bead of a tire that provides a firm contact to the rim. D 5681, D34
- beam**, n —in textiles, a large spool containing many ends of yarn wound parallel, and used for such purposes as weaving or warp knitting. D 123, D13
- beam**—a convex wooden slab sloping downward from about waist height over which a hide is placed for trimming off excess flesh and ragged edges and scudding by hand. D 1517, D31
- beam**, n —in textiles, a large spool containing many ends of yarn wound parallel, and used for such purposes as weaving or warp knitting. D 4849, D13
- beam**, n —in optics, a concentrated unidirectional flow of radiant energy. E 284, E12
- beam**, n —a structural member intended primarily to resist transverse forces, and subject to bending by these forces. E 631, E06
- beam**:
- analyzing*—same as *incident*.
 - current*—the total current incident on the specimen by the primary particle source.
 - current density*—the current incident on the specimen per unit area.
 - diameter*—in surface analysis, the full width of the incident beam at half maximum intensity measured in a plane normal to the beam direction. This plane must be specified and is often taken at the intersection of the beam center with the specimen.
 - divergence, convergence*—angles spanned by the directions of all particles of the incident beam.
 - energy*—the energy of the particles incident on the specimen surface, expressed in electron volts (eV).
 - energy, primary*—the kinetic energy of the primary beam, usually expressed in kiloelectronvolts (keV).
 - incident*—the energetic particles incident on the specimen.
 - particle*—atomic or molecular species contained in the incident beam, regardless of state of ionization.
 - primary*—a directed flux of particles (ions or neutrals) incident on the specimen.
 - profile, primary ion*—the spatial distribution of the primary ion current in a plane perpendicular to the primary ion beam axis.
 - size*—the full width at half-maximum of the beam at a given point in space that must be defined.
 - spot*—the area on the specimen surface illuminated by the incident beam. E 673, E42
- beam axis**—the acoustic centerline of a search unit’s beam pattern as defined by the locus of points of maximum sound pressure in the far field, and its extension into the near field. E 1316, E07
- beam loading**—the application of a load to a pipe between two points of support, usually expressed in newtons (or pounds-force) and the distance between the centers of the supports. F 412, F17
- beam, radiant energy**—a collection of rays confined to a specific path. E 772, E44
- beam ratio**—the measured intensity of the reference beam divided by the measured intensity of the object beam in the plane of the recording medium. E 1316, E07
- beams**, n —all horizontally oriented structural members employed in building construction and known variously as beams, joists, or girders. E 176, E05
- beam set**, n —in textiles, one or more beams of yarn in a single shipment to be further processed together for a specific end use. D 123, D13
- beam set**, n —in textiles, one or more beams of yarn in a single shipment to be further processed together for a specific end use. D 4849, D13
- beam shear**—a term describing the stresses developed in planes parallel to facing planes of flat sandwich constructions when subjected to flatwise flexure in such a manner that the applied moments produce curvature of the plane of a sheet of the sandwich construction (see Test Method C 393). E 631, E06
- beam shear**—a term describing the stresses developed in planes parallel to facing planes of flat sandwich constructions when subjected to flatwise flexure in such a manner that the applied moments produce curvature of the plane of a sheet of the sandwich construction (see Test Method C 393). E 1749, E06
- beamsplitter**—a semireflecting device used to create, and often to recombine, spatially separate beams. E 131, E13
- beamsplitter**—an optical device for dividing a beam into two or more separate beams. E 1316, E07
- beamsplitter efficiency**—the product $4RT$, where R is the reflectance and T is the transmittance of the beamsplitter. E 131, E13
- beam spread**—a divergence of the ultrasonic beam as the sound travels through a medium. E 1316, E07
- bear claw**, n —the rough-edged bead wire sticking out from a shredded tire. D 5681, D34
- bearer arch**—See **rider arch**. C 162, C14
- bearer bars**, n —solid lines that are located at the perimeter of some bar code symbols whose purpose is to reduce partial, incorrect scans and support the printing plate. Bearer bars do not contain information. F 1294, F05
- bearing area**—for chemical-resistant polymer machinery grout, the portion of the grout surface in contact with the underside of a supported surface. C 904, C03
- bearing area** $[L^2]$, n —the product of the pin diameter and specimen thickness. E 6, E28
- bearing capacity**—see **ultimate bearing capacity**. D 653, D18
- bearing capacity (of a pile)**, Q_p , P_p (F)—the load per pile required to produce a condition of failure. D 653, D18
- bearing force** $[F]$, n —a compressive force on an interface. E 6, E28
- bearing strain**, n —the ratio of the bearing deformation of the bearing hole, in the direction of the applied force, to the pin diameter. E 6, E28
- bearing strength**—the non-destructive limit of pipe load, as determined by 3-edge bearing test method, used to determine field supporting strength. C 896, C04
- bearing strength** $[FL^{-2}]$, n —the maximum bearing stress which a material is capable of sustaining. E 6, E28
- bearing stress** $[FL^{-2}]$, n —the force per unit of bearing area. E 6, E28
- bearing surface**—the outside surface of an item of glassware on which it rests when in its normal upright position. C 162, C14
- bearing surface**—underside of head in contact with nailed member. F 547, F16
- bearing wall**—See **wall**. E 631, E06
- bearing yield strength** $[FL^{-2}]$, n —the bearing stress at which a material exhibits a specified limiting deviation from the proportionality of bearing stress to bearing strain. E 6, E28

bed, v—in *building construction in glazing*, to apply a bead of sealant between a lite of glass or a panel and the stationary stops or sight bars of the sash or frame. C 717, C24

bed, n—See **bedding**. C 717, C24

bedcovering, n—a textile product used on a bed over the sheets for warmth or decoration. D 123, D13

bedcovering, n—a textile product used on a bed over the sheets for warmth or decoration. D 7023, D13

bed depth—the depth of the filter medium or ion exchange resin in a vessel. D 6161, D19

bedding, n—in *building construction in glazing*, a bead of sealant applied between a lite of glass or a panel and the stationary stop or sight bar of the sash or frame. It is usually the first bead to be applied when setting glass or panels. C 717, C24

bedding—the materials, their placement, consolidation, and configuration, as designed to support, and to develop field supporting strength of vitrified clay pipe. C 896, C04

bedding—applies to rocks resulting from consolidation of sediments and exhibiting surfaces of separation (bedding planes) between layers of the same or different materials, that is, shale, siltstone, sandstone, limestone, etc. (ISRM) D 653, D18

bedding—collective term signifying the existence of layers of beds. Planes or other surfaces dividing sedimentary rocks of the same or different lithology. D 653, D18

bedding, n—materials that provide support for buried pipe. F 412, F17

bedding, v—placement of support materials for buried pipe. F 412, F17

bedding coat, n—that coat of plaster to receive aggregate or other decorative material of any size, impinged or embedded into its surface, before it sets. C 11, C11

bed expansion—the depth increase of filter medium or ion exchange resin that occurs during backwashing. D 6161, D19

bed joint—a horizontal mortar joint between a chemical-resistant construction unit and a substrate or another chemical-resistant construction unit. C 904, C03

bed-load—material moving on or near the stream bed by rolling, sliding, and skipping. D 4410, D19

bed-load discharge—the quantity of bed-load passing a cross section of a stream in a unit of time. D 4410, D19

bed-load sampler—a device for sampling the bed-load. D 4410, D19

bed material—the sediment mixture of which the stream bed is composed. D 4410, D19

bed-material discharge—that part of the total sediment discharge composed of grain sizes occurring in appreciable quantities in the bed material. D 4410, D19

bed-material load—that part of the total load which is composed of particle sizes present in appreciable quantities in the shifting portions of the stream bed. D 4410, D19

bed moisture—synonym for *inherent moisture*. D 121, D05

bedrock—the more or less continuous body of rock which underlies the overburden soils. (ISRM) D 653, D18

bedrock (ledge)—rock of relatively great thickness and extent in its native location. D 653, D18

bedspread, n—a type of bedcovering that is placed over the blankets and sheets for appearance and warmth. D 123, D13

bedspread, n—a type of bedcovering that is placed over the blankets and sheets for appearance and warmth. D 7023, D13

bed surface, n—(1) the nonvertical surfaces of a manufactured masonry unit intended by the manufacturer to be joined by mortar or other methods. (2) the in situ nonvertical surfaces of a manufactured masonry unit joined by mortar or other methods. C 1232, C15

beehive coke—See *beehive coke* under *coke*. D 121, D05

beer—term used to describe the product of ethanol fermentation by microorganisms. E 1705, E48

beer-case cleat nail—bright, regular-stock-steel, 1 by 0.080 to 1 7/8 by

0.106-in. nails with 3/16 to 1/4-in. oval head and duckbill or clinch point. F 547, F16

beer-case hinge, lock and latch nail—bright, regular-stock-steel, 5/8 by 0.080 to 1 5/16 by 0.092-in. nails with oval 3/16 to 7/32-in. head and duckbill or clinch point. F 547, F16

beer-case strap nail—bright, regular-stock-steel, 1 1/4 by 0.092 to 2 by 0.113-in. nails with oval 1 5/4 to -in. head and medium diamond point. F 547, F16

Beer's law—the absorbance of a homogeneous sample containing an absorbing substance is directly proportional to the concentration of the absorbing substance. See also **absorptivity**. E 131, E13

Beer's law, n—the absorbance of a homogeneous sample containing an absorbing substance is directly proportional to the concentration of the absorbing substance. See also **absorptivity**. ^A E 284, E12

behavior, n—observable, recordable, or measurable actions or activity of an organism. E 943, E47

Beilby layer, n—an altered surface layer of supposedly amorphous material formed on a crystalline solid during mechanical polishing, whose existence was proposed in Sir George Beilby's writings. The existence of such a layer is not supported by recent research, and the use of this term is therefore considered archaic and is strongly discouraged. G 40, G02

belay, n—a technique where a stationary person controls a rope connected to a moving climber in order to provide protection against a fall, or in the event of a fall, to catch the climber. F 1773, F08

belay, v—to protect a climber with a belay. F 1773, F08

belay anchor, n—an anchor used to secure the rope or belayer, or both, while belaying a climber. It also may be used with ropes while descending or lowering. F 1773, F08

belay bar, n—a belay anchor made from pipe or a bar. F 1773, F08

belay device, n—a mechanical device used to control the friction on a rope. F 1773, F08

belayer, n—the one who performs the belay. F 1490, F32

belayer, n—a person who is belaying. F 1773, F08

belay station, n—a place where belay anchors are located. F 1773, F08

bell—see **female end of pipe**. C 822, C13

bell—the flared-end portion of a vitrified clay pipe or fitting, designed to function in the joining of other such pipe. C 896, C04

bell-and-spigot joint—see **joint, bell-and-spigot gasket**. F 412, F17

Belleek china—a highly translucent whiteware composed of a body containing a significant amount of frit and normally having a luster glaze. C 242, C21

bell end—the enlarged portion of a pipe that resembles the socket portion of a fitting and that is intended to be used to make a joint. F 412, F17

bell jar—a container, open at one end (usually the bottom), which is used as a vacuum chamber or test vessel. E 1316, E07

bell jar testing—a test used for detecting leakage from an object completely or partially filled with a tracer gas and placed in a vacuum chamber or bell jar. E 1316, E07

bellows length—the distance from the eyepiece to the photosensitive material or viewing screen in a photomicrographic apparatus. E 7, E04

belly—that part of the hide below the belly line. For steerhide leather, the belly line (RU) passes through a point at or above the top of the rear break. For cowhide leather, the belly line passes through a point at or above the top of the front break and a point not more than 2 1/2 in. (64 mm) below the top of the rear break. D 1517, D31

below-grade, *adj*—below the surface of the ground, *as related to floor location*, part or all of the floor is below the ground. F 141, F06

belt, n—an assembly of rubber coated fabric or wire used to reinforce a tire's tread area. In radial tires, also constrains the outside diameter against inflation pressure and centrifugal force. D 5681, D34

belt, *n*—*in a tire*, a breaker that substantially restricts the carcass in a circumferential direction. **F 538, F09**

belting butt—a double back with the tail cut off at the butt line. **D 1517, D31**

belting butt bend—a double bend with the tail cut off at the butt line. **D 1517, D31**

beltmarks—See **chain marks**. **C 162, C14**

belt printer—a type of printer that employs an endless belt, the outer surface of which contains fully formed characters. The belt is caused to transverse the width of the paper form. Hammers are caused to strike the back of the form, synchronized in such a way as to produce the desired characters in their proper positions. **F 909, F05**

belt separation, *n*—a breakdown of bonding between the belts or plies or tread, or combination thereof. **F 538, F09**

belt wire, *n*—a brass-plated high tensile steel wire cord used in steel belts. **D 5681, D34**

bench—See **siege**. **C 162, C14**

bench—(1) the unexcavated rock having a nearly horizontal surface which remains after a top heading has been excavated, or (2) step in a slope; formed by a horizontal surface and a surface inclined at a steeper angle than that of the entire slope. (ISRM) **D 653, D18**

benchmark neutron field—a well-characterized neutron field which will provide a fluence of neutrons for validation or calibration of experimental techniques and methods and for validation of cross sections and other nuclear data. The following classification of benchmark neutron fields for reactor dosimetry has been made:

controlled neutron field—a neutron field physically well-defined, and with some spectrum definition, employed for a restricted set of validation experiments.

reference neutron field—a permanent and reproducible neutron field less well characterized than a standard field but accepted as a measurement reference by a community of users.

standard neutron field—a permanent and reproducible neutron field with neutron fluence rate and energy spectra, and their associated spatial and angular distributions characterized to state-of-the-art accuracy. Important field quantities must be verified by interlaboratory measurements and calculations. **E 170, E10**

bench marks, *n*—marks placed on a specimen to define gage length, that is, the portion of the specimen that will be evaluated in a specific test. **D 123, D13**

bench marks, *n*—two marks of known separation applied to a specimen to measure the strain of the specimen during extension. **D 1566, D11**

bench marks, *n*—marks placed on a specimen to define gage length, that is, the portion of the specimen that will be evaluated in a specific test. **D 4849, D13**

bench stock—low cost, high usage, non-sensitive consumable material issued to work areas. Quantities of such stock do not normally exceed an amount that would normally be consumed within a 30-day period or as established in the property control system. **E 2135, E53**

bench test—a modified service test in which the service conditions are approximated, but the equipment is laboratory equipment and not necessarily identical with that in which the product will be employed. **F 869, F08**

bend—a back with the shoulder cut off at right angles to the backbone line at the break of the fore flank. **D 1517, D31**

bend, *vt*—*in mechanics*, to force an object from its natural or manufactured shape into a curve or into increased curvature. **D 4439, D35**

bend—a fitting either molded separately or formed from pipe for the purpose of accommodating a directional change. **F 412, F17**

bend—to force from a straight form into different and especially a curved one. **F 2112, F01**

bendable bolts—bolts furnished with an altered section at some location at which the bolt will bend. **F 1789, F16**

bend angle—180° minus the internal angle created by applying a load on the weld joining two sheets of plastic. **C 904, C03**

bend cycle—a fold of a sample around a specified mandrel which is “rolled” in one direction, followed by rolling in the opposite direction, returning the sample to its original position. **F 2112, F01**

bending—process of deformation normal to the axis of an elongated structural member when a moment is applied normal to its long axis. (ISRM) **D 653, D18**

bending length, *n*—(1) *general*—a measure of the interaction between fabric weight and fabric stiffness as shown by the way in which a fabric bends under its own weight. It reflects the stiffness of a fabric when bent in one plane under the force of gravity, and is one component of drape. (2) *specific*—the cube root of the ratio of the flexural rigidity to the weight per unit area. **D 123, D13**

bending length, *n*—(1) *general*—a measure of the interaction between fabric weight and fabric stiffness as shown by the way in which a fabric bends under its own weight. It reflects the stiffness of a fabric when bent in one plane under the force of gravity, and is one component of drape; (2) *specific*—the cube root of the ratio of the flexural rigidity to the weight per unit area. **D 4850, D13**

bending moment, *n*—*of paper*, the work (force multiplied by the distance over which it is applied) required to deflect the test piece under specified conditions. **D 1968, D06**

bending stiffness, *n*—the sandwich property which resists bending deflections. $D=EI$; the facing modulus times the panel moment of inertia. **C 274, D30**

bending stress—a stress system that simultaneously imposes a compressive component at one surface, graduating to an imposed tensile component at the opposite surface of a glass section. **C 162, C14**

bend test, *n*—a test for ductility performed by bending or folding a specimen, usually by steadily applied forces but in some instances by blows. The bending may be interrupted to examine the bent surface for cracks. **E 6, E28**

bend test—various tests in which a fastener is bent through its axis or on a round mandrel to determine the toughness and ductility of the fastener. **F 1789, F16**

beneficial use of a CCP, *n*—the use of or substitution of the coal combustion product (CCP) for another product based on performance criteria. For purposes of this definition, beneficial use includes but is not restricted to raw feed for cement clinker, concrete, grout, flowable fill, controlled low strength material; structural fill; road base/sub-base; soil modification; mineral filler; snow and ice traction control; blasting grit and abrasives; roofing granules; mining applications; wallboard; waste stabilization/solidification; soil amendment and agriculture. **E 2201, E50**

beneficiation, *n*—improvement of the chemical or physical properties of a raw material or intermediate product by the removal or modification of undesirable components or impurities. **E 2201, E50**

benefit-cost analysis—a method of evaluating projects or investments by comparing the present value or annual value of expected benefits to the present value or annual value of expected cost. **E 631, E06**

benefit-cost analysis, *n*—a method of evaluating projects or investments by comparing the present value or annual value of expected benefits to the present value or annual value of expected costs. **E 833, E06**

benefit-to-cost ratio (BCR)—benefits divided by costs, where both are discounted to a present value or equivalent uniform annual value (Syn. *benefit-cost ratio*). **E 631, E06**

benefit-to-cost ratio (BCR), *n*—benefits divided by costs, where both are discounted to a present value or equivalent uniform annual value (Syn. *benefit-cost ratio*). **E 833, E06**

bent glass—flat glass that has been shaped while hot into a body having curved surfaces. **C 162, C14**

bent head

bent head—wire bent and upset to form head. (See **hook head**.)

F 547, F16

bentonite—a distinct type of fine-grained clay containing not less than 85 % montmorillonite clay having the formula $(\text{OH})_4\text{Si}_8\text{Al}_4\text{O}_{20}\text{H}_2\text{O}$ and composed of units made up of two silica tetrahedral sheets with a central alumina octahedral sheet.

C 242, C21

bentonitic clay—a clay with a high content of the mineral montmorillonite, usually characterized by high swelling on wetting.

D 653, D18

benzene—cyclohexatriene, benzol (obsolete) (C_6H_6) mol weight 78.11; clear, colorless, highly flammable liquid; characteristic odor; solidification point $+5.5^\circ\text{C}$; boiling point 80.1°C .

D 4790, D16

benzene, carbon disulfide-free—benzene treated with alcoholic sodium hydroxide and used as a spectrophotometric reference standard.

D 4790, D16

benzene-535, refined—benzene with impurities limited to trace amounts by a solidification point of 5.35°C and having a total distillation range of no more than 1.0°C . Refer to Specification D 2359 for complete specifications.

D 4790, D16

benzene-545, refined—benzene with impurities limited to trace amounts by a solidification point of 5.45°C and having a total distillation range of no more than 1°C . Refer to Specification D 4734.

D 4790, D16

benzene-485, refined (nitration grade)—benzene with impurities limited by a solidification point of 4.85°C and having a total distillation range of no more than 1.0°C . Refer to Specification D 835 for complete specifications.

D 4790, D16

benzene, thiophene-free—benzene refined by special treatment and used as a reagent in ASTM standards.

D 4790, D16

Berglund-Liu atomizer—a vibratory atomizer in which a piezoelectric transducer transmits high-frequency oscillations to a liquid stream discharged through an orifice, creating relatively uniform drops whose size is a function of the frequency of oscillation and the flow rate of the liquid through the orifice.

E 1620, E29

berm—a shelf that breaks the continuity of a slope.

D 653, D18

berry-box nail—bright, regular-stock-steel, $\frac{3}{4}$ to $\frac{1}{4}$ by 0.054 and 0.062-in. nails with flat and medium diamond or needle point.

F 547, F16

Bertrand lens—an auxiliary removable lens in the body of a microscope, used to examine images in the back focal plane of the objective, for example, interference figures with polarized light.

E 7, E04

Bertrand lens—see **lens, Bertrand**.

E 175, E41

beryllium oxide (beryllia) (BeO)—an inorganic material of exceptionally high thermal conductivity which is toxic in the powder form.

C 242, C21

beta-cellulose—(1) Historically, a term used to indicate impurities of moderate chain lengths found in pulps, predominately degraded cellulose. (2) Beta-cellulose content, as measured by TAPPI Method T 203 om-93, is the pulp fraction soluble in caustic, which precipitates upon acidification.

D 1695, D01

beta (β) loss peak—in *dynamic mechanical measurement*, second discrete peak in damping curve below the melt, in order of decreasing temperature or increasing frequency, (D 4092, D20).

E 1142, E37

beta (β) loss peak (in dynamic mechanical measurement)—the second peak in the damping curve below the melt, in order of decreasing temperature or increasing frequency.

D 4092, D20

beta structure—structurally analogous body-centered cubic phases (similar to beta brass), or electron compounds, that have ratios of 3 valence electrons to 2 atoms.

E 7, E04

betatron—an electron accelerator in which acceleration is provided by a special magnetic field constraining the electrons to a circular orbit. This type of equipment usually operates at energies between 10 and 31 MEV.

E 1316, E07

between-laboratory standard deviation, S_R, n —the standard deviation of results obtained on the same material in different laboratories (synonym: **reproducibility**).

E 135, E01

beveled pipe—a pipe with an end angled to mate with a complementary pipe end or adjust to another surface.

C 896, C04

beveled pipe—a pipe with an end chamfered to mate or adjust to another surface or to assist in assembly.

F 412, F17

beveled square point—extremity of nail shank opposite head sheared obliquely to shank axis. (See **sheared-bevel point**.)

F 547, F16

beveling—the process of edge finishing flat glass to a bevel angle.

C 162, C14

bevel point—point sheared obliquely to staple-leg axis, with beveled face across staple-leg end; used to produce an outward clinch or to provide additional penetration, or both, in thin stapling member.

F 592, F16

beyond line-of-sight, BLOS, n —transmitter and receiver are not in direct, point-to-point contact. See R-103-2004.

F 2395, F38

"B" horizon—see **horizon**.

D 653, D18

bias—a constant or systematic error, as opposed to a random error, manifesting itself as a persistent positive or negative deviation of the method average from the accepted reference value.

C 242, C21

bias, n —the difference between the population mean of the test results and an accepted reference value.

D 121, D05

bias, n —in statistics, a constant or systematic error in test results.

D 123, D13

bias, n —the persistent positive or negative deviation of the method average value from the assumed or accepted true value.

D 1129, D19

bias, n —a systematic (nonrandom) deviation of the method average value or the measured value from an accepted value.

laboratory bias, n —systematic differences between the true value and a value reported by a laboratory due to errors of application such as losses, contamination, miscalibration, and faulty manipulations, for example.

method bias, n —systematic departures of the limiting mean from the true value of the parameter measured caused by physical or chemical phenomena inherent in the methodology.

D 1356, D22

bias—See **skew**.

D 3990, D13

bias, n —the difference between the population mean of the test results and an accepted reference value.

D 4175, D02

bias, n —a systematic error that contributes to the difference between a population mean of the measurements or test results and an accepted reference or true value.

D 4175, D02

bias—a persistent positive or negative deviation of a test method average value from the assumed or accepted true value.

D 4790, D16

bias, n —the difference between the sample value of the test results and an accepted reference value.

D 5681, D34

bias, n —a systematic positive or negative deviation of the sample or estimated value from the true population value.

D 5681, D34

bias—the difference between the value determined using the measurement protocol in question and the true value; operationally the difference between the expected mean of the sample test results and an accepted true value.

D 5681, D34

bias—a systematic error that is consistently negative or consistently positive. The mean of errors resulting from a series of observations that does not tend towards zero.

D 5681, D34

bias—a systematic error that contributes to the difference between a population mean of the measurements or test results and an accepted or reference value (see Terminology E 456).

E 131, E13

bias, n —systematic error manifested as a persistent positive or negative deviation of the method average from its accepted true value.

E 253, E18

bias, n —a systematic difference between the sample mean of the measurements or test results and an accepted reference value.

E 284, E12

- bias**, *n*—the scatter between the mean values of subsets of data, from each other or from the accepted value. **E 344**, E20
- bias**, *n*—the difference between the expectation of the test results and an accepted reference value. **E 456**, E11
- bias**, *n*—systematic error that contributes to the difference between a population mean of the measurements or test results and an accepted reference or true value. **E 631**, E06
- bias**—a systematic error that is consistently negative or consistently positive. The mean of errors resulting from a series of observations which does not tend toward zero. **E 856**, D34
- bias**—a constant or systematic error as opposed to a random error. It manifests itself as a persistent positive or negative deviation of the method average from the accepted reference value. See also **accuracy**. **E 1547**, E15
- bias**, *n*—systematic error of the indication of a measuring instrument. **E 1605**, E06
- bias**, *n*—the difference between the average measured test result and the accepted reference value; it measures in an inverse manner the accuracy of a test. **F 538**, F09
- biased gun**—an electron gun in which there is a bias voltage on the cathode cap. (See also **self-biased gun**.) **E 7**, E04
- biased sampling**, *n*—the taking of a sample(s) with prior knowledge that the sampling result will be biased relative to the true value of the population. **D 5681**, D34
- bias ply tires**, *n*—a tire built with two or more casing plies, which cross each other in the crown at an angle of 30 to 45° to the tread centerline. **D 5681**, D34
- bias, relative**, *n*—the difference between the population mean of the test results and an accepted reference value, which is the agreed upon value obtained using an accepted reference method for measuring the same property. **D 4175**, D02
- biaxial compression**—compression caused by the application of normal stresses in two perpendicular directions. (ISRM) **D 653**, D18
- biaxial state of stress**—state of stress in which one of the three principal stresses is zero. (ISRM) **D 653**, D18
- bicellular sealant backing**, *n*—a flexible and very compressible extruded shape (usually cylindrical), with a surface skin, that is composed of both open and closed cell material. **C 717**, C24
- bicheroux process**—[archaic] an intermittent process for making plate glass, in which the glass is cast between rolls, onto driven conveyer rolls, or a flat moving table. **C 162**, C14
- bicomponent fiber**, *n*—a fiber consisting of two polymers which are chemically different, physically different, or both. **D 123**, D13
- bicomponent fiber**, *n*—a fiber consisting of two polymers which are chemically different or physically different, or both. **D 4466**, D13
- biconical**, *adj*—see the preferred but not equivalent term, **bidirectional**, as in bidirectional optical measuring system. **E 284**, E12
- biconstituent fiber**, *n*—deprecated term. Use the preferred term **bicomponent bigeneric fiber**. **D 4466**, D13
- bidirectional**, *adj*—see **bidirectional optical measuring system**. **E 284**, E12
- bi-directional**, *adj*—*in reference to bar codes*, symbologies that may be decoded whether scanned in one direction or the reverse direction. **F 1294**, F05
- bidirectional optical measuring system**, *n*—an optical system for measuring the reflecting or transmitting properties of specimens, wherein the illuminator and receiver each subtend small angles at the specimen surface. **E 284**, E12
- biff**—to beat a salted hide that has been placed on a rack, in order to shake loose salt from the hair. **D 1517**, D31
- bifilar eyepiece**—a Filar eyepiece with motion in two mutually perpendicular directions. **E 7**, E04
- bilateral agreement**—recognition arrangement that covers acceptance of each other's results by two parties, (ISO Guide 2). **E 1187**, E36
- bilateral specifications**—specifications that have both an upper and a lower value. **F 1789**, F16
- billet**—refinery shape used for piercing or extrusion into tubular products or for extrusion into rods, bars, and shapes. Circular in cross section, usually 3 to 16 in. (76 to 406 mm) in diameter, normally ranging in weight from 100 to 4200 lb (45 to 1905 kg). **B 846**, B05
- billet**, *n*—a formed shape that may be further worked, or a solid, semifinished, round, or rectangular product that has been hot-worked by forging, rolling, or extrusion. **B 899**, B02
- bill of lading**—contract between the shipper and the carrier whereby the carrier agrees to furnish transportation service subject to the conditions printed on the reverse side of the bill of lading. **E 2135**, E53
- bill of lading, government (GBL)**—a government document used to procure freight and cargo transportation and related services from commercial carriers for the movement of material at government expense. **E 2135**, E53
- bi-modal technique**—Ultrasonic examination method that utilizes both the longitudinal (L-wave) and shear (S-wave) modes of propagation in order to estimate or measure flaw height. **E 1316**, E07
- binary alloy**—any specific composition in a binary system. **E 7**, E04
- binary cycle plant**, *n*—a facility that generates electric power by transferring heat from produced geothermal fluids to a non-aqueous working fluid that vaporizes and causes a turbine to rotate the shaft of a generator. **E 957**, E44
- binary digit**, *n*—a unit of electronic data. (See **bit**.) **F 1457**, F05
- binary elastic scattering event**—*ISS*, the collision between an incident probe ion and a single surface atom in which the total kinetic energy and momentum are conserved. **E 673**, E42
- binary elastic scattering peak**—*ISS*, an increase in the spectrometer detection system response above the background level which can be attributed to binary elastic scattering of the probe ion from a surface atom of a particular mass. **E 673**, E42
- binary separator**—a device that separates a single input feed stream into two output or product streams. **D 5681**, D34
- binary synchronous transmission**, *n*—a form of data sending. (See **binary digit**, **synchronous**, and **asynchronous**.) **F 1457**, F05
- binary system**—the complete series of compositions produced by mixing a pair of components in all proportions. **E 7**, E04
- binder**, *n*—a cementing medium; either a material added to the powder to increase the green strength of the compact, and which is expelled during sintering; or a material (usually of relatively lower melting point) added to a powder mixture for the specific purpose of cementing together powder particles which alone would not sinter into a strong body. **B 243**, B09
- binder**, *n*—a substance added to a granular material to give it workability and green or dry strength. **C 71**, C08
- binder**—(*I*) for a continuous filament process, a constituent of a fiber glass sizing that couples the fiber to the composite matrix.
(2) for insulation, material applied to glass fibers to hold them in a desired arrangement. **C 162**, C14
- binder**—a cementing medium; either a material added to the mixture to increase the green or dry strength as compacted, and which may be expelled during sintering or calcining, or a material added to a mixture for the purpose of cementing together particles. **C 242**, C21
- binder**, *n*—a substance, usually an organic material such as coal tar pitch or petroleum pitch, used to bond the coke or other filler material prior to baking. **C 709**, D02
- binder**—a substance used to bond aggregates or fillers, or both, into a solid mass. **C 904**, C03
- binder**—anything that causes cohesion in loosely assembled substances, such as clay or cement. **D 653**, D18
- binder**, *n*—in a reinforced plastic, the continuous phase which holds together the reinforcement. **D 883**, D20
- binder**, *n*—*in adhesive compounds*, a component of an adhesive composition that is primarily responsible for its mechanical strength and adhesion. **D 907**, D14

binder

binder—an extraneous bonding agent, either organic or inorganic, used to bind particles together to produce a particle board.

D 1554, D07

binder, *n*—a substance, usually an organic material such as coal tar pitch or petroleum pitch, used to bond the coke or other filler material prior to baking.

D 4175, D02

binder—a substance used in dry formulations to produce or enhance cohesion of solid particles.

E 609, E35

binder—the resinous adhesive component of a pigmented coating composition.

F 335, F05

binder—in a reinforced plastic, the continuous phase that holds together the reinforcement.

F 412, F17

binder, *n*—a material employed to bind the image-forming materials to the substrate.

F 1623, F05

binder phase, *n*—*as used in Test Method D 5061*, a continuous solid carbon matrix formed during the thermoplastic deformation of those coal macerals that become plastic during carbonization.

D 121, D05

binder removal, *n*—the chemical or thermal extraction of binder from a compact. Synonymous with **debinding**.

B 243, B09

binders—in reference to cartridge filters, chemicals used to hold, or 'bind', short fibers together in a filter.

D 6161, D19

binder (soil binder)—portion of soil passing No. 40 (425- μ m) U.S. standard sieve,

D 653, D18

binder tape—see **core wrap (binder tape)**.

D 1711, D09

binding—in surface filtration, a build-up of particulates on the filter, restricting fluid flow through the filter at normal pressures.

D 6161, D19

binding energy—the work that must be expended in removing an electron from a given electronic level to a reference level, such as the vacuum level or the Fermi level.

E 673, E42

binding site, *n*—*for pile yarn floor covering*, a place at which the pile yarn is, or can be, bound to the backing fabric.

D 123, D13

binding site, *n*—*for pile yarn floor covering*, a point at which the pile yarn is, or can be, bound to the backing fabric.

D 5684, D13

binocular disparity—the difference in angular deviation between two light rays passing through a transparency, originating from two eye positions located 2.5 in. apart.

F 2429, F07

binodal curve—in a two-dimensional phase diagram, a continuous line consisting of both of the pair of conjugate boundaries of a two-phase equilibrium and which join, without inflection, at a critical point. See **miscibility gap**.

E 7, E04

binomial distribution, *n*—the frequency distribution which has the probability function:

$$P(r) = (n!/[r!(n-r)!])p^r q^{n-r}$$

where:

$P(r)$ = probability of obtaining exactly r "successes" in n independent trials,

p = probability, constant from trial to trial, of obtaining a "success" in a single trial, and

q = $1 - p$.

D 123, D13

bioaccumulation—the net accumulation of a substance by an organism as a result of uptake from all environmental sources.

E 943, E47

bioaccumulation, *n*—the net accumulation of a substance by an organism as a result of uptake from all environmental sources.

E 2114, E06

bioactive agents, *n*—any molecular component in, on, or with the interstices of a device that is intended to elicit a desired tissue or cell response.

F 2312, F04

bioassay—an experiment that uses living whole organisms, tissues or cells to measure the presence, the concentration, or the relative potency of one or more chemicals.

E 943, E47

bioaugmentation—the addition of microorganisms (predominantly bacteria) to increase the biodegradation rate of target pollutants.

F 1600, F20

biobased products, *n*—products fabricated from alternative agricultural materials and forestry materials, or both.

E 2114, E06

bioburden, *n*—the level of microbial contamination (*biomass*) in a system.

D 4175, D02

biocide, *n*—a poisonous substance that can kill living organisms.

D 4175, D02

biocide, *n*—a chemical used to kill bacteria and other microorganisms.

D 4439, D35

biocide—a substance that kills all living organisms.

D 6161, D19

biocompatibility, *n*—a material may be considered biocompatible if the materials perform with an appropriate host response in a specific application.

F 2312, F04

bioconcentration—the net accumulation of a substance by an aquatic organism as a result of uptake directly from aqueous solution.

E 943, E47

bioconversion—a general term describing the use of biological systems to transform one compound into another. Examples are digestion of organic wastes or sewage by microorganisms to produce methane.

E 1705, E48

biodegradable, *adj*—capable of undergoing decomposition into carbon dioxide, methane, water, inorganic compounds, or biomass in which the predominant mechanism is the enzymatic action of microorganisms, that can be measured by standardized tests, in a specified period of time, reflecting available disposal conditions.

D 996, D10

biodegradable, *adj*—capable of decomposing under natural conditions into elements found in nature.

E 2114, E06

biodegradable plastic, *n*—a degradable plastic in which the degradation results from the action of naturally-occurring microorganisms such as bacteria, fungi, and algae.

D 883, D20

biodegradable plastic, *n*—See **degradable plastic**.

D 883, D20

biodegradation, *n*—the process of chemical breakdown or transformation of a material caused by organisms or their enzymes.

D 4175, D02

biodegradation, *n*—the process of chemical breakdown or transformation of a substance caused by organisms or their enzymes.

D 4175, D02

biodegradation, *n*—the process of chemical breakdown or transformation of a substance caused by organisms or their enzymes.

D 4175, D02

biodegradation, *n*—the process of chemical breakdown or transformation of a substance caused by organisms or their enzymes.

D 4175, D02

biodegradation, *n*—the process of chemical breakdown or transformation of a substance caused by organisms or their enzymes.

D 6384, D02

biodegradation—the chemical alteration and breakdown of a substance, usually to smaller products caused by microorganisms or their enzymes.

F 1600, F20

biodeterioration, *n*—the loss of commercial value or performance characteristics, or both, of a product (fuel) or material (fuel system) through biological processes.

D 4175, D02

biodiesel (B-100), *n*—fuel comprised of mono-alkyl esters of long chain fatty acids derived from vegetable oils or animal fats.

D 4175, D02

biodiversity, *n*—the variability among living organisms from all sources including: terrestrial, marine, and other aquatic ecosystems and the ecological complexes of which they are a part; this includes diversity within species, between species and of ecosystems.

E 2114, E06

biofilm, *n*—a film or layer of microorganisms, biopolymers, water, and entrained organic and inorganic debris that forms as a result of microbial growth and proliferation at phase interfaces (liquid-liquid, liquid-solid, liquid-gas, and so forth). (Synonym—**skinnogen**.)

D 4175, D02

biofuel—biomass-derived fuel.

E 1705, E48

biogas—a composition of methane and carbon dioxide and minor

- constituents produced by the digestion of organic substrates in the absence of oxygen. **E 1705, E48**
- biological control agents, *n***—living organisms used to eliminate or regulate the population of other living organisms. **E 2114, E06**
- biological deposits, *n***—deposits of organisms or the products of their life processes. **D 1129, D19**
- biological deposits**—the debris left by organisms as a result of their life processes. **D 6161, D19**
- biological diversity, *n***—see **biodiversity**. **E 2114, E06**
- biological evaluation test (biotest)**—a test which involves exposure of sealed packages to biological indicators and is designed to determine the microbiological integrity of a package under the specific conditions of the test. **F 17, F02**
- biological evaluation test (biotest)**—See Terminology F 17. **F 1327, F02**
- biological monitoring**—analysis of a person's blood or urine, or both, to determine the level of lead contamination in the body. **E 631, E06**
- biological monitoring**—analysis of a person's blood or urine, or both, to determine the level of lead contamination in the body. **E 1605, E06**
- biological monitoring, *n***—the chemical analysis of chemicals or metabolites, or both, from a worker's blood, urine, fingernails, sweat, breath, and so forth. **F 1494, F23**
- biological product, *n***—"any virus, therapeutic serum, toxin, antitoxin, vaccine, blood, blood component or derivative, allergenic product, or analogous product, or arsenamine or its derivatives (or any trivalent organic arsenic compound) applicable to the prevention, treatment, or cure of diseases or injuries of man." **F 2312, F04**
- biomagnification**—the increase in tissue concentration of poorly depurated materials in organisms along a series of predator-prey associations, primarily through the mechanism of dietary accumulation. **E 943, E47**
- biomagnification, *n***—the increase in tissue concentration of poorly depurated materials in organisms along a series of predator-prey associations, primarily through the mechanism of dietary accumulation. **E 2114, E06**
- biomarker, *n***—a biological measure (within organisms) of exposure to, effects of, or susceptibility to, environmental stress using molecular, genetic, biochemical, histological, or physiological techniques. **E 943, E47**
- biomarker assay**—an experiment that uses a molecular, genetic, biochemical, histological, anatomical, or physiological technique to assess exposure, response, or susceptibility of an organisms tissue or cells to environmental stress. **E 943, E47**
- biomass, *n***—any material, excluding fossil fuels, which is or was a living organism or component of a living organism. **D 4175, D02**
- biomass, *n***—density of biological material per unit sample volume, area, or mass (g biomass / g (or / mL or / cm²) sample). **D 4175, D02**
- biomass**—any material which is or was a living organism or excreted from a micro-organism. **D 6161, D19**
- biomass, *n***—any material, excluding fossil fuels, which is or was, a living organism or component of a living organism. **D 6384, D02**
- biomass**—any material, excluding fossil fuels, which is or was a living organism that can be used as a fuel peanut hulls, agricultural waste, corn and other grains, sugar, and bagasse are all examples of biomass. **E 772, E44**
- biomass**—total weight of living matter in a given volume. When considered as an energy source, biomass is further subdivided into: (1) primary biomass, rapidly growing plant material that may be used directly or after a conversion process for the production of energy, and (2) secondary biomass, biomass residues remaining after the production of fiber, food, or other products of agriculture, or biomass by-products from animal husbandry or food preparation that are modified physically rather than chemically. Examples include waste materials from agriculture and forestry industries (manure, sewage, etc.) from which energy may be produced. The above distinction noted between primary and secondary biomass is based on economic factors; these are defined differently in ecological science. **E 1705, E48**
- biomass**—any material, excluding fossil fuels, which is or was a living organism that can be used as a fuel directly or after a conversion process. Peat is not a biomass. **E 1705, E48**
- biomass, *n***—(1) All living material in a given area. (2) Any material which is or was a living organism or excreted from a microorganism. **E 2114, E06**
- biomass fuel**—fuel derived from biomass. **E 772, E44**
- biomass fuel**—fuel derived from biomass. **E 1705, E48**
- biomaterial, *n***—any substance (other than a drug), synthetic or natural, that can be used as a system or part of a system that treats, augments, or replaces any tissue, organ, or function of the body. **F 2312, F04**
- biomolecule, *n***—a biologically active peptide, protein, carbohydrate, vitamin, lipid, or nucleic acid produced by and purified from naturally occurring or recombinant organisms, tissues or cell lines or synthetic analogs of such molecules. A biomolecule may be used as a component of a TEMP. **F 2312, F04**
- biomolecule therapy, *n***—the use of biomolecules to repair, modify, or regenerate the recipient's cells, tissues, or organs or their structure and function, or both. Biomolecule therapy technologies can be applied in tissue engineering to generate TEMPs. **F 2312, F04**
- bioremediation**—the biological degradation treatment of waste sludge and soils to breakdown organic and hydrocarbons. **D 6161, D19**
- bioremediation**—the enhancement of biodegradation. **F 1600, F20**
- bioremediation agents**—inorganic and organic compounds and microorganisms that enhance biological degradation processes, predominantly microbial. **F 1600, F20**
- biostat**—a substance that inhibits biological growth. **D 6161, D19**
- biostimulation**—the addition of microbial nutrients, oxygen, heat, or water, or some combination thereof, to enhance the rate of biodegradation of target pollutants by indigenous species (predominantly bacteria and fungi). **F 1600, F20**
- biosurfactant, *n***—a biologically produced molecule that acts as a soap or detergent. **D 4175, D02**
- bipolar electrode**—an electrode that is not directly connected to the power supply but is so placed in the solution between the anode and the cathode that the part nearest the anode becomes cathodic and the part nearest the cathode becomes anodic. **B 374, B08**
- bipolar field**—see **field, bipolar**. **E 1316, E07**
- bipolar membrane**—synthetic membrane containing two oppositely charged ion-exchange layers that are in contact with each other. **D 6161, D19**
- birdseye, *n***—*in knittedfabrics*, an unintentional tuck stitch. **D 123, D13**
- birdseye, *n***—*in knittedfabrics*, an unintentional tuck stitch. **D 3990, D13**
- birdseyes**—small localized areas in wood with the fibers indented and otherwise contorted to form small circular or elliptical figures remotely resembling birds' eyes on the tangential surface. Common in sugar maple; rare in other hardwood species. **D 9, D07**
- birefringence, *n***—(*double refraction*) a property of anisotropic materials which manifests itself as a splitting of a light ray into components having different vibration directions which are transmitted at different velocities. **D 123, D13**
- birefringence**—the separation of a light beam as it penetrates a doubly refracting material into two diverging beams commonly known as ordinary and extraordinary beams, which may appear in transparencies as rainbowing or the apparent random dispersion of light into its component colors. **F 2429, F07**
- birefringent**—having more than one refractive index. Such materials exhibit alternately bright and dark reflections at 45° intervals during a 360° rotation with plane-polarized light. (See also **anisotropic**.) **E 7, E04**

bisectrix, acute

bisectrix, acute—in biaxial crystals, that principal axis of the ellipsoid of indexes which bisects the smaller angle between the optic axes. **E 175, E41**

bisectrix, obtuse—in biaxial crystals, that principal axis of the ellipsoid of indexes which bisects the larger angle between the optic axes. **E 175, E41**

bison—leather made from hides of the American Bison, commonly referred to as the North American Buffalo, and not from the domesticated Asian or Eastern Water Buffalo. **D 1517, D31**

bispectral fluorescence radiance factor, $b_F(\mu, n)$ —the ratio of the spectral radiance at wavelength λ due to fluorescence from a point on the specimen when irradiated at wavelength μ to the total radiance of the perfectly reflecting diffuser similarly irradiated and viewed (see NPL Report MOM 12). **E 284, E12**

bispectral radiance factor, $b_\lambda(\mu, n)$ —the ratio of the spectral radiance (radiance per unit waveband) at wavelength λ from a point on a specimen when irradiated at wavelength μ to the total (integrated spectral) radiance of the perfectly reflecting diffuser similarly irradiated and viewed.

$$b_\lambda(\mu) = L_\lambda(\mu)/L(\mu)_d$$

E 284, E12

bispectral reflection radiance factor, $b_{R\lambda}(\mu, n)$ —the ratio of the spectral radiance at wavelength λ due to reflection from a point on the specimen when irradiated at wavelength μ to the total radiance of the perfectly reflecting diffuser similarly irradiated and viewed. **E 284, E12**

bispectrometer, n —an optical instrument equipped with a source of irradiation, two monochromators, and a detection system, such that a specimen can be measured at independently-controlled irradiation and viewing wavelengths. The bispectrometer is designed to allow for calibration to provide quantitative determination of the bispectral radiation-transfer properties of the specimen. **E 284, E12**

bisque—a coating of wet-process porcelain enamel that has been dried, but not fired. **C 286, B08**

bisque fire—See *bisque fire* under **firing**. **C 242, C21**

bisulfiting—the treatment of hot solutions of vegetable tanning extracts with sodium bisulfite in order to increase their solubility and rate of take-up by hides. **D 1517, D31**

bisync (BSC), n —an IBM-developed method of binary synchronous transmission. **F 1457, F05**

bit—any device that may be attached to or is an integral part of a drill string and is used as a cutting tool to bore into or penetrate rock or other materials. **D 653, D18**

bit—binary digit. **F 1457, F05**

bite, n —in *building construction in glazing*, the effective structural contact dimension of a structural sealant. **C 717, C24**

bite—See **windows and doors**. **E 631, E06**

bite, chemical, n —stinging experienced primarily in the oral cavity as a result of exposure to substances such as highly carbonated beverages. **E 253, E18**

bit map—a pattern of bits representing the dots in a printed image. **F 1457, F05**

bitter, *adj*—taste produced by substances such as quinine or caffeine when in solution. **E 253, E18**

bitumen, n —a class of black or dark-colored (solid, semisolid, or viscous) cementitious substances, natural or manufactured, composed principally of high molecular weight hydrocarbons, of which asphalts, tars, pitches, and asphaltites are typical. **D 8, D04**

bitumen—(1) a class of amorphous, black or dark-colored, (solid, semi-solid, or viscous) cementitious substances, natural or manufactured, composed principally of high molecular weight hydrocarbons, soluble in carbon disulfide, and found in asphalts, tars, pitches, and asphaltites;

(2) a generic term used to denote any material composed principally of bitumen. **D 1079, D08**

bitumen trap—See **pitch pocket**.

D 1079, D08

bituminized, *adj*—impregnated with bitumen. Example: bituminized fiber pipe. **D 1079, D08**

bituminous, *adj*—containing or treated with bitumen (also *bituminized*); for example: bituminous concrete, bituminized felts and fabrics, bituminous pavement. **D 8, D04**

bituminous, *adj*—containing or treated with bitumen. Examples: bituminous concrete, bituminous felts and fabrics, bituminous pavement. **D 1079, D08**

bituminous bleeding, n —excess bitumen on the surface of the pavement, usually found in the wheel paths. **E 867, E17**

bituminous bleeding, n —excess bitumen on the surface of the pavement, usually found in the wheel paths. **E 1778, E17**

bituminous class—See *bituminous class* under **rank**. **D 121, D05**

bituminous emulsion, n —(1) a suspension of minute globules of bituminous material in water or in an aqueous solution, or (2) a suspension of minute globules of water or of an aqueous solution in a liquid bituminous material. **D 8, D04**

bituminous emulsion—(1) a suspension of minute globules of bituminous material in water or in an aqueous solution; (2) a suspension of minute globules of water or of an aqueous solution in a liquid bituminous material (invert emulsion). **D 1079, D08**

bituminous grout—a mixture of bituminous material and fine sand that will flow into place without mechanical manipulation when heated. **D 1079, D08**

bituminous pavement, n —a pavement comprising an upper layer or layers of aggregate mixed with a bituminous binder, (such as asphalt, coal tars and natural tars) and surface treatments such as chip seals, slurry seals, sand seals, and cape seals are also included. **E 867, E17**

bituminous pavement, n —a pavement comprising an upper layer or layers of aggregate mixed with a bituminous binder, such as asphalt, coal tars, and natural tars for purposes of this terminology; surface treatments such as chip seals, slurry seals, sand seals, and cape seals are also included. **E 1778, E17**

bituminous varnish—under **varnish**, see *bituminous varnish*.

D 16, D01

bivariant equilibrium—a stable state among a number of phases equal to the number of components in a system and in which any two of the external variables (temperature, pressure, or concentrations) may be varied, at will, without necessarily causing a change in the number of phases; sometimes called *divariant equilibrium*. **E 7, E04**

black, *adj*—color description applied to opaque objects that are highly light absorbing throughout the visible spectrum. **D 2946, C17**

blackboard enamel—see **chalkboard enamel**. **C 286, B08**

blackbody, n —the ideal, perfect emitter and absorber of thermal radiation. It emits radiant energy at each wavelength at the maximum rate possible as a consequence of its temperature, and absorbs all incident radiance. **C 168, C16**

blackbody—the ideal, perfect emitter and absorber of thermal radiation which emits radiant energy at the maximum rate possible, as a consequence of its temperature, and absorbs all incident radiation. **C 242, C21**

blackbody, n —see the preferred term, **full radiator**. **E 284, E12**

blackbody, n —the perfect or ideal source of thermal radiant power having a spectral distribution described by the Planck equation. **E 344, E20**

blackbody, n —a reference source of infrared radiation made in the shape of a cavity and characterized by precisely known temperature of the cavity walls and having effective emissivity at the cavity opening arbitrarily considered equal to unity. **E 344, E20**

blackbody—a hypothetical “body” that completely absorbs all incident radiant energy, independent of wavelength and direction; that is, one which neither reflects nor transmits any of the incident

radiant energy. It is the emitter of electromagnetic radiant energy which, at a given temperature, presents the maximum spectral density of radiant exitance or radiance at all wavelengths.

NOTE—No real material is a blackbody. A completely enclosed cavity with opaque walls at a uniform temperature contains blackbody radiation. A blackbody radiator can be approximated in the laboratory to any desired degree of approximation by a furnace containing a cavity with opaque walls at a uniform temperature, that contains an aperture through which the blackbody radiation is observed. The degree of approximation to a true blackbody radiator is inversely related to the ratio of the area of the aperture to the area of the interior wall of the cavity. E 772, E44

blackbody—an ideal thermal radiator (emissivity = 1.0) that emits and absorbs all of the available thermal radiation at a given temperature. E 1316, E07

blackbody equivalent temperature—the apparent temperature of an object as determined from the measured radiance and the assumption that it is an ideal blackbody with emissivity of 1.0. E 1316, E07

blackbody radiant energy—see **radiant energy, blackbody**. E 772, E44

blackbody temperature, *n*—the temperature of a perfect radiator—a surface with an emissivity of unity and, therefore, a reflectivity of zero. E 176, E05

blackbody temperature, t_{BB} , *n*—temperature of blackbody cavity walls as measured by an imbedded or immersed *contact thermometer*. E 344, E20

black box, *n*—a thin metal box painted flat black on the outside only exclusive of the bottom surface with an open top where the flat test specimens to be exposed constitute the top surface of the box; the box is equipped with mounting strips to hold the test specimens firmly in place; the top surface of the box must be completely filled at all times; any blank spaces on the top surface must be occupied by flat black “dummy” panels to maintain correct operating condition. G 113, G03

black box under glass, *n*—a glass covered enclosure or cabinet of any convenient size. It shall be constructed of corrosion resistant metal and be enclosed to prevent ambient air from circulating over the samples. Exterior non-glass surfaces shall be painted black. The interior shall remain unpainted. G 113, G03

black density—see **image density**. F 335, F05

black edging—a black porcelain enamel applied over the ground coat and exposed in specified areas by brushing the cover coat bisque prior to firing (see also **edging**). C 286, B08

black felt, *n*—those classifications of felt manufactured to various shades of the color black. D 123, D13

black felt, *n*—those classifications of felt manufactured to various shades of the color black. D 4845, D13

black light—electromagnetic radiation in the near ultraviolet range of wavelength (330 to 390 nm) (3300 to 3900 Å). E 1316, E07

black light filter—a filter that transmits near ultraviolet radiation while absorbing other wavelengths. E 1316, E07

black marking—black marks on a flooring surface usually caused by the impact of the soles and heels of footwear. D 2825, D21

black marking—black smudges on the surface of the pultruded product that cannot be removed by cleaning or scrubbing or wiping with solvent.

NOTE—Black marking results from excessive pressures in the die when the pultrusion is rubbing against soft or unchromed die surfaces. D 3918, D20

black oil, *n*—lubricant containing asphaltic materials. Black oils are used in heavy-duty equipment applications, such as mining and quarrying, where extra adhesiveness is desired. D 4175, D02

black oxide—a finish on metal produced by immersing a metal in hot oxidizing salts or salt solutions. B 374, B08

black panel thermometer, *n*—a temperature measuring device consisting of a metal panel, having a black coating which absorbs

all wavelengths uniformly, with a thermal sensitive element firmly attached to the center of the exposed surface. The black panel thermometer is used to control an artificial weathering device and to provide an estimate of the maximum temperature of samples exposed to a radiant energy source. G 113, G03

black sidewall, *n*—a sidewall on which only black compounds comprise the outer visible surface of the tire. F 538, F09

black speck—a defect that appears in the fired cover coat as a small dark spot. C 286, B08

black write—a process in electrostatic printing where the photoconductive element is charged with a charge of the same sign as that of the toner. A light beam, used like a “stylus” is used to discharge only those areas that are to receive toner to form the image. In the development process, the charged background areas repel the like charged toner to the discharged areas on the photoconductor. F 909, F05

bladder temperature, *n*—temperature of the interior of urinary bladder as measured by a *contact thermometer*. E 344, E20

blade—the segment that contains the cutting edge which may be with or without serrations. F 1078, F04

blade alignment—the positioning of the blades with respect to tip match-up and blade setting. F 1078, F04

blade clincher—thin clinching arm; usually designed for insertion between layers of corrugated boards. F 592, F16

blaine fineness—the fineness of powdered materials, such as cement and pozzolans, expressed as surface area usually in square centimetres per gram. D 653, D18

blank, *n*—a pressed, presintered, or fully sintered compact, usually in the unfinished condition, requiring cutting, machining, or some other operation to give it its final shape. B 243, B09

blank—a piece of flat product intended for subsequent fabrication by forming, bending, cupping, drawing, hot pressing, and so forth. B 846, B05

blank—(1) a preliminary shape from which a finished article is further formed, molded, or cut.

(2) a semi-finished piece of glass for making an optical element, such as a lens or prism. Also known as a pressing. C 162, C14

blank—the piece cut from metal sheet that is to be used in forming the finished article. C 286, B08

blank, *n*—matrix carried through all or part of the analytical process, where the analyte is not present, or where the analyte response is suppressed.

NOTE—A blank must be appropriate to the analytical process it is being used with.

NOTE—A blank is typically used to monitor contamination or to establish a baseline for quantitation. D 1129, D19

blank, *n*—a portion of a rubber compound of suitable volume to fill the cavity of a mold. D 1566, D11

blank, *n*—in *biodegradability testing*, a test system containing all system components with the exception of the test substance. D 4175, D02

blank, *n*—in *biodegradability testing*, a test system containing all system components with the exception of the test material. D 6384, D02

blank—the measured value obtained when a specific component is not present during the measurement. E 2161, E37

blank, *n*—the contamination level, sometimes referred to as the background level, of a fluid when the test coupon is omitted. G 126, G04

blank carburizing, *n*—simulating the **carburizing** operation without introducing carbon. A 941, A01

blanket, *n*—flexible insulation product, supplied rolled or flat. C 168, C16

blanket, *n*—for *bedding*, an unquilted fabric covering designed primarily to provide thermal insulation. D 123, D13

blanket, n

blanket, n—for bedding, an unquilted fabric covering designed primarily to provide thermal insulation. **D 7023, D13**

blanket feed—a method for charging batch designed to produce an even distribution of batch across the width of the melter. **C 162, C14**

blanket grouting—a method in which relatively closely spaced shallow holes are drilled and grouted on a grid pattern over an area, for the purpose of making the upper portions of the bedrock stronger and less pervious. **D 653, D18**

blanket insulation, n—a relatively flat and flexible insulation in coherent sheet form furnished in units of substantial area. **C 168, C16**

blanket insulation, metal mesh, n—blanket insulation covered by flexible metal-mesh facings attached on one or both sides. **C 168, C16**

blanket mark—See **sanforizing mark**. **D 3990, D13**

blanket roll-up—a container made from fabric or similar material and specifically designed to protect the blanket from damage during storage or transportation. **F 819, F18**

blanking band—a band of uniform height with its longitudinal center positioned optimally between the highs and lows of the surface record depicting at least 100 ft (30 m) of pavement. **E 867, E17**

blank mold—the metal mold that first shapes the glass in the manufacture of hollow ware. **C 162, C14**

blank nitriding, n—simulating the nitriding operation without introducing nitrogen. **A 941, A01**

blank sample—unexposed specimen of the *medium* used in testing, such as a wipe or a filter, which is analyzed with other samples to determine whether samples are either (1) contaminated before collection (for example, in the field, or at the testing site), or are (2) contaminated after collection (for example, during transportation to the laboratory or in the laboratory), or both. Also called a *media blank*, or a *dummy specimen*. **E 631, E06**

blank sample—unexposed specimen of the *medium* used in testing, such as a wipe or a filter, which is analyzed with other samples to determine whether samples are either (1) contaminated before collection (for example, in the field, or at the testing site), or are (2) contaminated after collection (for example, during transportation to the laboratory or in the laboratory), or both. Also called a *media blank*, or a *dummy specimen*. **E 1605, E06**

blast-furnace slag, n—the nonmetallic product, consisting essentially of silicates and aluminosilicates of calcium and other bases, that is developed in a molten condition simultaneously with iron in a blast furnace. **C 125, C09**

blast-furnace slag, n—the nonmetallic product, consisting essentially of silicates and aluminosilicates of calcium and other bases, that is developed in a molten condition simultaneously with iron in a blast furnace. **C 219, C01**

blast-furnace slag, n—the nonmetallic product, consisting essentially of silicates and aluminosilicates of lime and of other bases, that is developed simultaneously with iron in a blast furnace. **D 8, D04**

blast-furnace slag—the nonmetallic product, consisting essentially of silicates and aluminosilicates of calcium and other bases, that is developed in a molten condition simultaneously with iron in a blast furnace. **D 1079, D08**

blastability—index value of the resistance of a rock formation to blasting. (ISRM) **D 653, D18**

blasting—See **sand blasting; grit blasting; wet blasting**. **B 374, B08**

blasting—haze around a letter, word or image in the form of fine spotting or speckling. **F 335, F05**

blasting cap (detonator, initiator)—a small tube containing a flashing mixture for firing explosives. (ISRM) **D 653, D18**

blast nozzle—see **pneumatic atomizer**. **E 1620, E29**

bleach, n—in care of textiles, a product for brightening and aiding in the removal of soils and stains from textile materials by oxidation that is inclusive of both chlorine and non-chlorine products. **D 123, D13**

bleach, n—in care of textiles, a product for brightening and aiding the removal of soils and stains from textile materials by oxidation that is inclusive of both chlorine and non-chlorine products. **D 3136, D13**

bleachability—the capacity of a pulp to bleach to a given whiteness. This is approximately and indirectly related to lignin content. **D 1695, D01**

bleached, adj—having been subjected to the process of bleaching. **D 1968, D06**

bleached specimen, n—specimen whose absorbance has been decreased by chemical or radiant means. **E 284, E12**

bleaching—(1) the process of removing oxidized tannins and insoluble materials from the surface layers of leather, in order to prevent crackiness of the grain. It is performed by dipping the leather in a weak alkaline solution to render the tannin readily soluble, dipping in water, neutralizing in weak acid solution and washing.

(2) the process of lightening the color of chrome leather by treating with synthetic tannins or precipitating white pigment in the surface of the leather. **D 1517, D31**

bleaching, n—a process involving a chemical or biological treatment of pulp, primarily to increase whiteness and brightness; such a process may alter or remove noncellulosic materials, such as but not limited to lignin, resin, and colorants. **D 1968, D06**

bleed, n—the spreading or running of a dye or pigment color by the action of a solvent. **D 6488, D01**

bleed, n—the spreading of ink into an unwanted area on the printed sheet. **D 6488, D01**

bleed, n—ink feathering of one color into an adjacent color over time. **F 1857, F05**

bleed (bleeding), n—of lubricating greases, the separation of a liquid lubricant from a lubricating grease for any cause. **D 4175, D02**

bleeder cloth—a nonstructural layer of material used in the manufacture of composite assemblies to allow the escape of excess gas and resin during cure. **E 631, E06**

bleeder cloth—a nonstructural layer of material used in the manufacture of composite assemblies to allow the escape of excess gas and resin during cure. **E 1749, E06**

bleeding, n—the autogenous flow of mixing water within, or its emergence from, newly placed concrete or mortar caused by the settlement of the solid materials within the mass, also called water gain. **C 125, C09**

bleeding, n—the diffusion of coloring matter through a coating from the substrate; also, the discoloration arising from such diffusion. In the case of printing ink, the spreading or running of a pigment color by the action of a solvent such as water or alcohol. **D 16, D01**

bleeding—in grouting, the autogeneous flow of mixing water within, or its emergence from, newly placed grout caused by the settlement of the solid materials within the mass. **D 653, D18**

bleeding—the transfer of materials exuded from leather to other materials that come in contact with it. **D 1517, D31**

bleeding, n—the exuding of a liquid compounding material from the surface of a vulcanized or unvulcanized rubber. **D 1566, D11**

bleeding, n—the unintentional transfer of coloring matter from one medium to or through another. **E 284, E12**

bleeding of coating—the diffusion of coloring matter through a substrate from the coating, or to copy paper from the coating. **F 221, F05**

bleeding rate—in grouting, the rate at which water is released from grout by bleeding. **D 653, D18**

bleed of image—spread or diffusion of an image with time. **F 221, F05**

bleedout—the action of an entrapped liquid penetrant in surfacing from discontinuities to form indications. **E 1316, E07**

bleed through—glue or components of glue that have seeped through the outer layer or ply of a glued wood product and that show as a blemish or discoloration on the surface. **D 1038, D07**

bleedthrough, *n*—*for coated inflatable restraint fabrics*, the presence of coating material on the uncoated side, between two yarns, without covering either yarn. **D 6799**, D13

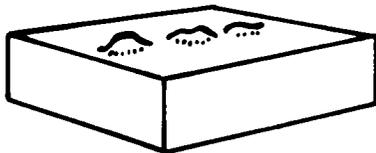
bleed through, *n*—the diffusion of ink through the substrate. **F 1857**, F05

blemish—in dry process enameling, an insignificant imperfection in the porcelain enamel surface. **C 286**, B08

blemish—in grading lumber, anything marring the appearance. May not be classified as a defect. **D 9**, D07

blemish—anything marring the appearance of the veneer that is not classifiable as a defect. **D 1038**, D07

blemish—strained or discolored area attributable to normal composition or forming, or both. (See also **inclusion**.)



F 109, C21

blend—a combining of various cementitious materials. **C 822**, C13

blended hydraulic cement, *n*—a hydraulic cement consisting of two or more inorganic constituents (at least one of which is not portland cement or portland cement clinker) which separately or in combination contribute to the strength-gaining properties of the cement, (made with or without other constituents, processing additions and functional additions, by intergrinding or other blending).

portland blast-furnace slag cement, *n*—a hydraulic cement consisting of an intimately interground mixture of portland cement clinker and granulated blast-furnace slag or an intimate and uniform blend of portland cement and fine granulated blast-furnace slag in which the amount of the slag constituent is within specified limits.

portland-pozzolan cement, *n*—a hydraulic cement consisting of an intimate and uniform blend of portland cement or portland blast-furnace slag cement and fine pozzolan produced by intergrinding portland cement clinker and pozzolan, by blending portland cement or portland blast-furnace slag cement and finely divided pozzolan, or a combination of intergrinding and blending, in which the amount of the pozzolan constituent is within specified limits. **C 219**, C01

blended soap—under **soap**, see **blended soap**. **D 459**, D12

blending, *n*—the thorough intermingling of powders of the same nominal composition (not to be confused with mixing). **B 243**, B09

blending, *n*—*in hydraulic cement manufacture*, a process in which two or more ingredients are combined into an intimate and uniform product of finely divided dry material, as by intergrinding or mixing, or both. **C 219**, C01

blending-batch—{archaic} stepwise changes in batch composition to arrive at the final change in finished glass. **C 162**, C14

blending plan, *n*—the instructions for mixing fibers during specimen preparation. **D 123**, D13

blending plan, *n*—the instructions for mixing fibers during specimen preparation. **D 7139**, D13

blind clinch—clinch between the layers of corrugated boards, usually buried with wide-crown retractable anvil tools. **F 592**, F16

blind hem stitch, *n*—*in home sewing*, a complex machine stitch pattern consisting of small groups of straight or narrow zigzag stitches separated by a wide zigzag stitch unit at consistent intervals. **D 123**, D13

blind hem stitch, *n*—*in home sewing* a complex machine stitch pattern consisting of small groups of straight or narrow zigzag stitches separated by a wide zigzag stitch unit at consistent intervals. **D 5646**, D13

blinding, *n*—*for geotextiles*, the condition where soil particles block

the surface openings of the fabric, thereby reducing the hydraulic conductivity of the system. **D 4439**, D35

blinding—placing selected material to completely cover the pipe or tubing. **F 412**, F17

blind ink—See **reflective ink**. **F 149**, F05

blind nailing—the use of nails that are not exposed to the weather in the finished roofing. **D 1079**, D08

blind reference oil, *n*—a reference oil, the identity of which is unknown by the test facility. **D 4175**, D02

blip, *n*—*for inflatable restraint fabrics*, any short, irregularly shaped or textured portion of an individual multifilament yarn that has been woven into the fabric, including slough offs, stripbacks, fuzz balls, snarls, and slubs. **D 6799**, D13

blister—a dome-shaped imperfection or defect, resulting from loss of adhesion between a metallic deposit and the substrate. **B 374**, B08

blister—a relatively large gaseous inclusion in glass. **C 162**, C14

blister—a defect caused by gas evolution consisting of a bubble that forms during fusion and remains when the porcelain enamel solidifies. **C 286**, B08

blister—a convex, raised area on the pipe surface indicating an internal separation. **C 896**, C04

blister, *n*—*in bonded, fused, or laminated fabrics*, a bulge, swelling, or similar surface condition on either the face fabric or the backing fabric characterized by the fabric being raised from the plane of the underlying component over a limited area to give a puffy appearance. **D 123**, D13

blister, *n*—an imperfection, a rounded elevation of the surface of a plastic, with boundaries that may be more or less sharply defined, somewhat resembling in shape a blister on the human skin. **D 883**, D20

blister, *n*—an elevation of the surface of varied contour and dimensions, with a void beneath it. **D 907**, D14

blister—*in plywood*, an elevation of the surface of an adhering (separation between plies), somewhat resembling in shape a blister on the human skin; its boundaries may be indefinitely outlined and it may have burst or become flattened. **D 1038**, D07

blister—(1) a raised portion of a roofing membrane resulting from local internal pressure;

(2) the similarly formed protuberances in coated prepared roofing. **D 1079**, D08

blister—a rounded elevation of the pultruded surface with boundaries that may be more or less sharply defined.

NOTE—The rounded elevation somewhat resembles in shape a blister on the surface of human skin. Blisters may exist within the pultrusion as a hollow delaminated area (usually gas-filled) under a raised portion of the surface. **D 3918**, D20

blister—bubble or gaseous inclusion at the surface which if broken could form a pit, pock, or hole.



F 109, C21

blister, *n*—rounded elevation of the surface of a plastic, with boundaries that may be more or less sharply defined, somewhat resembling in shape a blister on the human skin. (D20) **F 412**, F17

blister, *n*—in sheet plastics, an imperfection, a rounded elevation of the surface, with boundaries that may be more or less sharply defined, somewhat resembling in shape a blister on the human skin. **F 1251**, F04

blister crack, *n*—*in a rigid die system*, typically small defects (star burst) over or around a bump or blister. **B 243**, B09

blistered compact, *n*—a sintered object characterized by having blisters or eruptions on the surface. **B 243**, B09

blistering—the development during firing of enclosed or broken

blistering

macroscopic vesicles or bubbles in a body, or in a glaze or other coating. C 242, C21

blistering, *n*—the formation of small air pockets under the printed paper surface. D 6488, D01

blistering, *n*—an enclosed raised spot or air bubble on the paper surface that can be caused by moisture trapped during the drying process. D 6488, D01

blistering resistance, *n*—the ability of a coating to resist the formation in the film of dome-shaped, liquid- or gas-filled projections resulting from local loss of adhesion and lifting of the film from the previously applied coating or the substrate. D 16, D01

blister pack—See **pack**. D 996, D10

blister(s), *n*—surface or internal imperfection(s), produced by entrapped gases or other volatiles, during the manufacture of rubber articles. D 1566, D11

blotch—{archaic} an imperfection resulting from incompletely grinding plate glass, caused by a low place in the plate which retains part of the original rough surface. C 162, C14

blotting—substantial swelling produced by a heat treatment that causes the formation of a vesicular structure. C 242, C21

blotting of refractories, *v*—substantial swelling produced by a heat treatment that causes the formation of a vesicular structure. C 71, C08

Bloch wall—a domain wall in which the magnetic moment at any point is substantially parallel to the wall surface. See also **domain wall**. A 340, A06

block, *n*—*in experimenting*, a group of units that is relatively homogeneous within itself, but may differ from other similar groups. D 123, D13

block, *v*—to align warp and weft yarns at right angles, by some form of manipulation. D 123, D13

block—a grouping of devices in a single unit having common control. See **array**, **bank**, **train**. D 6161, D19

block, *n*—*for cutting standard def.*, a sequence of commands within a cut file and which activate a response by the automated fabric cutter. D 6963, D13

block—*in a honeycomb core material*, a single production unit of honeycomb before slicing. E 631, E06

block—*in a honeycomb core material*, a single production unit of honeycomb before slicing. E 1749, E06

block—*in fatigue loading*, a specified number of constant amplitude loading cycles applied consecutively, or a spectrum loading sequence of finite length that is repeated identically. E 1823, E08

block, *n*—synonym for *element*. F 538, F09

block, *n*—a group of data transmitted as a unit. F 1457, F05

block circuit diagram, *n*—an illustration of the interconnection of the major elements of a system, each element being presented by a block. (See **BCD**.) F 1457, F05

block copolymer—an essentially linear copolymer in which there are repeated sequences of polymeric segments of different chemical structure. D 883, D20

block copolymer, *n*—an essentially linear copolymer in which there are repeated sequences of polymeric segments of different chemical structure. F 1251, F04

block cracking, *n*—a pattern of cracks that divide the pavement into approximately rectangular pieces, ranging in size from approximately 0.1 m² to 10 m² (1 to 100 ft²). E 867, E17

block cracking, *n*—a pattern of cracks that divide the pavement into approximately rectangular pieces, ranging in size from approximately 0.1 m² to 1.0 m² (1 ft² to 100 ft²). E 1778, E17

blocked curing agent, *n*—a curing or hardening agent temporarily rendered unreactive, which can be reactivated as desired by physical or chemical means. D 907, D14

block flow—the distance an adhesive, sealant, or coating will sag on a vertical surface in a given period of time. Also referred to as *slump*. E 631, E06

block flow—the distance an adhesive, sealant, or coating will sag on

a vertical surface in a given period of time. Also referred to as *slump*. E 1749, E06

blocking—(1) shaping a gather of glass in a cavity of wood or metal.

(2) *archaic*, promoting mixing and fining of glass by immersion of a wooden block or other object to create bubbles.

(3) reprocessing to remove surface imperfections.

(4) *archaic*, mounting of glass for grinding and polishing.

(5) *archaic*, idling a furnace at reduced temperatures.

See **hothold**.

C 162, C14

blocking, *n*—*for coatings other than powder coatings*, the sticking of a coated surface to an adjacent surface when the two surfaces have been in contact for an extended period of time. D 16, D01

blocking, *n*—*of coated fiber glass yarn solar screening*, an undesired adhesion between touching layers of a material, such as occurs under moderate pressure, during storage or use. D 123, D13

blocking, *n*—the measurement of the development of surface tack and the thermal softening point of the material. D 123, D13

blocking—wood blocks placed between the excavated surface of a tunnel or shaft and the main bracing system. (ISRM) D 653, D18

blocking, *n*—unintentional adhesion between plastic films or between a film and another surface. D 883, D20

blocking, *n*—an undesired adhesion between touching layers of a material, such as occurs under moderate pressure during storage or use. D 907, D14

blocking—See **loading**.

D 996, D10

blocking—(1) wood built into a roofing system above the deck and below the membrane and flashing to (a) stiffen the deck around an opening, (b) act as a stop for insulation, (c) serve as a nailer for attachment of the membrane or flashing.

(2) wood cross-members installed between rafters or joists to provide support at cross-joints between deck panels.

(3) cohesion or adhesion between similar or dissimilar materials in roll or sheet form that may interfere with the satisfactory and efficient use of the material. D 1079, D08

blocking—the adhesion between touching layers of leather such as occurs under moderate pressures during storage or use.

D 1517, D31

blocking, *n*—*of paper or paperboard*, undesired cohesion or adhesion that interferes with the satisfactory and efficient use of the material.

D 1968, D06

blocking, *n*—an undesired adhesion between sheets of printed material that might occur under moderate pressure or increased temperature, or both, while in storage or in use. D 6488, D01

blocking, *n*—*of coated fiber glass yarn solar screening*, an undesired adhesion between touching layers of a material. Such as occurs under moderate pressure, during storage or use. D 7018, D13

blocking, *n*—the measurement of the development of surface tack and the thermal softening point of the material. D 7023, D13

blocking—the tendency for coated sheets to stick together under pressure. (F 335) F 221, F05

blocking—the tendency for coated sheets to stick together under pressure. F 335, F05

blocking, *n*—image is transferred upon contact from one substrate to another substrate which may cause the images or substrate coatings, or both, to stick to one another. See also **transference**, **offset**. F 1857, F05

blocking geometry—*EIA*, experimental situation wherein the atom rows or planes of a single crystal target are aligned parallel to a vector from the specimen to the detector. E 673, E42

blocking or masking—surrounding specimens or covering their sections with absorptive material. E 1316, E07

blocking resistance, *n*—*of paper or paperboard*, the capacity of a given paper or paperboard to resist blocking. See **blocking**.

D 1968, D06

block insulation, *n*—rigid insulation preformed into rectangular units. C 168, C16

block mold—a one-piece mold.

C 162, C14

block reek, rake—{archaic} a scratch imperfection caused by cullet lodged in the felt in the polishing operation. **C 162, C14**

blood-lead level (blood level)—concentration of lead in the blood, 1 $\mu\text{mole/L} = 20.72 \mu\text{g/mL}$. **E 631, E06**

blood-lead level (blood level)—concentration of lead in the blood, 1 $\mu\text{mole/L} = 20.72 \mu\text{g/mL}$. **E 1605, E06**

blood-lead testing—testing by laboratories to determine the blood-lead level. **E 631, E06**

bloom—a visible exudation or efflorescence on a surface. **B 374, B08**

bloom—(1) a visible surface film resulting from attack by the atmosphere or from the deposition of particulate or vapor condensates. (See also **smoked**.)
(2) a blemish in float glass appearing on the bottom (tin contact) surface after reheating as a result of the presence of tin diffused into the surface. **C 162, C14**

bloom, *n*—in *buildingconstruction*, a substance formed by blooming. **C 717, C24**

bloom, *n*—a visible exudation or efflorescence on the surface of a material. **D 883, D20**

bloom—a light-colored deposit of ellagic acid appearing on the grain surface of leather tanned with certain pyrogallo tannins, such as myrabolans, valonia, and dividivi. The appearance may be objectionable for some purposes, but bloom does not significantly affect the other physical properties of the leather. **D 1517, D31**

bloom—a condition in which moisture has condensed upon and is being trapped by a polish film, rendering a haze over the surface. **D 2825, D21**

bloom, *n*—for *asbestos-cement*, see **efflorescence (bloom)**. **D 2946, C17**

bloom, *n*—the scattering of light in directions near the specular angle of reflection by a deposit on or exudation from a specimen. **E 284, E12**

bloom, *n*—a visible exudation or efflorescence on the surface of a material. (D20) **F 412, F17**

bloom, *n*—a visible exudation or efflorescence of a performance additive on the surface of a material. **F 1251, F04**

blooming, *v*—in *buildingconstruction*, movement or diffusion of a component such as a plasticizer, monomer, unreacted polymer or other formulation ingredient to a sealant, coating, or membrane surface. **C 717, C24**

blooming—in radiologic real-time imaging, an undesirable condition exhibited by some image conversion devices and television pickup tubes brought about by exceeding the allowable input brightness for the device, causing the image to go into saturation, producing a fuzzy image of degraded spatial resolution and grey scale rendition. **E 1316, E07**

blooming/blushing, *n*—a foggy appearance in a printed ink film commonly caused by incompatibility of the ingredients in the ink. **D 6488, D01**

blooming, fiber—a pultrusion surface condition exhibiting a fiber prominence or fiber show that usually has a white or bleached color and a sparkling appearance.

NOTE—The surface generally feels rough when touched by the fingers and is of superficial thickness easily removed by buffing or light sanding. **D 3918, D20**

blooming, undercure—a dull and bleached surface color that is evident in pultruded material not exposed to the weather.

NOTE—This condition is usually the result of insufficient surface cure. **D 3918, D20**

bloom (rubber), *n*—a liquid or solid material that has migrated to the surface of a rubber and generally changes the surface appearance. **D 1566, D11**

blotch, *n*—an irregularly shaped offcolored area. **D 123, D13**

blotch, *n*—an offcolored area of any shape caused by grease or oil. (*Syn.* **oil spot**) **D 3990, D13**

blotting—the action of the developer in soaking up the penetrant from the discontinuity to accelerate bleedout. **E 1316, E07**

blow, *n*—the volume expansion that occurs during the production of cellular or sponge rubber. **D 1566, D11**

blow-and-blow process—the process of forming hollow ware in which both the preliminary and final shapes are formed by air pressure. **C 162, C14**

blow back—the enlargement of a minified radiograph to its original size by use of an optical direct reader. **E 1316, E07**

blowby, *n*—in *internalcombustion engines*, the combustion products and unburned air-and-fuel mixture that enter the crankcase. **D 4175, D02**

blowby, *n*—in *internalcombustion engines*, that portion of the combustion products and unburned air/fuel mixture which leaks past piston rings into the engine crankcase during operation. **D 4175, D02**

blower—one who forms glass by blowing. (See also **gaffer**.) **C 162, C14**

blower door, *n*—a fan pressurization device incorporating a controllable fan and instruments for airflow measurement and building pressure difference measurement that mounts securely in a door or other opening. **E 631, E06**

blow head—part of a forming machine serving to introduce air under pressure to blow any hollow glass article. **C 162, C14**

blow hole—a unintended hole or void in a metal casting resulting from entrained gases. **E 631, E06**

blowholes—a hole produced in a casting by gas which was trapped during solidification. **E 7, E04**

blow-in—the inflow of ground water and unconsolidated material into a borehole or casing caused by differential hydraulic heads; that is, caused by the presence of a greater hydraulic head outside of a borehole/casing than inside. **D 653, D18**

blowing agent—a compounding ingredient used to produce gas by chemical or thermal action, or both, in manufacture of hollow or cellular articles. **D 883, D20**

blowing agent, *n*—a compounding material used to produce gas by chemical or physical action, or both, in the manufacture of hollow or cellular articles. **D 1566, D11**

blowing agent—a compounding ingredient used to produce gas by chemical or thermal action, or both, in manufacture of hollow or cellular articles. (D20). **F 412, F17**

blowing iron—See **blowpipe**. **C 162, C14**

blow mold—the metal mold in which a blown glass article is finally shaped. **C 162, C14**

blow molding—a method of fabrication in which a heated parison is forced into the shape of a mold cavity by internal gas pressure. **D 883, D20**

blow molding—a method of fabrication in which a parison (hollow tube) is forced into the shape of the mold cavity by internal gas pressure. (D20) **F 412, F17**

blown glass—glassware shaped by air pressure, as by compressed air or by mouth blowing. **C 162, C14**

blow-off resistance—the degree to which a deposited layer of powder resists being blown off by a standard jet of air. **C 286, B08**

blowout—the displacement and lengthening of an arc to facilitate its extinction. The blowout effect can be achieved by a magnetic field, air blast, etc. **B 542, B02**

blowout—a sudden or violent uncontrolled escape of fluids or gas, or both, from a borehole. **D 653, D18**

blowout, *n*—the extinguishing of the arc caused by a magnetic field. **F 819, F18**

blow-over—the thin-walled bubble formed above a blow mold in hand-shop operation to facilitate bursting-off. **C 162, C14**

blowpipe—the pipe used by a glassmaker for gathering and blowing by mouth. **C 162, C14**

blowups, *n*—localized upward movement of the pavement surface at transverse joints or cracks, often accompanied with shattering of the concrete in that area. **E 867, E17**

blowups, *n*—localized upward movement of the pavement surface at

blowups, *n*

transverse joints or cracks, often accompanied with shattering of the concrete in that area. **E 1778, E17**

blue—usually in the phrase “in the blue,” applied to hides or skins that have been chrome-tanned but not dyed nor fat-liquored. **D 1517, D31**

blue—that temperature at which the intensity of 470 nm light reflected by the liquid crystal is maximum, symbolized as T^{470} . **E 344, E20**

blueberry—See **strawberry**. **D 1079, D08**

blued—heated to result in oxidized bluish surface of steel nail. **F 547, F16**

blue dip—a solution, once widely used, containing a mercury compound used to deposit mercury upon a metal by immersion, usually prior to silver plating. **B 374, B08**

blue enamel—(1) in dry-process porcelain enameling, an area of enamel coating so thin that it appears blue in color.

(2) In wet-process enameling, a cover coat applied too thin to hide the substrate. **C 286, B08**

bluing—the formation of a thin oxide film on steel, either by heating in air, or by immersion in oxidizing solutions. **B 374, B08**

bluestone—a dense, hard, fine-grained, commonly feldspathic sandstone of medium to dark greenish-gray or bluish-gray color that may split readily along original bedding planes to form thin slabs (flagstone). The term bluestone is applied principally to stone with the above characteristics quarried in the eastern United States. **C 119, C18**

bluing, *n*—subjecting the scale-free surface of a steel object to the action of air, steam, or other agents at a suitable temperature, thereby forming a thin blue film of oxide and improving the object's appearance and corrosion resistance. **A 941, A01**

blunging—the wet process of blending, or suspending ceramic material in liquid by agitation. **C 242, C21**

blunt chisel point, short chisel point—chisel point with large included angle. **F 547, F16**

blunt diamond point, short diamond point—diamond point with large included angle. **F 547, F16**

blunted-point—point end of nail purposely dulled by nail user prior to driving of nail. (See **dullpoint**.) **F 547, F16**

blunting line—*in fracturetesting*, a line that approximates apparent crack advance due to crack-tip blunting in the absence of slow stable crack tearing. The line is defined based on the assumption that the crack advance is equal to one half of the crack-tip opening displacement. This estimate of pseudo-crack advance, Δa_B , is based on the effective yield strength of the material tested.

$$\Delta a_B = J/2 \sigma_Y$$

E 1823, E08

blunt point, short point—point with large included angle; designed to punch and not to split. (See **dull point**.) **F 547, F16**

blush—a premature coloration of a CFB sheet caused by component migration from the CB to the CF within the sheet. **F 549, F05**

blushing—dulling or mottling of the finish of the leather resulting from condensed moisture during the drying of the finish. Also referred to as lacquer bloom. **D 1517, D31**

boarded leather—leather on which a false or accentuated grain has been produced by folding the grain side and working the leather back and forth. Hand boarding is done with a curved cork board attached to the worker's arm and rolled over the folded skin. **D 1517, D31**

board foot—a unit of measurement represented by a board 1 ft long, 1 ft wide, and 1 in. thick. Abbreviation ft. b.m.; bd. ft., fmb. In finished or surfaced lumber, the board-foot measure is based on the nominal size. In practice, the working unit is 1000 board feet. Abbreviation M bd. ft.; M B.M.; M B.F. **D 9, D07**

board insulation, *n*—semirigid insulation preformed into rectangular units having a degree of suppleness particularly related to their geometrical dimensions. **C 168, C16**

board measure—a unit of measurement of the volume in board feet of logs or lumber. Abbreviation B.M. **D 9, D07**

boards—See **lumber**.

D 9, D07

boardy—adjective applied to stiff, inflexible leather. **D 1517, D31**

boat nail—light-duty or heavy-duty, bright or galvanized, regular-stock-steel, 1½ by ¾ to 4 by ¾-in., round-wire nails with oval, countersunk, 1⅓ to ¾-in. head and medium chisel point. Also, bright, annularly or helically threaded, nonferrous or stainless-steel, 1 by 0.062 to 3 by 0.165-in., round-wire nails with flat or oval, slightly countersunk, ⅛ to ⅜-in. head and medium diamond point. Also, galvanized, regular-stock-steel, 2 to 2½-in. square, cut nails with oval head. **F 547, F16**

bobbin coil—see **ID coil**. **E 1316, E07**

BOD (biochemical oxygen demand)—the amount of dissolved oxygen utilized by natural agencies in water in stabilizing organic matter at specified test conditions. **D 6161, D19**

body—the attribute of molten glass, associated with viscosity and homogeneity, which is conducive to workability. **C 162, C14**

body—the structural portion of a ceramic article, or the material or mixture from which it is made. **C 242, C21**

body—See **pipe body**. **C 896, C04**

body, *n*—the structural portion of a ceramic article, or the material or mixture from which it is made. (C21, C 242) **C 1145, C28**

body—See **container**. **D 996, D10**

body, *n*—tire structure not including the tread portion of the tire. (See also **casing** and **carcass**.) **D 5681, D34**

body, *n*—central portion of the needle intended to be grasped by the needle holder. **F 1840, F04**

body-centered—having an atom (or group of atoms) separated by a translation of ½, ½, ½ from a similar atom (or group of atoms). The number of atoms in a body-centered cell must be a multiple of two. **E 7, E04**

body color, *n*—color produced by absorption and scattering of light by colorants within a colored material. **E 284, E12**

body dimension, *n*—*in garment construction*, a body measurement which can be used to build a sizing system or to select an appropriately sized garment. (See also **sizing system**.) **D 123, D13**

body dimension, *n*—a body measurement that can be used to build a sizing system or to select an appropriately sized garment. **D 5219, D13**

body dimension, *n*—*in garment construction*, a body measurement which can be used to build a sizing system or to select an appropriately sized garment. **F 1494, F23**

body feed—the continuous addition of filter medium (for example, diatomaceous earth) to sustain the efficacy of the filter. **D 6161, D19**

body fluid simulant, *n*—a liquid which is used to act as a model for human body liquids. **F 1494, F23**

body (food), *n*—the quality of a food or beverage relating either to its consistency, compactness of texture, fullness, flavor, or combination thereof. **E 253, E18**

body force—a force such as gravity whose effect is distributed throughout a material body by direct action on each elementary part of the body independent of the others. (ISRM) **D 653, D18**

body, housing, or accumulator, *n*—the primary chamber for creating the positive and negative pressure during the pumping action. **D 6655, D10**

body measurement, *n*—*in anthropometry*, a standardized distance between two specified points on the human anatomy. **F 1494, F23**

body measurements, *n*—*in anthropometry*, a standardized distance between two specified points on the human anatomy. **D 123, D13**

body measurements, *n*—a standardized distance between two specified points on the human anatomy. **D 5219, D13**

body temperature, *n*—temperature measured from the interior of a human body cavity, such as pulmonary artery, distal esophagus, urinary bladder, ear canal, oral, or rectal. **E 344, E20**

body weight, *n*—*in body measurements*, mass in kilograms (pounds). **D 123, D13**

body weight, *n*—the weight as measured on a calibrated scale taken with the subject in undergarments. **D 5219, D13**

bog—a peat covered area with a high water table and a surface dominated by a carpet of mosses, chiefly sphagnum. It is generally nutrient poor and acidic. It may be treed or treeless. **D 653, D18**

boghead coal—See *boghead coal* under **coal**. **D 121, D05**

Bohr magneton—a constant that is equal to the magnetic moment of an electron because of its spin. The value of the constant is $(9\ 274\ 078 \times 10^{-21} \text{ erg/gauss or } 9\ 274\ 078 \times 10^{-24} \text{ J/T})$.

A 340, A06

bolt—(1) {archaic} an imperfection; a gaseous inclusion larger in size than a seed.

(2) turbulence caused by gases escaping from the melting batch. **C 162, C14**

boiler—self-contained electric, gas, or steam coil-powered vessel wherein water is boiled to produce steam for the steam cooker. **F 1827, F26**

boiler slag, n—a molten ash collected at the base of slag tap and cyclone boilers that is quenched with water and shatters into black, angular particles having a smooth, glassy appearance. **E 2201, E50**

boiling—a defect visible in the fired porcelain enamel caused by gas evolution which results in the formation of blisters, pinholes, black specks, dimples, or spongy surface. **C 286, B08**

boiling point, n—the temperature at which the vapor pressure of an engine coolant reaches atmospheric pressure under equilibrium boiling conditions. **D 4725, D15**

boiling pressure—at a specified temperature, the pressure at which a liquid and its vapor are in equilibrium. **E 7, E04**

boiling pressure—at a specific temperature, the value of the vapor pressure of the liquid at which it is equal to the external pressure. **E 1142, E37**

boiling temperature—at a specified pressure, the temperature at which a liquid and its vapor are in equilibrium. **E 7, E04**

boiling temperature—at a specific pressure, the temperature at which the vapor pressure of the liquid is equal to the external pressure. **E 1142, E37**

boilup rate, n—in *column distillation*, the quantity of vapor entering the column per unit of time. **D 4175, D02**

boilup rate, n—the quantity of vapor entering the column per unit of time. **D 4175, D02**

bole—the stem or trunk of a tree of size sufficient to yield lumber, veneer, or poles. **D 9, D07**

bolometer—instrument for measuring irradiance. Its principle is based on the variation of electrical resistance, with the incoming radiation, as a result of temperature change, of one or both of the resistance elements which comprise the instrument. **E 772, E44**

bolster, n—pillow or similarly shaped unit containing upholstery material covered by upholstery cover material that may or may not be attached to the upholstered furniture item but is sold and delivered with it. **E 176, E05**

bolt—(1) a short section of a tree trunk or limb;

(2) a short log of a length suitable for peeling in a lathe for veneer; and

(3) a short portion of a log prepared for production of shingles, staves, etc. **D 9, D07**

bolt—the component or part of a combination lock that locks or blocks another mechanism from operating until it is retracted. **F 471, F12**

bolt, n—an anchor component that connects to the bony elements of the spine, pelvis, or ribs by means of threads with the lead threads accommodating a nut thus sandwiching the bony element or implant component between the nut or washer and bolt head or other fixed stop. **F 1582, F04**

bolt—headed and externally threaded fastener designed to be assembled with a nut. **F 1789, F16**

bolt hanger, n—a device which, when attached to a surface by the means of a bolt, is used to provide an anchor point. **F 1773, F08**

bolt-hole brush—a special round brush used to remove porcelain enamel bisque from in and around small openings in the ware. **C 286, B08**

bolt interconnection, n—an interconnection having an implant component sandwiched between two nuts or between a nut and fixed stop. **F 1582, F04**

bolt load-elongation behavior—when tensile loaded, a bolt will elongate elastically until stressed beyond its proportional limit where it will behave plastically. **F 1789, F16**

bolt (veneer)—a short log cut to length suitable for peeling in a lathe; also block. **D 1038, D07**

bomb test—see **pressure-evacuation test**. **E 1316, E07**

bond—see **adherence**. **C 286, B08**

bond, n—the attachment between an adhesive and an adherend.

edge joint, n—in *wood bonding*, a type of laminate joint made by bonding adherends edge-to-edge with grain directions parallel to form wider stock.

face joint, n—in *wood bonding*, a type of laminate joint made by bonding adherends face-to-face with grain directions parallel to form thicker stock.

laminate joint, n—in *wood bonding*, a joint made by bonding layers of adherends face-to-face or edge-to-edge to form thicker or wider stock. **D 907, D14**

bond, v—to join adherends by means of an adhesive. **D 907, D14**

bond, n—the attachment at an interface between an adhesive and an adherend. **D 1038, D07**

bond, v—to attach materials together by means of an adhesive. **D 1038, D07**

bond—the adhesive and cohesive forces holding two roofing components in intimate contact. **D 1079, D08**

bond, v—to connect two parts of a system electrically by means of a conductive wire to eliminate voltage differences. **D 4175, D02**

bond area, n—in *describing a bonded test specimen*, the cemented area between elastomer and high-modulus attachment member. **D 1566, D11**

bond breaker—in *building construction*, a material to prevent adhesion at a designated interface. **C 717, C24**

bond breaker, n—a material installed in pavement cracks or joints that is intended to prevent adherence of the sealant to the bottom of the crack or joint. **D 5535, D04**

bonded, adj—in *describing a test specimen*, one in which the elastomer to be tested is permanently cemented to members of much higher modulus for two purposes: (1) to provide convenient rigid attachment to the test machine, and (2) to define known areas for the application of forces to the elastomer. **D 1566, D11**

bonded abrasive disk—a rigid support surface with an abrasive, typically diamond, bonded to the surface by a ceramic, resin, or metal based material. **E 7, E04**

bonded fabric, n—a layered fabric structure wherein a face or shell fabric is joined to a backing fabric, such as tricot, with an adhesive that does not significantly add to the thickness of the combined fabrics. (See also **laminated fabric, coated fabric**.) **D 123, D13**

bonded glycerin, n—is the glycerin portion of the mono-, di-, and triglyceride molecules. **D 4175, D02**

bond enhancer, n—admixture incorporated into a masonry mortar to increase the bond strength between the mortar and the masonry unit. **C 1180, C12**

bonderized—phosphate coated. (See **parkerized**.) **F 547, F16**

bond failure—failure mode characterized by loss of bond either between the anchor and adhesive or between the adhesive and the base material. **E 2265, E06**

bond fireclay, n—see **fireclay, plastic or bond**. **C 71, C08**

bonding—touching the sampling equipment to the drum to form an electrically conductive path to minimize potential electrical differences between the sampling equipment and the drum, reducing the buildup of static electricity. **D 5681, D34**

bondline, n—the layer of adhesive which attaches two adherends. (See **interphase**.) **D 907, D14**

bond paper, n

bond paper, n—one of many grades of paper covering a wide range of quality, from grades requiring superior permanence, strength and durability to applications where permanence and durability are less important, but in all cases requiring good printing properties, color fidelity, erasability, and cleanliness. **D 1968, D06**

bond plaster, n—a calcined gypsum plaster specially formulated for application over rough monolithic concrete as a bonding coat for a subsequent gypsum plaster layer. **C 11, C11**

bond strength, n—of *bonded, fused, or laminated fabrics*, the tensile force expressed in ounces per 25 mm (1 in.) of width, required to separate the component layers under specified conditions. **D 123, D13**

bond strength—in *grouting*, resistance to separation of set grout from other materials with which it is in contact; a collective expression for all forces such as adhesion, friction, and longitudinal shear. **D 653, D18**

bond strength, n—the unit load applied to tension, compression, flexure, peel, impact, cleavage, or shear, required to break an adhesive assembly with failure occurring in or near the plane of the bond. (See also **adhesion** and **bond**.)

dry strength, n—the strength of an adhesive joint determined immediately after drying under specified conditions or after a period of conditioning in a standard laboratory atmosphere.

wet strength, n—the strength of an adhesive joint determined immediately after removal from a liquid in which it has been immersed under specified conditions of time, temperature, and pressure. **D 907, D14**

bond strength, n—a measure of the force required to separate surfaces which have been bonded together. **D 1711, D09**

bone ash—calcined bone consisting essentially of calcium phosphate. **C 242, C21**

bone china—a translucent china made from a ceramic whiteware body composition containing a minimum of 25 % bone ash. **C 242, C21**

bone coal—See *bone coal* under **coal**. **D 121, D05**

bone-dry—see **oven-dry**. **D 1695, D01**

bonnet, n—in *cleaningpile floor coverings*, an absorbent pad which can be mounted under a rotary shampoo machine. **D 123, D13**

bonnet, n—in *cleaningpile floor coverings*, an absorbent pad which can be mounted under a rotary shampoo machine. **D 5253, D13**

BOO—build, own, operate. **D 6161, D19**

bookbinder's wire—wire used in stitchers to fasten paper; measured according to AWG sizes. **F 592, F16**

book bulk, n—the overall thickness of a given number of sheets. See **thickness**. **D 1968, D06**

book fold, n—a fabric doubled selvage to selvage, then folded back and forth upon itself in predetermined lengths. (See also **shoe fold**.) **D 123, D13**

book fold, n—a fabric doubled selvage to selvage, then folded back and forth upon itself in predetermined lengths. (See also **shoe fold**.) **D 4850, D13**

book paper, n—a general term for a group of uncoated or coated papers (exclusive of newsprint) suitable for the graphic arts. **D 1968, D06**

boom—floating mechanical barrier used to control the movement of substances that float. **F 818, F20**

boom planing—heeling over of a boom and loss of draft. **F 818, F20**

boom section—length of boom between two end connectors. **F 818, F20**

boom segment—repetitive identical portion of the boom section. **F 818, F20**

boom sprayer—a sprayer apparatus consisting of a pressure source and controls, and employing a boom (vertical or horizontal) with atomizers (hydraulic, rotary, or other) arranged to provide uniform coverage of the treated surfaces. **E 1102, E35**

boom submergence (aka submarining)—containment failure due to loss of freeboard. **F 818, F20**

boom weight—dry weight of a fully assembled boom section including end connectors. **F 818, F20**

booster, n—synonym for **secondary accelerator**, which is the preferred term. **D 1566, D11**

booster heater—the water heater responsible for heating and maintaining the final sanitizing rinse water (to a minimum of 180°F) to dishwasher, may be separate from dishwasher or integral. **F 1827, F26**

booster heater inlet temperature—the temperature of water being supplied to the booster heater (see **dishwashing machine, commercial: booster heater**) measured at the booster heater inlet. **F 1827, F26**

boost melting—See **electric boosting**. **C 162, C14**

boot—a suspended enclosure in the nose of a melter protecting a portion of the surface and serving as a gathering opening. **C 162, C14**

BOOT—build, own, operate and transfer. **D 6161, D19**

borax glass—vitreous anhydrous sodium tetraborate ($\text{Na}_2\text{B}_4\text{O}_7$). **C 162, C14**

borderline pumping temperature, n—the lowest temperature at which the critical yield stress or critical viscosity that allows a fluid to be pumped occurs. **D 4175, D02**

bore—the hole or lumen in the stem. **E 344, E20**

borehole, n—the circular hole through soil and rock strata made by boring. **D 121, D05**

borehole—a hole of circular cross-section made in soil or rock. **D 653, D18**

borehole log—the record of geologic units penetrated, drilling progress, depth, water level, sample recovery, volumes and types of materials used, and other significant facts regarding the drilling of an exploratory borehole or well. **D 653, D18**

borehole television log—a borehole or well video record produced by lowering a television camera into the borehole or well. This record is useful in visually observing downhole conditions such as collapsed casing or a blocked screen. **D 653, D18**

borer holes—voids made by wood-boring insects. **D 1038, D07**

borescope—A flexible or rigid tube-like instrument used for a remote direct viewing visual aid. The instrument may consist of mirrors, prisms, lenses, optic-fibers, or a miniature CCD camera to transmit images to the viewing or recording medium. **E 1316, E07**

borosilicate glass—a silicate glass with B_2O_3 content above 4 weight percent, characterized by a moderate to low thermal expansion, long in viscosity versus temperature, and low in density. **C 162, C14**

borrow, n—an area designated as a source for soil in construction or mine reclamation projects; a source or sources of material other than the required excavation. **E 2201, E50**

bottle—See **container**. **D 996, D10**

bottom—See **box**. **D 996, D10**

bottom ash, n—agglomerated ash particles formed in pulverized coal boilers that are too large to be carried in the flue gases and impinge on the boiler walls or fall through open grates to an ash hopper at the bottom of the boiler. Bottom ash is typically grey to black in color, is quite angular, and has a porous surface structure. **E 2201, E50**

bottom assembly, n—the components of the lowermost part of a slide fastener which determine whether the slide fastener will be non-separable or separable. (See also **non-separable zipper** and **separable zipper**.) **D 123, D13**

bottom assembly, n—the components of the lowermost part of a slide fastener which determine whether the slide fastener will be non-separable or separable. (See also **non-separable zipper** and **separable zipper**.) **D 2050, D13**

bottom charge—concentrated explosive charge at the bottom of a blast hole. (ISRM) **D 653, D18**

bottom echo—see **back reflection**. **E 1316, E07**

bottom out, v—to deform a tire by radial load on the tread until radial movement of the inside surface is stopped by the rim or other tire inside surface. **F 538, F09**

bottom protective plate—a safety device installed on a Type II, Class 1, cantilever slide gate with external rollers to isolate the lower roller mechanism to reduce the possibility of contact with the roller mechanism by a person. See Specification F 1184. **F 552, F14**

bottom rail—See **railing systems**. **E 631, E06**

bottom rail—the lowest member of a railing system, supporting pickets or panels, if any. **E 631, E06**

bottom rail—the lowest member of a railing system, supporting balusters or panels, if any. **E 1481, E06**

bottom rail—horizontal member of the framework running continuously along the bottom edge of the fence. **F 552, F14**

bottoms—the underface of the shoe sole which extends from the toe to the heel breast. The heel is not a part of the bottom. **F 869, F08**

bottom scissor half—the component which contains the threaded end of the screw. **F 1078, F04**

bottomset bed—fine-grained material (usually silts and clays) slowly deposited on the bed of a quiescent body of water which may in time be buried by foreset beds and topset beds. **D 4410, D19**

bottomsize, nominal—for the purpose of Test Method D 4749, the sieve designating the lower limit or bottomsize shall be that sieve of the series given in the Standard Series of Sieves section with the largest openings through which passes a total of less than 15 % of the sample. This defined bottomsize is not to be confused with the size of the smallest particles in the lot. **D 121, D05**

bottom stop, n—a part affixed to both stringers immediately below, or over, the chain, holding the two stringers together at the bottom and preventing the slider from leaving the chain. **D 123, D13**

bottom stop, n—a part affixed to both stringers immediately below, or over the chain, holding the two stringers together at the bottom and preventing the slider from leaving the chain. **D 2050, D13**

bottom temperature of snow cover—temperature measured at the base of the snow cover during mid- to late-winter (February/March). The measurements are used in the BTS method to predict the presence or absence of permafrost. **D 7099, D18**

bottom-tension boom—boom with tension member located along the bottom of the skirt. **F 818, F20**

bottom time, n—the total elapsed time measured in minutes from the time that the diver leaves the surface in descent to the time that the diver begins ascent. **F 1549, F32**

bottom trip—tool activation by tool nose touching the work, while at the same time activating trigger trip. **F 592, F16**

Bouguer's law—the absorbance of a homogeneous sample is directly proportional to the thickness of the sample in the optical path. **E 131, E13**

Bouguer's law, n—the absorbance of a homogeneous sample is directly proportional to the thickness of the sample in the optical path. (Also known as **Lambert's[thickness] law**.) **E 284, E12**

boulder clay—a geological term used to designate glacial drift that has not been subjected to the sorting action of water and therefore contains particles from boulders to clay sizes. **D 653, D18**

bouldering, n—a technique of climbing where climbers remain close to the ground and do not use a rope to safeguard their progress. **F 1773, F08**

boulders—a rock fragment, usually rounded by weathering or abrasion, with an average dimension of 12 in. (305 mm) or more. **D 653, D18**

boulder size (fluvial sediment)—larger than 256 mm in diameter. **D 4410, D19**

boulevard clamp—a two piece clamp with carriage bolts and nuts designed for 180° horizontal rail connections to a line post (also called **line rail clamp**). **F 552, F14**

boundary friction, n—friction at low sliding speeds (0.02 m/min or less) where lubrication occurs under thin-film lubricant conditions. **D 123, D13**

boundary friction, n—friction at low sliding speeds (0.02 m/min or less) where lubrication occurs under thin-film lubricant conditions. **D 4849, D13**

boundary grain—in the Jeffries' method for grain size measurement,

a grain that is intersected by the boundary of the standard area and is, therefore, counted only as one-half grain. (See also **Jeffries' Method**.) **E 7, E04**

boundary layer—a thin layer at the membrane surface where water velocities are significantly less than those in the bulk flow. **D 6161, D19**

bound monomer, n—monomer that is combined or reacted with itself or other types of monomers in a polymerization reaction to form a polymer. **D 1566, D11**

bound seam-finish, n—a finish for the raw edges of a plain seam, in which another fabric encloses the raw edges of one or more seam allowances. (Compare **Hong Kong seam-finish**.) **D 123, D13**

bound seam-finish, n—in home sewing, a seam finish in which another material is used to enclose the cut edges of one or more seam allowances. (Compare **Hong Kong seam finish**.) **D 4965, D13**

bow—the distortion of a piece of lumber in which there is a deviation in a direction perpendicular to the flat face from a straight line from end to end of the piece. **D 9, D07**

bow, n—a fabric condition resulting when filling yarns or knitted courses are displaced from a line perpendicular to the selvages and form one or more arcs across the width of the fabric. (See also **double bow**.) **D 123, D13**

bow—a condition of longitudinal curvature in pultruded parts. **D 3918, D20**

bow, n—a fabric condition resulting when filling yarns or knitting courses are displaced from a line perpendicular to the selvages and form one or more arcs across the width of fabric. (See also **double bow**) **D 3990, D13**

bow, n—a fabric condition resulting when filling yarns or knitted courses are displaced from a line perpendicular to the selvages and form one or more arcs across the width of the fabric. (See also **double bow**.) **D 4850, D13**

bow—the maximum deviation between an actual instrument reading and the reading predicted by a straight line drawn between upper and lower calibration points, expressed as a percent of full scale. **E 2161, E37**

bow, double—See **double bow**. **D 3990, D13**

bowl—See **spout**. **C 162, C14**

bowl guard—the barrier, assembled over the bowl area, intended to reduce the user's access to the hazards that exist in the bowl during machine operation. **F 1827, F26**

box, n—a rigid **container** having closed faces and completely enclosing the contents. When this term is used in connection with fiberboard boxes, such fiber boxes must comply with all the requirements of the carrier rules. (See **carton**.)

bottom, n—the **face** of a **box** on which it usually rests while filling.

box batten, n—a reinforcing member, (1) for a **wood box** internally or externally applied to the sides, top and bottoms. When applied externally it should be applied in pairs; (2) in a **wirebound box**, a batten is a reinforcement used on the ends of the container only.

cleated fiberboard box—a rigid **container** having five or six **panel faces** with wood strips fastened to them, the panels being made of **solid** or **corrugated fiberboard**.

cleated plywood box—a rigid **container** having five or six **panel faces** with wood strips fastened to them, the panels being made of plywood.

flange, n—in **fiberboard boxes**, an extension to a panel similar to a short flap that may be folded in or out, usually at angles of 90 or 180° to the panel.

nailed wood box—a rigid **container** constructed of wood in several standard styles, assembled by fastening sides, top and bottom to the ends with nails or other suitable fasteners.

skid box—a metal, wooden, or fiber **box** fastened to a platform raised on skid members or legs; it may or may not be collapsible. (See also **skid**.)

box, n

wirebound box—a rigid **container** whose sides, top, and bottom are of rotary-cut lumber, sliced lumber, **resawn lumber**, **fiberboard**, or combinations thereof, usually $\frac{3}{8}$ in. (9.5 mm) or less in thickness, fastened to **cleats** and to each other by means of binding wires and staples; and ends of similar material, plain or stapled to **battens** or **liners**, fastened in place by means of nails or staples or wires stapled thereto.

D 996, D10

box annealing, n—**annealing** in a sealed container under conditions that minimize oxidation.

A 941, A01

boxboard—See **paperboard**.

D 996, D10

box calf or sides—sides or skins finished by folding with the grain side in and rubbing the flesh side with a cork-surfaced instrument known as a hand board. Machinery is now also used. The effect is sometimes imitated by embossing. Also called “box” or “willow” finish.

D 1517, D31

boxcar truncation—identical effective weighting of all points in the measured interferogram prior to the Fourier transform; all points outside of the range of the measured interferogram take a value of zero.

E 131, E13

boxed heart—the term used when the pith falls entirely within the four faces of a piece of wood throughout its length.

D 9, D07

boxed pith—See **boxed heart**.

D 9, D07

box furnace—a furnace in which, periodically, a load of ware is introduced; fired, and removed.

C 286, B08

box lock—the junction where the female member and the male member are secured forming the pivoting feature.

F 921, F04

box mark—See **shuttle mark**.

D 3990, D13

box nail—bright, coated or galvanized, regular-stock-steel, 1 by 0.058 to 5 by 0.162-in. nails, made of lighter-gage wire than common nails and sinkers, with flat $\frac{1}{4}$ to $\frac{3}{32}$ -in. head and medium diamond point.

F 547, F16

box section—a concrete pipe with a rectangular cross section.

C 822, C13

box section bottom slab—lower horizontal portion of a box section in the installed condition.

C 822, C13

box section top slab—upper horizontal portion of a box section in the installed condition.

C 822, C13

box section wall—vertical sides of a box section in the installed condition.

C 822, C13

box stay wire—wire used in stitchers for assembly of containers; with dimensions measured in thousandths of inches.

F 592, F16

BP—an abbreviation for base paper, referring to an uncoated paper that is coated to form a carbonless product. Also known as base stock or rawstock.

F 549, F05

brace band—a symmetrically formed strip of metal shaped to fit around a post and used with a carriage bolt and nut to attach the rail end or brace rail end truss rod tightener to the post. Also used for attaching barbed wire, tension wire, and other items to a terminal post.

F 552, F14

brace rail—a compression member at terminal posts or corner posts.

F 552, F14

brace rail end—a cup-shaped fitting similar to a rail end with provision for attaching a truss rod.

F 552, F14

bracing—See **loading**.

D 996, D10

bracket, n—projecting element or hardware attached to the surface of a member to support other members.

E 631, E06

brackish water, n—water that contains dissolved matter at an approximate concentration range from 1000 to 30 000 mg/L.

D 1129, D19

brackish water—water with an approximate concentration of total dissolved solids ranging from 500 to 10 000 mg/L. See **high brackish water**, **potable water**, **sea water**.

D 6161, D19

brad—small nail with small head.

brad, common wire—slender, regular-stock-steel, $\frac{3}{8}$ by 0.035 to 6 by 0.262-in. wire nails with brad 0.050 to 0.331-in. head and medium diamond point.

brad, cut—slender, usually small, regular-stock-steel nails of

same thickness throughout, but tapering in width; with slight projection on one side serving as head. Also, tapering, square-bodied, finishing nail with countersunk head.

F 547, F16

brad-clinched point—pointed end of nail, having been driven through member, flattened and bent sideways to a limited extent when striking flat anvil plate.

F 547, F16

brad head—small-diameter, deep, circular, barrel-shaped head with flat or concavely cupped top surface, as found on finishing nails and common brads for countersinking where concealment is important.

F 547, F16

Bragg angle—the angle between the incident beam and the lattice planes considered.

E 7, E04

Bragg equation—

$$n\lambda = 2d \sin \theta$$

where:

n = order of reflection,

λ = wavelength of X-rays,

d = distance between lattice planes, and

θ = Bragg angle.

E 7, E04

Bragg method—a method of X-ray diffraction in which a single crystal is mounted on a spectrometer with a crystal face parallel to the axis of the instrument.

E 7, E04

Bragg's rule—an empirical rule formulated by W. H. Bragg and R. Kleeman that states that the stopping cross section of a compound specimen is equal to the sum of the products of the elemental stopping cross sections for each constituent and its atomic fraction, that is,

$$\epsilon(A_x B_y) = x\epsilon_A + y\epsilon_B$$

where:

$\epsilon(A_x B_y)$ = the stopping cross section of the compound, and

$A_x B_y$, and ϵ_A and ϵ_B = the stopping cross section of elements A and B respectively.

E 673, E42

braid, n—a narrow tubular or flat fabric produced by intertwining a single set of yarns according to a definite pattern (Maypole process).

D 123, D13

braid, n—(1) woven metallic wire used as a shield for insulated conductors and cables.

(2) A woven fibrous protective outer covering over an insulated conductor or cable.

D 1711, D09

braid, n—a narrow tubular or flat fabric produced by intertwining a single set of yarns according to a definite pattern (Maypole process).

D 7018, D13

braided fabric, n—a structure produced by interlacing three or more ends of yarns in a manner such that the paths of the yarns are diagonal to the vertical axis of the fabric.

D 123, D13

braided fabric—see *braided fabric* under **fabric**.

D 3878, D30

braided fabric, n—a structure produced by interlacing three or more ends of yarns in a manner such that the paths of the yarns are diagonal to the vertical axis of the fabric.

D 4850, D13

braided river—a wide- and shallow-river where the flow passes through a number of small interlaced channels separated by bars or shoals.

D 4410, D19

braided rope, n—a cylindrically produced rope made by intertwining, maypole fashion, several to many strands according to a definite pattern with adjacent strands normally containing yarns of the opposite twist.

D 123, D13

braising pan—equipment suitable for the preparation of foods by several methods, such as frying, braising, boiling and simmering.

F 1827, F26

brake bar rack, *n*—a variable friction device consisting of a u-shaped metal bar to which are attached several metal bars that create friction on the rope. Also known as a rappel rack.

F 1490, F32

braking coefficient [*nd*], *n*—the ratio of the braking force to the normal force on a tire.

F 538, F09

braking force coefficient, *n*—of a tire, the ratio of braking force to normal force.

F 538, F09

braking force coefficient, peak, *n*—of a tire, the maximum value of tire braking force coefficient that occurs prior to wheel lockup as the braking torque is progressively increased.

F 538, F09

braking force coefficient, slide, *n*—of a tire, the value of braking force coefficient obtained on a locked wheel.

F 538, F09

braking force coefficient, tire—the ratio of braking force to vertical load.

E 867, E17

braking force coefficient, tire, peak—the maximum value of tire braking force coefficient that occurs prior to wheel lockup as the braking torque is progressively increased.

E 867, E17

braking force coefficient, tire, slide—the value of the braking force coefficient obtained on a locked wheel.

E 867, E17

braking force [*F*], *n*—of a tire, the negative longitudinal force resulting from braking torque application.

F 538, F09

braking force, tire—the negative longitudinal force resulting from braking torque application.

E 867, E17

braking torque—the negatively directed wheel torque. (See **torque (T), wheel**).

E 867, E17

braking torque [ML^2/T^2], *n*—of a vehicle, the negative wheel torque.

F 538, F09

branched polyethylene plastics, *n*—those containing significant amounts of both short-chain and long-chain branching and having densities in the 0.910 to 0.940 g/cm³ range.

D 883, D20

brand, *n*—of a tire, the name under which one or more tire lines are marketed.

F 538, F09

brand, tire, private, *n*—a brand name used by a tire seller or group of sellers who are not manufacturers.

F 538, F09

brashness—a condition that causes some pieces of wood to be relatively low in shock resistance for the species and, when broken in bending, to fail abruptly without splintering at comparatively small deflections.

D 9, D07

Braun's law—the ratio of the solubility change with pressure, temperature being constant, $(\delta X/\delta P)T$, to the solubility change with temperature, pressure being constant, $(\delta X/\delta T)P$, is equal to the negative of the product of the absolute temperature, T , and the (fictitious) volume change (Δv) which accompanies the solution of 1 g-molecular weight of the solute in an infinitely large quantity of the saturated solution at T degrees, divided by the amount of heat, Q , developed in the process:

$$(\delta X/\delta P)T/(\delta X/\delta T)P = -T\Delta v/Q$$

E 7, E04

brazing—the joining of ends of two wires, rods, or groups of wires with a nonferrous filler metal at temperatures above 800°F [427°C].

B 354, B01

break—(1) *heavy leather*—the places, in the areas where the fore shank and hind shank join the body of the hide, where the texture of the leather changes quite sharply from the firm, close weave of the bend to a loose, open texture.

(2) *shoe upper leather*—the superficial wrinkling formed when the leather is bent, grain inward. Adjectives commonly used to describe this characteristic are "tight," "fine," "loose," "coarse," and "pipy," or "flanky."

D 1517, D31

break, *n*—a crack or tear extending into or through the reinforcing material.

F 538, F09

breakaway staple—staple with its crown designed to break off if

removal is attempted; used to discourage pilfering and shop-lifting.

F 592, F16

breakaway torque—torque necessary to start a fastener in motion after the axial load of the mating components has been reduced to zero.

F 1789, F16

breakdown, electrical—the electrical discharge or arc occurring between the electrodes and through the equipment being tested.

F 819, F18

breakdown potential—the least noble potential where pitting or crevice corrosion, or both, will initiate and propagate.

G 15, G01

breakdown voltage—see **dielectric breakdown voltage**.

breaker, *n*—in *atire*, one or more plies under the tread region of a tire that are additional to those which extend from bead to bead.

F 538, F09

breakeven analysis—a technique for determining that value of a variable which results in benefits (savings) just equal to costs.

E 631, E06

break even analysis, *n*—a technique for determining that value of a variable which results in benefits (savings) just equal to costs.

E 833, E06

break factor, *n*—in *yarn testing*, the comparative breaking load of a skein of yarn adjusted for the linear density of the yarn expressed in an indirect system.

D 123, D13

break-in, *n*—in *tribology*, an initial transition process occurring in newly established wearing contacts, often accompanied by transients in coefficient of friction or wear rate, or both, that are uncharacteristic of the given tribological system's long term behavior. (Synonym—*run-in, wear-in*.)

D 4175, D02

break-in, *n*—in *tribology*, an initial transition process occurring in newly established wearing contacts, often accompanied by transients in coefficient of friction or wear rate, or both, which are uncharacteristic of the given tribological system's long-term behavior.

D 4175, D02

break-in, n—See **run-in**.

G 40, G02

break in, v—See **run in**.

G 40, G02

breaking, *n*—the crushing of the structure of the stem; loosening the bond between the fiber bundles and shives and breaking the shives into short pieces to facilitate its removal.

D 123, D13

breaking, *v*—in *flaxstems*, the crushing of the structure of the stem; loosening the bond between the fiber bundles and shives and breaking the shives into short pieces to facilitate its removal.

D 6798, D13

breaking elongation—See **elongation break**.

D 4848, D13

breaking force, *n*—the maximum force applied to a material carried to rupture. (Compare **breakingpoint**. See **breaking strength**.)

D 123, D13

breaking force, *n*—the maximum force applied to a material carried to rupture. (Compare **breakingpoint, breaking strength, Syn. force-at-break**)

D 4848, D13

breaking force, *n*—the maximum force applied to a material carried to rupture.

D 6477, D13

breaking force[F], *n*—the force at which fracture occurs.

E 6, E28

breaking force, (*F*), *J*, *n*—the force at failure.

D 4439, D35

breaking length, *n*—of *pulp and paper*, a calculated value expressed as the length of a strip of paper, usually stated in metres, which would break of its own weight when suspended vertically; calculated from the tensile strength and the basis weight of the sheet.

D 1968, D06

breaking load, *n*—the maximum force applied to a specimen in a tensile test carried to rupture.

D 4439, D35

breaking load—deprecated term. Use the preferred term **breaking force**.

D 4848, D13

breaking point, *n*—on a *force-extension or force-elongation curve, or stress-strain curve*, the point corresponding with the breaking force or the breaking stress in a tensile test. (Compare **breaking force**.)

D 123, D13

breaking point, *n*—on a *force-elongation curve, or stress-strain*

breaking point, n

curve, the point corresponding with the breaking force or the breaking stress in a tensile test. (Compare **breaking force**.)

D 4848, D13

breaking strength, n—as related to wire, the maximum force developed prior to fracture during tension testing of wire and wire products.

A 902, A05

breaking strength—the maximum load that a conductor attains when tested in tension to rupture.

B 354, B01

breaking strength, n—the ability or capacity of a specific material to withstand the ultimate tensile load or force required for rupture. (See also **tensile strength**)

D 123, D13

breaking strength, n—strength expressed in terms of breaking force. (See also **breaking force** and **strength**. *Syn.*, strength at break)

D 4848, D13

breaking strength, n—a strength expressed in terms of breaking force.

D 6477, D13

breaking tenacity, n—the tenacity at the breaking force.

D 123, D13

breaking tenacity, n—the tenacity corresponding to the breaking load.

D 4845, D13

breaking tenacity, n—the tenacity at the breaking force. (See also **breaking force, tenacity**.)

D 4848, D13

breaking tenacity, n—the tenacity at the breaking force.

D 6477, D13

breaking toughness, n—the actual work per unit volume or per unit mass of material that is required to rupture the material.

D 123, D13

breaking toughness, n—toughness up to the breaking force of a material.

D 4848, D13

breaking toughness, T, (FL⁻), Jm⁻², n—for geotextiles, the actual work-to-break per unit surface area of material.

D 4439, D35

break-in [L], n—one or more periods of initial standardized tire operation during which tire is brought to the state which will lead to more consistent test results.

F 538, F09

break loose torque—torque applied in a removal direction necessary to start the fastener in motion from its fully preloaded installed position.

F 1789, F16

break-open—in testing thermal protective material, a response evidenced by the formation of a hole in the material which allows the molten substance to pass through the material.

F 1494, F23

break out—in dry process enameling, a defect characterized by an area of blisters with well defined boundaries.

C 286, B08

break-out—See **smash**.

D 3990, D13

breakout—fiber separation or break on surface plies at drilled, machined, etc., edges.

E 631, E06

breakout—fiber separation or break on surface plies at drilled, machined, etc., edges.

E 1749, E06

breakout pressure, n—for inflatable restraints, the pressure level during deployment which ruptures the module cover.

D 123, D13

breakout pressure, n—for inflatable restraints, the pressure level during deployment which ruptures the module cover.

D 6799, D13

breakpoint—the appearance in the effluent of a specified concentration of an adsorbate.

D 2652, D28

breakpoint chlorination—the point at which the water chlorine demand is satisfied and any further chlorine is the chlorine residual, the "free" chlorine species.

D 6161, D19

break tank—a storage device used for hydraulic isolation and surge protection.

D 6161, D19

breakthrough, n—the first appearance in the effluent of an adsorbate of interest under specified conditions.

D 2652, D28

breakthrough detection time, n—the elapsed time measured from the start of the test to the sampling time that immediately precedes the sampling time at which the test chemical is first detected.

F 1494, F23

breakup, n—liquid disintegration that occurs during atomization.

E 1620, E29

breakup length, n—the distance between the liquid discharge point of an atomizing device and the point where liquid breakup commences.

E 1620, E29

breakwater stone—(generally three tons to twenty tons in weight) stone resulting from blasting, cutting, or other means to obtain rock heavy enough to require handling individual pieces by mechanical means.

D 653, D18

breast, n—the forward or front face of a shoe heel.

F 1646, F13

breast wall—(1) the entire side wall of a melter between the flux block and the crown, but not including the ends.

(2) refractory wall between pillars of a pot furnace and in front of or surrounding the front of a pot.

C 162, C14

breather—a loosely woven cloth (such as glass fabric) which serves as a continuous vacuum path over a part but does not come in contact with the resin.

E 631, E06

breather—a loosely woven cloth (such as glass fabric) which serves as a continuous vacuum path over a part but does not come in contact with the resin.

E 1749, E06

breather finish—coating system allowing the passage of water vapor.

E 631, E06

breather string, n—a string, composed of a material such as glass, that provides a vacuum path from the laminate to a breather.

D 3878, D30

breathing zone, n—that location in the atmosphere at which persons breathe.

D 1356, D22

breezing—{archaic} buckwheat anthracite coal or coarse sand spread on the sieve before setting of pots.

C 162, C14

bremsstrahlung—XPS, photon radiation, continuously distributed in energy up to the energy of the incident electrons, emitted from an anode due to deceleration of incident electrons within the anode. The bremsstrahlung from a conventional X-ray source contributes to the background and the Auger signal strengths in an XPS spectrum.

E 673, E42

BRI, n—see **building related illness**.

E 2114, E06

brick, n—a solid or hollow masonry unit of clay or shale, usually formed into a rectangular prism while plastic and burned or fired in a kiln; brick is a ceramic product.

C 43, C15

brick-siding nail—galvanized, colored (baked-lacquer finished), plain-shank barbed or annularly threaded, regular-stock-steel, 7/8 by 0.092 to 2 1/2 by 0.099-in. nails with flat checkered 3/16 or 1/4-in. head and medium diamond point.

F 547, F16

bridge—the structure formed by the end walls of the adjacent melter and refiner compartments of a melting furnace and the covers spanning the gap between the end walls.

C 162, C14

bridge, n—in buttons, the area between the holes partially covered by the sewing threads with dimensions varying upon design and end use.

D 123, D13

bridge—an obstruction within the annulus which may prevent circulation or proper emplacement of annular materials.

D 653, D18

bridge, n—the area of a button between the holes partially covered by the sewing threads with dimensions varying upon design and end use.

D 5497, D13

bridge cover—See **bridge wall cover**.

C 162, C14

bridge sealant joint, n—in building construction, a joint where sealant is applied over the joint to the face of substrates that are in approximately the same plane.

C 717, C24

bridge top stop, n—in zippers, a part affixed immediately above the chain, holding the tops of the two stringers together and preventing the slider from leaving the chain.

D 123, D13

bridge top stop, n—a part affixed immediately above the chain, holding the tops of two stringers together and preventing the slider from leaving the chain.

D 2050, D13

bridgewall—that part of a melting furnace forming a bridge or separation between melter and refiner.

C 162, C14

bridge wall cover—refractory blocks spanning the space between the bridge walls.

C 162, C14

bridging, v—the formation of arched cavities in a powder mass.

B 243, B09

bridging, n—in framing, sections of wood or metal pieces used between framing members to stiffen, give lateral support, and minimize rotation.

C 11, C11

bridging—spanning a feature without full contact, such as tape or fabric spanning a radius, step, core edge, etc., or vacuum bagging material spanning tool or part surfaces. **E 631, E06**

bridging—spanning a feature without full contact, such as tape or fabric spanning a radius, step, core edge, etc., or vacuum bagging material spanning tool or part surfaces. **E 1749, E06**

bridging—enlargement of a graphic shape beyond the COL, which produces undesired character fill in. **F 149, F05**

bridging—combination of peaks and smudges that may close or partially close the loop of a character (F 149). **F 335, F05**

bridging, v—the clumping of toner which causes a hollow area in the toner supply that prevents the free flow of toner to the dispenser auger. **F 1457, F05**

bridging failure—portions of a boom emerging from the water due to poor wave conformance, with resulting containment failure. **F 818, F20**

bridle—device attached to a boom to distribute the load exerted by towing or anchoring the boom. **F 818, F20**

bridle leather—a harness-finished strap leather. **D 1517, D31**

brief (of a facility)—See **facility program**. **E 631, E06**

brief (of a facility)—See **facility program**. **E 1480, E06**

bright—term applied to nails with natural bare finish resulting from cleaning of nails which have not undergone treatments affecting finish, such as hardening, bluing, coating, plating, etching, painting, etc. Also applied to polished appearance after plating. **F 547, F16**

bright annealing, n—annealing in a protective medium to prevent discoloration of the bright surface. **A 941, A01**

bright annealing—see Terminology A 919. **C 286, B08**

bright dip (nonelectrolytic)—a solution used to produce a bright surface on a metal. **B 374, B08**

bright electroplating—a process that produces an electrodeposit having a high degree of specular reflectance in the as-plated condition. **B 374, B08**

bright electroplating range—the range of current densities within which an electroplating solution produces a bright deposit under a given set of operating conditions. **B 374, B08**

brightener—an addition agent that leads to the formation of a bright plate, or that improves the brightness of the deposit. **B 374, B08**

brightener—see **fluorescent whitening agents (FWA)**. **D 459, D12**

brightening agent—see **fluorescent whitening agents (FWA)**. **D 459, D12**

brightfield illumination—for *reflected light*, the illumination which causes specularly reflected surfaces normal to the axis of a microscope to appear bright. For *transmission electron microscopy*, the illumination of an object so that it appears on a bright background. **E 7, E04**

bright finish—non-coated wire finish. **F 547, F16**

bright glaze—See **bright glaze** under **glaze**. **C 242, C21**

brightness—as commonly used in the paper industry, the reflectivity of a sheet of pulp or paper for blue light measured under standardized conditions on a particular instrument designed and calibrated specifically for the purpose. **D 1695, D01**

brightness, n—in *paper and paperboard*, reflectance of an infinitely thick stack of material measured for blue light with centroid wavelength of 457 nm under specified spectral and geometric conditions. **D 1968, D06**

brightness, n—see **color (of an object)**. (For consensus technical definition see **brightness** in Terminology E 284). **E 253, E18**

brightness, n—(1) aspect of visual perception whereby an area appears to emit more or less light. [CIE]^B (F 923)^B

(2) *of an object color*, combination of lightness and saturation.

(3) *in the textile industry*, perceived as saturated, vivid, deep, or clean.

(4) *of paper*, reflectance of an infinitely thick specimen (reflectivity) measured for blue light with a centroid wavelength of 457 nm under specified spectral and geometric conditions of measurement.

(5) *dyer's*, the color quality, combining lightness and saturation, that would be decreased by adding black, gray, or a complementary color to a chromatic dye. **E 284, E12**

brightness—in *paper*, a characteristic of white paper measured in terms of reflectance in the blue and violet portions of the spectrum. **F 149, F05**

bright or mirror finish—highly reflective surface. **F 1840, F04**

bright plating—a process that produces an electrodeposit having a high degree of specular reflectance in the as-plated condition. **B 374, B08**

bright plating range—the range of current densities within which a given plating solution produces a bright plate. **B 374, B08**

bright-throwing power—the measure of the ability of a plating solution or a specified set of plating conditions to deposit uniformly bright electroplate upon an irregularly shaped cathode. **B 374, B08**

bright-wood—wood free of stain or any discoloration. **D 9, D07**

brine, n—water that contains dissolved matter at an approximate concentration of more than 30 000 mg/L. **D 1129, D19**

brine—the concentrate (reject) stream from a crossflow membrane device performing desalination. Portion of the feed stream which does not pass through the membrane. **D 6161, D19**

brine, n—in geothermal, fluids in a liquid phase that have been produced from geothermal wells or from hot springs and that contain appreciable amounts of sodium chloride and other salts. **E 957, E44**

brine (concentrate) seal—a rubber lip seal on the outside of a spiral wound cartridge which prevents feed by-pass between the cartridge and the inside pressure vessel wall. **D 6161, D19**

Brinell hardness number, HB, n—a number related to the applied force and to the surface area of the permanent impression made by a ball indenter computed from the equation:

$$HB = 2P/\beta D(D - \sqrt{D^2 - d^2})$$

where:

P = applied force, kgf,

D = diameter of ball, mm, and

d = mean diameter of the impression, mm.

E 6, E28

Brinell hardness test, n—an indentation hardness test using calibrated machines to force a hard ball, under specified conditions, into the surface of the material under test and to measure the diameter of the resulting impression after removal of the force. **E 6, E28**

brinelling, n—damage to a solid bearing surface characterized by one or more plastically formed indentations caused by static or impulsive overloads, especially as found in rolling contact bearings. (See also **false brinelling**.) **G 40, G02**

brine seal carrier—see **ATD**. **D 6161, D19**

brine system staging—a process in which the concentrate, under pressure, of a group of membrane devices is fed directly to another set of membrane devices to improve the efficiency of the water separation. **D 6161, D19**

brining—a process of curing hides by soaking with salt solution (sodium chloride). **D 1517, D31**

briquet, n—see **compact**. **B 243, B09**

briquette, n—a cylindrical block composed of granulated coal or coke particles compressed and embedded with an epoxy binder. **D 121, D05**

brittle—the inability of a material to deform plastically before fracturing. **F 2078, F07**

brittle erosion behavior, n—erosion behavior having characteristic properties that can be associated with brittle fracture of the

brittle erosion behavior, *n*

exposed surface; that is, little or no plastic flow occurs, but cracks form that eventually intersect to create erosion fragments. (See also **ductile erosion behavior**.) **G 40, G02**

brittle failure—a pipe failure mode which exhibits no visible (to the naked eye) material deformation (stretching, elongation, or necking down) in the area of the break. **F 412, F17**

brittle fracture, *n*—fracture that occurs without appreciable plastic deformation of the material. **A 644, A04**

brittle fracture area, *n*—The fraction or percent of the fracture surface that formed by brittle fracture. (When observed with no or low magnification, brittle fracture appears whiter and shinier than ductile fracture.) **A 644, A04**

brittleness—the tendency of a material to break at a very low strain, elongation, or deflection, and to exhibit a clean fracture surface with no indications of plastic deformation. **E 631, E06**

brittleness—the tendency of a material to break at a very low strain, elongation, or deflection, and to exhibit a clean fracture surface with no indications of plastic deformation. **E 1749, E06**

broadcast application—the distribution of a material uniformly over the entire area to be treated and not just to portions of the area. **E 609, E35**

broadcast application—an application of a material over the entire area of a field. **E 1102, E35**

broadcast resin monolithic floor surfacing—a flooring system whereby a film of catalyzed resin binder is applied on a prepared concrete substrate followed immediately by the seeding to excess, into this wet film, of a dry inert filler. Upon hardening, any unbonded filler is removed. The application may be repeated once or several times to yield a greater thickness of surfacing. A top coat may be applied. **C 904, C03**

broadgoods—non-preimpregnated or uncured preimpregnated materials wider than 12 in. (300 mm). **E 631, E06**

broadgoods—non-preimpregnated or uncured preimpregnated materials wider than 12 in. (300 mm). **E 1749, E06**

broad head—See **large head**. **F 547, F16**

broiler, conveyor—equipment that carries the food product on a wire rack through a tunnel that heats using high temperature radiant heat sources above and or below the rack, for cooking on one or both sides of the food product at once. See **broiler, overfired** and **broiler, underfired**. **F 1827, F26**

broiler, overfired—equipment with a high temperature radiant heat source above a grate for cooking food. **F 1827, F26**

broiler, underfired—equipment with a high temperature radiant heat source below a grate for cooking food, including charbroiler, radiant-broilers, smokeless broilers, etc.. **F 1827, F26**

broken end, *n*—*inwoven fabrics*, a void in the warp direction due to yarn breakage. **D 123, D13**

broken end, *n*—*inwoven fabrics*, a void in the warp direction due to yarn breakage. **D 3990, D13**

broken end, *n*—*inwoven fabrics*, a void in the warp direction due to yarn breakage. **D 4850, D13**

broken filament, *n*—*in multifilament yarn*, breaks in one or more filaments. **D 123, D13**

broken filament, *n*—*in multifilament yarn*, breaks in one or more filaments. (*Syn.* strip back, skin back) **D 3990, D13**

broken filament, *n*—*in multifilament yarn*, breaks in one or more filaments. **D 4849, D13**

broken filament, *n*—*for inflatable restraint fabrics*, an individual filament, separated from a multifilament yarn bundle, that lies on the surface of the fabric. **D 6799, D13**

broken grain (shelling, leafing, grain separation)—a separation on veneer surface between annual rings. **D 1038, D07**

broken pick, *n*—*in woven fabrics*, a discontinuity in the filling direction caused by a break or cut in the filling yarn. **D 123, D13**

broken pick, *n*—*in woven fabrics*, a discontinuity in the filling direction caused by a break or cut in the filling yarn. **D 3990, D13**

broken selvage—See **cut selvage**. **D 3990, D13**

bromine index, *n*—the number of milligrams of bromine that will react with 100 g of sample under the conditions of the test. **D 4175, D02**

bromine index—the number of milligrams of bromine consumed by 100 g of sample under given conditions. **D 4790, D16**

bromine number, *n*—the number of grams of bromine that will react with 100 g of the sample under the conditions of the test. **D 4175, D02**

bromine number, total—number of centigrams of bromine equivalent to the total unsaturation present in 1 g of sample. It is a measure of the total ethylenic unsaturation present in the designated aliphatic compound. **E 1547, E15**

bronzing—the application of a chemical finish to copper or copper alloy surfaces to alter the color. **B 374, B08**

bronzing—excessive concentration of crystallized dyestuff on the surface of the leather tending to give a metallic sheen. **D 1517, D31**

bronzing—reflection of reddish-brown highlights from surface, characteristic of nonuniformly deposited film. **D 2825, D21**

bronzing, *n*—the metal-like reflectance which sometimes appears at the surface of nonmetallic colored materials. **D 6488, D01**

bronzing, *n*—an image which has a bronze sheen. **F 1857, F05**

bronzy color (or bronzing), *n*—a metallic coloration observed when viewing the light reflected at angles near the angle of specular reflection, the color usually being quite different from that observed for other directions. **E 284, E12**

brooming—embedding a ply by using a broom to smooth it out and ensure contact with the adhesive under the ply. **D 1079, D08**

broom nail—bright, regular-stock-steel, $\frac{5}{8}$ to $\frac{3}{4}$ by 0.072 or 0.080-in. nails with flat $\frac{1}{4}$ or $\frac{7}{32}$ in. head and medium diamond point. **F 547, F16**

brown coat, *n*—the second layer in three-coat plaster application. **C 11, C11**

bruise—synonymous with **percussion cone**. **C 162, C14**

bruise, *n*—*in fabrics*, an area that has been subjected to impact or pressure, which differs from the adjacent normal fabric. **D 123, D13**

bruise, *n*—*in fabrics*, an area that has been subjected to impact or pressure, that differs from the adjacent normal fabric. (*Syn.* pressure mark.) **D 3990, D13**

bruise, *n*—*for inflatable restraint fabrics*, a shift in the squareness of the weave pattern in an area that has been subjected to impact or pressure. **D 6799, D13**

brush—a sliding contact member consisting of one or more sliders (see sliders). **B 542, B02**

brush—to remove bisque in a definite pattern by means of a brush. **C 286, B08**

brush, *n*—a hand-held cleaning tool consisting of a base into which bristles are inserted. **D 123, D13**

brush, *vt*—*in refurbishing textiles*, (1) to use a brush to remove surface particulate soils, (2) work a cleaning solution or spot cleaning agent into carpet pile or upholstery fabric, or (3) restore the appearance of pile fabrics. **D 123, D13**

brush, *n*—a hand-held cleaning tool consisting of a base into which bristles are inserted. **D 5253, D13**

brush, *v*—*in refurbishing textiles*, (1) to use a brush to remove surface particulate soils, (2) work a cleaning solution or spot cleaning agent into carpet pile or upholstery fabric, or (3) restore the appearance of pile fabrics. **D 5253, D13**

brush, bolt-hole—see **bolt-hole brush**. **C 286, B08**

brush coat—*in sealants*, a thin layer of Class A curing type sealant used alone or in conjunction with a Type B sealant. **E 631, E06**

brush coat—*in sealants*, a thin layer of Class A curing type sealant used alone or in conjunction with a Type B sealant. **E 1749, E06**

brush coloring—the application of dye-stuff to leather with a brush or swab, the leather being laid on a table. Also called table dyeing. **D 1517, D31**

brush-drag, *n*—resistance encountered when applying a coating by brush, directly related to the high-shear viscosity of the coating.

D 16, D01

brushing—see **brush**.

C 286, B08

brush plating—a method of plating in which the plating solution is applied with a pad or brush, within which is an anode and which is moved over the cathode to be plated.

B 374, B08

brush polishing (electrolytic)—a method of electropolishing (q.v.) in which the electrolyte is applied with a pad or brush in contact with the part to be polished.

B 374, B08

BS—abbreviation for base stock. (see **BP**.)

F 549, F05

B-scan presentation—a means of ultrasonic data presentation which displays a cross section of the specimen indicating the approximate length (as detected per scan) of reflectors and their relative positions.

E 1316, E07

B-stage, *n*—an intermediate stage in the reaction of certain thermosetting resins in which the material swells when in contact with certain liquids and softens when heated, but may not entirely dissolve or fuse.

D 883, D20

B-stage, *n*—an intermediate stage in the reaction of certain thermosetting resins in which the material swells when in contact with certain liquids and softens when heated, but may not entirely dissolve or fuse.

D 907, D14

B-stage—an intermediate stage, in the reaction of certain thermosetting resins in which the material softens when heated and swells in contact with certain liquids, but may not entirely fuse or dissolve. The resin in an uncured thermosetting adhesive is usually in this stage. Sometimes referred to as *resitol*.

E 631, E06

B-stage—an intermediate stage, in the reaction of certain thermosetting resins in which the material softens when heated and swells in contact with certain liquids, but may not entirely fuse or dissolve. The resin in an uncured thermosetting adhesive is usually in this stage. Sometimes referred to as *resitol*.

E 1749, E06

BTDC, *adj*—abbreviation for Before Top Dead Center; used with the degree symbol to indicate the angular position of the crankshaft relative to its position at the point of uppermost travel of the piston in the cylinder.

D 4175, D02

BTS method—a method to predict the presence or absence of permafrost in a mountainous area, using measurements of the bottom temperature of the snow in mid- to late-winter.

D 7099, D18

Btu—British thermal unit, the amount of energy required to raise the temperature of one pound of water one degree Fahrenheit. One Btu_{IT} (International Table) is equal to 1055.056 J.

D 4150, D03

BTU—one British Thermal Unit is the amount of heat required to raise 1 lb of water 1°F.

E 1705, E48

B-tuft, *n*—a two-pass process for aligning hooked fibers on the Fibroliner FL-101.

D 123, D13

B-tuft, *n*—a two-pass process for aligning hooked fibers on the Fibroliner FL-101.

D 7139, D13

bubble immersion test—a form of leak test of gas-containing enclosures in which a leak is indicated by the formation of a bubble at the site of a leak.

E 1316, E07

bubble packaging material—a material consisting of a flexible plastic film having uniformly spaced bubbles integrally molded therein.

D 996, D10

bubble point—pressure differential at which bubbles first appear on one surface of an immersed porous membrane as gas pressure is applied to the other side.

D 6161, D19

bubble point pressure—the pressure differential necessary to displace a liquid held by surface tension forces from the largest equivalent capillaries in a membrane filter.

D 6161, D19

bubble point test—a nondestructive membrane filter test used to assess filter integrity and proper installation.

D 6161, D19

bubbler, *n*—a sampling device consisting of a gas disperser immersed in an absorbing liquid.

fritted bubbler, *n*—a bubbler having a frit as the gas disperser.

D 1356, D22

bubbler—a device using a liquid stream to couple an ultrasonic beam to the test piece.

E 1316, E07

bubble structure—size and spatial distribution of voids within the fired porcelain enamel.

C 286, B08

bubbling pressure—the applied air pressure at which water menisci of the porous segment of a suction sampler break down, and air exists.

D 653, D18

buck—a special support for ware during the firing of porcelain enamel on heavy ware.

C 286, B08

bucket pump sprayer—a sprayer apparatus consisting of a manually operated pump that may be held or mounted in a bucket containing the spray solution. The pump is connected to an atomizing device that forms and distributes the spray.

E 1102, E35

bucking coils—same as **differential coils**.

E 1316, E07

buckle (centre bulge or oil can)—alternate bulges and hollows recurring along the length of a strip with the edges remaining relatively flat.

B 846, B05

buckling—a bulge, bend, bow, kink, or wavy condition produced in sheets, plates, columns, or beams by compressive stresses.

D 653, D18

buck sides—cattlehide shoe upper leather finished to resemble buckskin.

D 1517, D31

buckskin—leather from deer and elk skins, used for shoes, gloves, and clothing. Only the outer cut of the skin from which the surface grain has been removed may be correctly defined as “genuine buckskin.” Leather finished from the split or under-cut of deerskin must be described as “split buckskin.”

D 1517, D31

buddy system, *n*—a means of organizing employee work groups whereby each participant is matched with another so that prompt assistance can be rendered in the case of any emergency.

F 1494, F23

buffable—capable of improvement in gloss or general appearance, or both, of a polish film by a mechanical action.

D 2825, D21

buffalo leather—leather made from the hides of domesticated water buffalo of the Far East, not the American bison.

D 1517, D31

buffer—a compound or mixture that, when contained in solution, causes the solution to resist change in pH. Each buffer has a characteristic limited range of pH over which it is effective.

B 374, B08

buffer, *n*—a material or device, such as folded up **corrugated fiberboard**, placed in a container to position and protect the contents from the forces of impact.

D 996, D10

buffer—a substance in solution that accepts hydrogen or hydroxyl ions added to the solution minimizing a change in pH.

D 6161, D19

buffer—*in fiber optics*, see **fiber optic buffer**.

E 131, E13

buffer, *n*—*in spectrometric analysis*, a substance that tends to minimize the effects of one or more elements on the emission of other elements.

E 135, E01

buffer—a solution of partially ionized acids or bases capable of reducing pH changes in the presence of added alkalis or acids.

F 1600, F20

buffer action—the resistance of a solution to change in pH.

D 459, D12

buffer or buffering agent—a compound or mixture that, when contained in solution, causes the solution to resist change in pH. Each buffer has a characteristic limited range of pH over which it is effective.

E 1519, E35

buffing—the smoothing of a surface by means of a rotating flexible wheel to the surface of which fine, abrasive particles are applied in liquid suspension, paste, or grease stick form.

B 374, B08

buffing—the mechanical operation of removing a superficial portion of the grain of flesh surface with sand paper or knife in order to produce a velvet surface or to minimize natural surface defects on the grain or flesh.

D 1517, D31

buffing dust—the fine particulate leather fiber that is sanded off during buffing.

D 1517, D31

buffing paper—rolls or continuous paper coated with specially

buffing paper

graded and treated abrasive particulates that is used to buff leather on a belt sanding machine. **D 1517, D31**

buffing rubber, n—particulate rubber produced as a byproduct of the buffing operation in the carcass preparation stage of a tire retreading; characterized by a wide range of particle sizes that are predominately elongated or acicular in shape. See **particulate rubber**. **D 1566, D11**

buffing rubber, n—vulcanized rubber usually obtained from a worn or used tire in the process of removing the old tread in preparation for retreading. **D 5681, D34**

buffing-type of floor polish—a floor polish that requires buffing to maintain or enhance appearance, or both. **D 2825, D21**

builder—a material added to a soap or synthetic detergent formulation that enhances or maintains the cleaning efficiency of the surfactant, principally by inactivating water hardness either by sequestration, precipitation, or ion exchange. Other functions, depending on the performance capability of the builder compound used, include supplying alkalinity, buffering to maintain alkalinity at effective cleaning levels, helping to keep removed soil in suspension, and emulsifying oily soils. **D 459, D12**

builder's model, n—a reference standard of quality for specific building components, denoting by example, the level of quality adopted by a builder. **E 631, E06**

building, n—(1) a shelter comprising a partially or totally enclosed space, erected by means of a planned process of forming and combining materials. (2) the act or process of constructing. **E 631, E06**

building, n—a structure comprising a partially or totally enclosed space, erected by means of a planned process of forming and combining materials. **E 1481, E06**

building, n—(1) A shelter comprising a partially or totally enclosed space(s), erected by means of planned forces of forming and combining materials. (2) The act or process of construction. **E 2114, E06**

building, n (bâtiment)—a shelter comprising a partially or totally enclosed space, erected by means of a planned process of forming and combining materials. Compare **building construction**. **E 1480, E06**

building board—a natural finished multi-purpose cellulosic fiberboard. **D 1554, D07**

building brick, n—brick for load-resisting or other purposes where appearance properties such as texture or color are not important (formerly called common brick); see Specification C 62 and Specification C 652. **C 43, C15**

building code—See **code**. **E 631, E06**

building code, n—a code applicable to buildings, adopted and administered with the primary intent of protecting public health, safety, and welfare. **E 631, E06**

building component, n—a building element using industrial products that are manufactured as independent units capable of being joined with other elements. **E 631, E06**

building component, n (composant de bâtiment)—a building element using industrial products that are manufactured as independent units capable of being joined with other elements. **E 1480, E06**

building construction, n—(1) the act or process of making or forming a building by assembling or combining elements, components, or systems. (2) the structure or part thereof so formed. **E 631, E06**

building construction, n (construire de bâtiment)—(1) the act or process of making or forming a building by assembly or combining elements, components or systems. (2) the structure or part thereof so formed. Compare **building**. **E 1480, E06**

building construction joint, n—a designed division of a building that allows movement of all component parts of the building, in any plane, which may be caused by thermal, seismic, wind loading, or any other force. The construction of the separation is accomplished by one of the following methods: (1) manufactured devices suitable for this application, or (2) by field fabrication of suitable materials. **C 11, C11**

building core and service area—See **space categories**. **E 631, E06**

building core and service area—See **space categories**. **E 1480, E06**

building decision—a decision regarding the design, financing, engineering, construction, management, or operation of a building. **E 631, E06**

building decision, n—a decision regarding the design, financing, engineering, construction, management, or operation of a building. **E 833, E06**

building drain—that part of the lowest horizontal piping of a drainage system that receives the discharge from soil, waste, and other drainage pipes inside the walls of the building and conveys it to the building sewer beyond the foundation walls of the building or structure. **F 412, F17**

building drain (sanitary)—a building drain that conveys gray water or sewage, or both. **F 412, F17**

building drain (storm)—a building drain that conveys storm water only. **F 412, F17**

building economics—the application of economic analysis to the design, financing, engineering, construction, management, operation, or ownership of buildings. **E 631, E06**

building economics, n—the application of economic analysis to the design, financing, engineering, construction, management, operation, ownership, or disposition of buildings. **E 833, E06**

building enclosure—Use **building envelope**. **E 631, E06**

building envelope—the outer elements of a building, both above and below ground, that divide the external from the internal environments. **E 631, E06**

building envelope—the boundary or barrier separating the interior volume of a building from the outside environment. **E 631, E06**

building envelope, n (enveloppe d'un immeuble)—perimeter elements of a building, both above and below ground, that divide the external from the internal environment. **E 631, E06**

building envelope, n (enveloppe d'un immeuble)—perimeter elements of a building, both above and below ground, that divide the external from the internal environment. **E 1480, E06**

building environmental survey—for lead systematic inspection of a building and associated on-site paint, dust, soil, and water for the presence of lead compounds. **E 631, E06**

building fabric—(1) elements, components, parts, materials, or systems of a building separately or in combination; (2) loadbearing part of a structure without windows, doors, interior or exterior finishes. **E 631, E06**

building gross area—See **space categories**. **E 631, E06**

building gross area—See **space categories**. **E 1480, E06**

building heat loss factor—a measure of the heat loss rate of a building expressed in joules per degree day (or Btu per degree day). This factor is multiplied by the number of degree days in a given period to estimate the energy required to heat the building during that period. **E 772, E44**

building modification—change or activity affecting the materials, structure, operations, or appearance of a building or its systems. **E 631, E06**

building occupant—See **occupant**. **E 631, E06**

building occupant—See **occupant**. **E 1480, E06**

building or construction lime—a lime whose chemical and physical characteristics and method of processing make it suitable for the ordinary or special construction uses of the product. **C 51, C07**

building performance, n—the behavior in service of a construction as a whole, or of the building components. **E 631, E06**

building performance, n—the behavior in service of construction as a whole, or of the building components. **E 2114, E06**

building performance, n (rendement d'édifice)—the behavior in service of a construction as a whole, or of the building components. Compare **facility performance**.

durability, n (durée)—the capability of a building, assembly, component, product, or construction to maintain serviceability for at least a specified period of time. Compare **facility durability**.

serviceability, n (fonctionnalité)—the capability of a **building**, assembly, component, product, or construction to perform the function(s) for which it is designed or used, or both.
Compare **facilityserviceability**. E 1480, E06

building permit, n—an authorization granted by the agency having jurisdiction to an applicant to proceed with construction on a specific project. E 631, E06

building preservation, n—measures taken to conserve, protect, rehabilitate, restore, or stabilize a building. See **preservation**. E 631, E06

building pressure difference—the pressure difference across the building envelope, expressed in pascals (inches of water, pounds-force per square foot, or inches of mercury). E 631, E06

building pressure difference, P, n—the pressure difference across the test zone envelope (Pa, in. H₂O). E 631, E06

building projection, n (saillie d'un immeuble)—pilaster, convector, baseboard heating unit, radiator, or other building element located in the interior of a building wall that prevents the use of that space for furniture, equipment, circulation, or other functions. E 631, E06

building projection, n (saillie d'un immeuble)—pilaster, convector, baseboard heating unit, radiator, or other building element located in the interior of a building wall that prevents the use of that space for furniture, equipment, circulation, or other functions. E 1480, E06

building related illness, BRI, n—diagnosable illness of which cause and symptoms can be directly attributed to a specific pollutant source within a building (for example, Legionnaire's disease, hypersensitivity, pneumonitis). BRI differs from sick building syndrome (SBS) conditions because the symptoms of the disease persist after leaving the building, unlike SBS where the occupant experiences relief shortly after leaving the building. E 2114, E06

building sanitary sewer—that part of the horizontal piping of a sanitary drainage system which extends from the building sanitary drain, receives the discharge of the building sanitary drain, and conveys it to a public sewer, private sewer, individual sewage disposal system, or other point of disposal. F 412, F17

building seal—See **seal**. C 717, C24

building service area—Preferred term is **building core and service area**. See **space categories**.

building space: E 631, E06

building service area—Preferred term is **building core and service area**. See **space categories**. E 1480, E06

building space—See **space categories**. E 1480, E06

building stone—natural rock of adequate quality to be quarried and cut as dimension stone as it exists in nature, as used in the construction industry. C 119, C18

building storm sewer—that part of the horizontal piping of a storm drainage system which extends from the building storm drain, receives the discharge of the building storm drain, and conveys it to a public storm sewer, private storm sewer, or other point of disposal. F 412, F17

building subsystem—a complete, integrated set of parts that functions as a unit within the finished **building**. See also **cladding system, hard-coat system, railing systems**. E 631, E06

building subsystem, n (sous-système d'immeuble)—complete, integrated set of parts that functions as a unit within the finished **building**. E 1480, E06

building supply—See **water service**. F 412, F17

building system—(1) group of structural or non-structural components or assemblies, or both, of a building interacting to serve a common purpose; (2) method for fabricating or erecting an entire structure. See also **anchorage system, anchoring system, hard-coat system, structural system, exterior installation, finish system**. E 631, E06

building system—an aggregation or assemblage of items joined in regular interaction or interdependence in buildings or building construction. E 631, E06

building system, n—an aggregation or assemblage of items joined in regular interaction or interdependence in buildings or building construction. E 833, E06

building system, n (système d'immeuble)—collection of equipment, facilities, and software designated to perform a specific function. E 631, E06

building system, n (système d'immeuble)—collection of equipment, facilities, and software designated to perform a specific function. E 1480, E06

building up—electroplating for the purpose of increasing the dimensions of an article. B 374, B08

build-up—condition resulting from lack of self-sensitivity in a polish, whereby new film deposits over old, with little or no self-cleaning action. D 2825, D21

buildup factor—for radiation passing through a medium, the ratio of the total value of a specified radiation quantity (such as absorbed dose) at any point in that medium to the contribution to that quantity from the incident uncollided radiation reaching that point. E 170, E10

built soap—under **soap**, see *built soap*. D 459, D12

built-up laminated wood, n—see *built-up laminated wood under wood laminate*. D 907, D14

built-up roofing—a continuous, semiflexible membrane consisting of plies of saturated felts, coated felts, fabrics or mats assembled in place with alternate layers of bitumen, and surfaced with mineral aggregate, bituminous materials, or a granule surfaced sheet (abbreviation, BUR). D 1079, D08

built-up timbers—an assembly made by joining layers of lumber together with mechanical fastenings so the grain of all laminations is essentially parallel. D 9, D07

bulb, n—of a *liquid-in-glass thermometer*, reservoir for the thermometric liquid. E 344, E20

bulb edge—the heavy rounded edge or bead of flat glass. C 162, C14

bulb length, n—the distance from the bottom of the bulb to the junction of the bulb and the stem tubing. E 344, E20

bulb of pressure—see **pressure bulb**. D 653, D18

bulge—doughnut-like protrusion perpendicular to nail shank below nail head. F 547, F16

bulk adherend, n—as related to *interphase*, the adherend, unaltered by the adhesive. (Compare to **bulk adhesive**.) D 907, D14

bulk adhesive, n—as related to *interphase*, the adhesive, unaltered by the adherend. (Compare to **bulk adherend**.) D 907, D14

bulk density, n—the mass per unit volume of a powder under nonstandard conditions, for example, in a shipping container (not to be confused with apparent density). B 243, B09

bulk density, n—of *aggregate*, the mass of a unit volume of bulk aggregate material (the unit volume includes the volume of the individual particles and the volume of the voids between the particles). C 125, C09

bulk density, n—apparent mass per unit volume. D 123, D13

bulk density, ρ—the mass of a quantity of a bulk solid divided by its total volume. D 653, D18

bulk density, n—the weight per unit volume of a loosely packed material, such as a molding powder or pellets. D 883, D20

bulk density, n—mass per unit volume of a material, including any voids present. D 1566, D11

bulk density, n—the mass per unit volume of a material, including voids inherent in the material as tested. E 1638, E29

bulk density, n—the mass of a material per unit volume including voids. Bulk density is usually reported on a dry basis. E 2201, E50

bulk density—the weight per unit volume of a material including voids inherent in the material as tested. F 1251, F04

bulk factor, n—the ratio of the volume of a given mass of molding material to its volume in the molded form. D 883, D20

bulk factor, n—the ratio of the volume of a given mass of molding material to its volume in the molded form. F 412, F17

bulk factor, n—the ratio of the volume of a given mass of molding material to its volume in the molded form. F 1251, F04

bulkhead

bulkhead—a steep or vertical structure supporting natural or artificial embankment. **D 653, D18**

bulking—the increase in volume of a material due to manipulation. Rock bulks upon being excavated; damp sand bulks if loosely deposited, as by dumping, because the apparent cohesion prevents movement of the soil particles to form a reduced volume. **D 653, D18**

bulking—the act of emptying multiple containers of compatible materials and mixing those materials together in a single package unit destined for shipment. This would also include material placed in storage tanks to be packaged for shipment at a later date, or pumped into a bulk tank truck for shipment. **D 5681, D34**

bulking number, *n*—of paper, the number of sheets required to produce a stack of 25 mm thickness (approximately 1 in.). See **thickness**. **D 1968, D06**

bulking value, *n*—solid volume of a unit weight of material, usually expressed as gallons per pound. For practical purposes this is 0.120 divided by the specific gravity. **D 16, D01**

bulk material length (BML), *n*—a single length of thermocouple material (produced from the same raw material lot) after completion of fabrication resulting in sheathed thermocouple material. **E 344, E20**

bulk micromachining—a MEMS fabrication process where the substrate is removed at specified locations. **E 2444, E08**

bulk molding compound (BMC), *n*—a putty-like mixture of any thermosetting resin containing fillers, fiber reinforcements, catalysts and thickening agents, or thermoplastic polymers, often extruded into logs or ropes. **D 883, D20**

bulk packaging—see **packaging**. **D 996, D10**

bulk reflection—reflection in which radiant energy is returned exclusively from within the specimen. **E 131, E13**

bulk sample, *n*—in the sampling of bulk material, one or more portions which (1) are taken from material that does not consist of separately identifiable units and (2) can be identified after sampling as separate or composited units. (Compare to **discretesample, lot sample**.) **D 123, D13**

bulk sample, *n*—a large sample, either from one place or made up of several incremental samples of the same material. **D 4175, D02**

bulk shrinkage, *n*—a measure of potential stretch and power of stretch yarns or a measure of bulk of textured-set yarns. **D 123, D13**

bulk shrinkage, *n*—a measure of potential stretch and power of stretch yarns or a measure of bulk of textured-set yarns. **D 4849, D13**

bulk solid—an assembly of solid particles handled in sufficient quantities that its characteristics can be described by the properties of the mass of particles rather than the characteristics of each individual particle. May also be referred to as granular material, particulate solid or powder. Examples are sugar, flour, ore, and coal. **D 653, D18**

bulk specific gravity, *n*—the ratio of the mass of a volume of a material (including the permeable and impermeable voids in the material, but excluding the voids between particles of the material) at a stated temperature to the mass of an equal volume of distilled water at a stated temperature. **C 125, C09**

bulk specific gravity (saturated surface dry), *n*—the ratio of the mass of a volume of a material including the mass of water within the pores in the material (but excluding the voids between particles) at a stated temperature, to the mass of an equal volume of distilled water at a stated temperature. **C 125, C09**

bulk storage—the storage of hose or covers together with one or more layers piled neatly, but without the benefit of spacers, supports, or special protective containers. **F 819, F18**

bullhides—hides from bulls are characterized by thick and rough head, neck and shoulders, and coarse flanks. They are often poor in quality and heavy, ranging from 60 lb (27 kg) up. **D 1517, D31**

bull's eye—(1) a tempered solid cylindrical sight glass.

(2) the glass left by the punty in the center of a flat disk of glass made by the hand blown crown process.

(3) in flat glass, an optical distortion that arises from a polishing depression or a solid inclusion trapped between layers of laminated glass. **C 162, C14**

bump check—See **percussion cone**. **C 162, C14**

bumping, molding process, *n*—the application, release, and reapplication of pressure prior to the start of vulcanization to vent entrapped gases, thereby facilitating complete filling of the mold. **D 1566, D11**

bunch, *n*—a defect in a yarn characterized by a segment not over 6 mm (¼ in.) in length that shows an abrupt increase in diameter caused by more fibers matted in this particular place. (See **slug, slub**.) **D 123, D13**

bunch—See **slug**. **D 3990, D13**

bunch, *n*—a defect in a yarn characterized by a segment not over 6 mm (¼ in.) in length that shows an abrupt increase in diameter caused by more fibers matted in this particular place. (See **slug, slub**.) **D 4849, D13**

bunch-stranded conductor—a conductor composed of wires twisted together with a given length and direction of lay in such manner that the respective wires at successive cross sections along the length of the conductor do not necessarily form a symmetrical geometric pattern, nor necessarily occupy the same positions relative to each other. **B 354, B01**

bundle, *n*—two or more articles held together with rope, wire, or strapping so as to form a shipping unit; it may be wrapped. **D 996, D10**

bundle—an assemblage of asbestos in which the fibers remain entirely in their original close-packed parallel configuration (or not appreciably displaced therefrom) and having a transverse dimension typically between 2 and 8 mm. **D 2946, C17**

bundle—a general term for a collection of essentially parallel filaments. **D 3878, D30**

bundle—a general term for a collection of parallel filaments or fibres. **D 6161, D19**

bung—usually a 2-in. (5.1-cm) or ¾-in. (1.3-cm) diameter threaded plug designed specifically to close a bung hole. **D 5681, D34**

bung hole—in packaging, an opening in a barrel or drum through which material can be poured to fill, empty or vent. **D 996, D10**

bung hole—an opening in a barrel or drum through which it can be filled, emptied, or vented. **D 5681, D34**

bunker—synonym for **bin**, but sometimes understood as being a bin without any or only a small vertical part at the top of the hopper. **D 653, D18**

Bunsen coefficient, *n*—the solubility of a gas expressed as the volume, reduced to 273 K (32°F) and 101.3 kPa (1 atm), dissolved by one volume of liquid at the specified temperature and 101.3 kPa. **D 4175, D02**

Bunsen coefficient, *n*—the solubility of a gas, expressed as the gas volume reduced to 273 K (32°F) and 0.10 MPa (1 atm), dissolved by one volume of liquid at the specified temperature and 0.10 MPa. **D 4175, D02**

buoyancy chamber (aka flotation chamber)—enclosed compartment of air or other buoyant material providing flotation for the boom. **F 818, F20**

buoyant unit weight (submerged unit weight)—see **unitweight**.

D 653, D18

burden—in an explosive blasting, the distance between the charge and the free face of the material to be blasted. **D 653, D18**

burden—distance between charge and free surface in direction of throw. (ISRM) **D 653, D18**

burglar-resistant spindle—a tapered, shouldered, or other specially designed and treated spindle intended to resist punching, pulling, and drilling. **F 471, F12**

buried ice—ice formed on the ground surface and later covered by sediments. **D 7099, D18**

buried pile yarn, *n*—for coated pile yarn floor covering, that portion of the pile tuft elements which remains after the tuft legs have been removed by shearing. **D 123, D13**

buried pile yarn, *n*—*for coated pile yarn floor covering*, the part of pile yarn tufts which is in or under the primary backing.

D 5684, D13

curl—(1) a hard, woody outgrowth on a tree, more or less rounded in form, usually resulting from the entwined growth of a cluster of adventitious buds.

(2) in wood or veneer, a localized severe distortion of the grain generally rounded in outline, usually resulting from overgrowth of dead branch stubs, varying from 1/2 in. to several inches in diameter; frequently includes one or more clusters of several small contiguous conical protuberances, each usually having a core of pith but no appreciable amount of end grain (in tangential view) surrounding it.

D 9, D07

burllap, *n*—a coarse, heavy, plain weave fabric of coarse single bask fiber yarn.

D 123, D13

burllap, *n*—a coarse, heavy, plain weave fabric of yarns, such as bast or cotton fiber yarn.

D 4850, D13

burn, *v*—the heat treatment to which refractory materials are subjected in the firing process.

C 71, C08

burn—a discoloration, distortion, or destruction of the pultruded surface as a result of thermal decomposition.

D 3918, D20

burn, *vt*—*in emissionspectroscopy*, to vaporize and excite a specimen with sufficient energy to generate spectral radiation.

D 4175, D02

burn, *n*—*in emission spectrometry*, (1) that portion of a solid specimen from which atoms were volatilized; (2) the act of burning.

E 135, E01

burn, *vt*—*in emission spectrometry*, to vaporize and excite a specimen with sufficient energy to generate spectral radiation.

E 135, E01

burn, *v*—to undergo combustion.

E 176, E05

burn chemical, *n*—perception of increased temperature and irritation resulting from exposure to such substances as ethyl alcohol, or high concentrations of NaCl or acids. The sensation lingers a short time after the stimulus is removed.

E 253, E18

burn distance, *n*—the measurement from the bottom edge of the specimen to the farthest point that shows evidence of damage due to combustion.

F 1494, F23

burner block—a refractory block with one or more orifices through which fuel is admitted to a furnace.

C 162, C14

burner fuel oil, *n*—any petroleum liquid suitable for the generation of heat by combustion in a furnace or firebox as a vapor or a spray, or a combination of both.

D 4175, D02

burning—see **firing**.

C 286, B08

burning bars, points, or tools—equipment used to suspend or support ware during the firing operations.

C 286, B08

burning behavior, *n*—all the changes that take place when materials or products are exposed to a specified ignition source.

D 123, D13

burning behavior, *n*—all the changes that take place when materials or products are exposed to a specified ignition source.

D 4391, D13

burning behavior, *n*—all the changes that take place when materials or products are exposed to a specified ignition source.

F 1494, F23

burning (burnt, burned)—a term applied to metal which has been permanently damaged by having been heated to a temperature close to or within the melting range. This results in a structure exhibiting incipient melting or intergranular oxidation.

E 7, E04

burning (firing) of refractories, *v*—the final heat treatment in a kiln to which refractory brick and shapes are subjected in the process of manufacture for the purpose of developing bond and other necessary physical and chemical properties.

C 71, C08

burning tool mark—a defect in the porcelain enamel appearing on the surface opposite to the point of contact with the supporting burning tool.

C 286, B08

burnishing—the smoothing of surfaces by rubbing, accomplished chiefly by the movement rather than the removal of the surface layer.

B 374, B08

burnishing—similar to buffing but using polishing paper/cloths with no or very fine abrasives that produces a very smooth polished appearance on the leather surface.

D 1517, D31

burnishing—enhancement of the appearance of a polish accomplished by dry mechanical abrasion with a suitable machine and accessories.

D 2825, D21

burn-off, *n*—removal of organic additives (binder or lubricant) from a compact by heating.

B 243, B09

burn off—the unintentional removal of an autocatalytic deposit from a nonconducting substrate, during subsequent electroplating operations, owing to the application of excess current or a poor contact area.

B 374, B08

burn-off—the process of severing an unwanted portion of a glass article by fusing the glass.

C 162, C14

burn-off papers—materials sensitive to and that will produce an image by electric current.

F 221, F05

burn rate—the rate at which a material burns after removal of the ignition heat source.

E 631, E06

burn rate—the rate at which a material burns after removal of the ignition heat source.

E 1749, E06

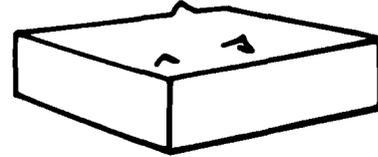
burnt deposit—a rough, noncoherent or otherwise unsatisfactory deposit produced by the application of an excessive current density and usually containing oxides or other inclusions.

B 374, B08

burnt lime—calcined limestone (CaO · MgO, dolomitic), or CaO (calcitic), or a mixture of these.

C 162, C14

burr—fragment of excess material or foreign particle adhering to the surface.



F 109, C21

burr—thin, wing-like ridge protruding from side or edge of point or underside of top of head; defect formed during pointing or heading process and intended to be removed during manufacturing process. (See **whisker**.)

F 547, F16

burr-wool waste, *n*—waste removed by the burr guard of cards or burr pickers having a very short fiber and full of burrs or seeds.

D 123, D13

burr-wool waste, *n*—waste removed by the burr guard of cards or burr pickers having a very short fiber and full of burrs or seeds.

D 4845, D13

burst—open break in the metal during forging located on the flats or corners of bolt and screw heads, or at the periphery of a flanged or circular headed bolt or screw, or on the flats or corners of the nut.

F 1789, F16

burst emission—see **emission, burst**.

E 1316, E07

bursting force, *n*—the force or pressure required to rupture a fabric by distending it with a force, applied at right angles to the plane of the fabric, under specified conditions

D 123, D13

bursting-off—the breaking of the blowover.

C 162, C14

bursting strength, *n*—*in fabric*, the capacity of a material to withstand the ultimate bursting force required to rupture a fabric.

D 123, D13

bursting strength—See **packagetesting**.

D 996, D10

bursting strength—*of paper or paperboard*, the maximum liquid pressure required to produce rupture of the material when the pressure is increased at a controlled rate through a rubber diaphragm to a constrained circular area of the material.

D 1968, D06

bursting strength, *n*—the force or pressure required to rupture a fabric by distending it with a force, applied at right angles to the plane of the fabric, under specified conditions.

D 4850, D13

bursting strength of paper, *n*—the hydrostatic pressure required to produce rupture of a circular area of the material under specified test conditions.

D 1711, D09

bursting strength "points", *n*—*in paper*, a unit of measure for bursting strength, measured in pounds per square inch, that should

bursting strength "points", *n*

- be considered colloquial and directly interchangeable with "pounds per square inch". See **bursting strength**. **D 1968**, D06
- bursting strength test**—See **package testing**. **D 996**, D10
- burst strength**—the internal pressure required to cause a pipe or fitting to fail. **F 412**, F17
- burst strength**—a measure of the internal pressure necessary to rupture a package or seal. **F 1327**, F02
- bus bar**—includes material of solid rectangular or square cross section or a solid section with two plane parallel surfaces and round or other simple regular-shaped edges. **B 846**, B05
- bus (bus bar)**—a rigid conducting section, for carrying current to the anode and cathode bars. **C 374**, B08
- bus conductor**, *n*—rigid electric conductor of any cross section. **B 881**, B07
- bus conductor stock**—a bar, rod, or shape of high-conductivity copper used to make bus conductors. **B 846**, B05
- bush-hammered**—a uniformly textured surface with small evenly-spaced pits produced by a hand or pneumatic hammer and carbide-tipped head having numerous points. **C 119**, C18
- bushing**—(1) a liner in the feeder orifice for molten glass.
(2) a precious metal or refractory/metal structure with single or multiple hole(s) through which glass flows and is attenuated into fiber(s). **C 162**, C14
- bust girth**, *n*—*inbody measurements*, the circumference of the body over the fullest part of the breasts and parallel to the floor. (Compare **chestgirth**.) **D 123**, D13
- bust girth**, *n*—*inbody measurement*, the circumference of the body over the fullest part of the breasts and parallel to the floor. (See **chest girth**.) **F 1494**, F23
- bust point to bust point**, *n*—*in body measurements*, the distance across the front from the apex of one breast to the apex of the other. **D 123**, D13
- bust point to bust point**, *n*—the horizontal distance from bust apex to bust apex, taken with the arms down. **D 5219**, D13
- butcher cuts**—damage to hides caused by improper removal from the animal, usually in the form of cuts or furrows on the flesh side. **D 1517**, D31
- butler finish**—a finish composed of fine, uniformly distributed parallel lines, having a characteristic luster usually produced with rotating wire brushes or cloth wheels with applied abrasives. **B 374**, B08
- butt**—that part of the hide or skin covering the rump or hind part of the animal. **D 1517**, D31
- butted wood member**—wood member with its squared end or side placed adjoining the squared end or side of another wood member; with both abutting members of same thickness and in a single plane. **E 631**, E06
- butterfly bruise**—See **percussion cone**. **C 162**, C14
- butterfly point**—a defective point with one or two thin fins projecting. (See **burr**.) **F 547**, F16
- butt-fused joint**—see **joint, butt-fused**. **F 412**, F17
- butt glazing**, *n*—in building construction, a glazing system wherein butt joints are formed between lites and filled with a glazing sealant. **C 717**, C24
- butt joint**, *n*—See **butt sealant joint**. **C 717**, C24
- butt joint**—See **joint**. **E 631**, E06
- butt joint**—a joint having the edge or end of one member matching the edge, end, or face of another member without overlap. **E 631**, E06
- button**, *n*—a knob, disc, or similar object which when forced through a narrow opening or buttonhole, fastens one part of a garment or other flexible substrate to another. (See also **sew-through flange button**.) **D 123**, D13
- button**, *n*—a knot, disc, or similar object which when forced through a narrow opening or buttonhole, fastens one part of a garment or other flexible substrate to another. **D 5497**, D13
- button clincher**—circular clincher. **F 592**, F16
- button head**—cylindrical head with flat upper and bearing surfaces, smaller in diameter and thicker than flat head for same size nail shank. **F 547**, F16
- buttonhole stitch**, *n*—*in home sewing*, a complex machine stitch pattern made by coordinated motions of needle and feed, appearing as very close stitches forming a narrow rectangle of stitching that is usually composed of four stitch segments, one on each side and on each of the two ends of the rectangle. **D 123**, D13
- buttonhole stitch**, *n*—*in home sewing*, a complex machine stitch pattern made by coordinated motions of needle and feed, appearing as very close stitches forming a narrow rectangle of stitching that is usually composed of four stitch segments, one on each side and on each of the two ends of the rectangle. **D 5646**, D13
- button sample**—*in sealants*, an identified small amount of sealant extruded from a mixed sealant cartridge. **E 631**, E06
- button sample**—*in sealants*, an identified small amount of sealant extruded from a mixed sealant cartridge. **E 1749**, E06
- button test**—a test designed to determine relative fusibility of porcelain enamel frit or powder and so called because the completed specimens resemble buttons.

NOTE—See **flow button** and Test Methods C 374. **C 286**, B08
- butress-type thread**—thread with flank on head side of crest almost perpendicular to nail axis; while flank on point side of crest is noticeably inclined. **F 547**, F16
- butt sealant joint**, *n*—*in building construction*, a joint where sealant is applied within the joint between approximately parallel substrate surfaces that are face-to-edge or edge-to-edge. **C 717**, C24
- butt welding (machine)**—the fusing together of two pieces of plastic which are aligned in the same plane, with the same mating thickness, by application of heat and pressure. Also called *hot-plate welding*. **C 904**, C03
- butylene plastic**—plastic based on resins made by the polymerization of butene or copolymerization of butene with one or more unsaturated compounds, the butene being in greatest amount by weight. **F 1251**, F04
- butylene plastics**—plastics based on resins made by the polymerization of butene or copolymerization of butene with one or more unsaturated compounds, the butene being in greatest amount by weight. **D 883**, D20
- butylene plastics**—plastics based on resins made by the polymerization of butene or copolymerization of butene with one or more unsaturated compounds, the butene being in greatest amount by weight. (D20) **F 412**, F17
- b-value**, *n*—*in statistics*, the difference between the mean of a set of results on a material and its accepted reference value. (Compare **error**.) **E 135**, E01
- B-value**—**salt diffusion coefficient**—defined as the amount of salt transferred per unit area of membrane per unit of concentration difference across the membrane. A unit of measurement is m/h or more specifically, m³/m²/h. **D 6161**, D19
- BWRO**—brackish water reverse osmosis. **D 6161**, D19
- by-pass clinch**—clinch with legs paralleling and adjacent to each other. **F 592**, F16
- bypass nozzle**—see **by-pass nozzle**. **E 1620**, E29
- by-pass nozzle**—a swirl chamber atomizer containing by-pass orifice(s) or port(s) through which part of the inlet liquid may be withdrawn from the swirl chamber and returned to the supply tank or pressure pump suction. The discharge flow is modulated by controlling the pressure in the bypass line, using a valve in the line. **E 1620**, E29
- by-product coke**—See **by-product coke** under **coke**. **D 121**, D05
- by-product lime**—by-product limes include a variety of Calcium and/or Calcium/Magnesium compounds that are usable for specific applications but generally do not meet one or more specifications required of primary lime products. Examples include lime kiln dust and lime hydrator rejects. It is advised that the specific compositions, physical properties, performance characteristics, and anticipated variabilities of such materials be evaluated for the service intended. **C 51**, C07

byte, *n*—a set of seven or eight bits used to represent a character or control function.
F 1457, F05

C

C—initial length of the diagonal $\sqrt{a^2 + b^2}$, in metres (feet).

- E 631, E06**
- cabal glass**—a glass consisting primarily of the oxides of calcium, boron, and aluminum. **C 162, C14**
- cable**, *n*—a multi-strand, flexible longitudinal element designed primarily to resist axial tension loading. **F 1582, F04**
- cable end closure**—a moisture barrier at the cable end of the sheath. **E 344, E20**
- cable twist**, *n*—the construction of cabled yarn, cord, or rope in which each successive twist is in the opposite direction to the preceding twist; an S/Z/S or Z/S/Z construction. **D 123, D13**
- cable twist**, *n*—the construction of cabled yarn, cord, or rope in which each successive twist is in the opposite direction to the preceding twist; an S/Z/S or Z/S/Z construction. **D 4849, D13**
- cable wrap**, *n*—paper used for mechanical protection or for space-filling (rather than as electrical insulation) in low-voltage cables with nonmetallic sheaths. **D 1711, D09**
- cabretta**—skin of hair sheep, originally Brazilian, used principally for glove and garment leathers. (See also **cape**.) **D 1517, D31**
- CAC**—combined available chlorine. **D 6161, D19**
- cadmium ratio**—the ratio of the neutron reaction rate measured with a given bare neutron detector to the neutron reaction rate measured with an identical neutron detector enclosed by a particular cadmium cover and exposed in the same neutron field at the same or an equivalent spatial location. **E 170, E10**
- cadmium ratio**—the ratio of the neutron reaction rate measured with a given bare neutron detector to the reaction rate measured with an identical neutron detector enclosed by a particular cadmium cover and exposed in the same neutron field at the same or an equivalent spatial location.
- NOTE**—In practice, meaningful experimental values can be obtained in an isotropic neutron field by using a cadmium filter approximately 1-mm thick. **E 1316, E07**
- Cady test**—See **package testing**. **D 996, D10**
- cage**—an assembled unit of steel reinforcement consisting of circumferential and longitudinal bars or wires. **C 822, C13**
- cage**—a structural fabrication fitted around the perimeter of the cassette with one or more lifting eye suitable for installing or removing the cassette. The four bottom corners of the cage rest within the frame in the tank. **D 6161, D19**
- cake**, *n*—a bonded mass of unpressed metal powder. **B 243, B09**
- cake**—refinery shape used for rolling into plate, sheet, strip, or shape. Rectangular in cross section and of various sizes, normally ranging in weight from 140 to 62 000 lb (63 to 28 123 kg). **B 846, B05**
- cake layer**—layer comprised of particulate materials residing on the upstream face of a membrane. **D 6161, D19**
- caking**, *n*—a settling out of pigments in a fluid ink during storage (sedimentation). **D 6488, D01**
- calcarenite**—a limestone composed predominantly of clastic sand-size grains of calcite, or rarely aragonite, commonly as tiny fossils, shell fragments, or other fossil debris. **C 119, C18**
- calcareous**—originating from predominately calcium carbonate or one of its derivative forms. **C 51, C07**
- calcia**—the chemical compound calcium oxide (CaO). **C 51, C07**
- calcine**—a ceramic material or mixture fired to less than fusion for use as a constituent in a ceramic composition. **C 242, C21**
- calcine**, *v* (**calcination**, *n*)—firing or heating a granular or particulate solid at less than fusion temperature, but sufficient to remove most of its chemically combined volatile matter (that is, H₂O, CO₂) and otherwise to develop the desired properties for use. **C 1145, C28**
- calcine**, **calcines**, *n*—refractory material, often fireclay, that has been heated to eliminate volatile constituents and to produce desired physical changes. **C 71, C08**
- calcined coke**, *n*—petroleum coke that has been thermally treated to drive off the volatile matter and to develop crystalline structure. **D 4175, D02**

- calcined coke**, *n*—raw petroleum coke that has been thermally treated to drive off the volatile matter and to develop crystalline structure. **D 4175, D02**
- calcined gypsum**, *n*—a dry powder; primarily calcium sulfate hemihydrate, resulting from calcination of gypsum; cementitious base for production of most gypsum plasters: also called plaster of paris, sometimes called stucco. **C 11, C11**
- calcined petroleum coke**, *n*—green petroleum coke which has been thermally treated to drive off the volatile matter and to develop crystalline structure. **D 4175, D02**
- calcined petroleum coke**, *n*—raw petroleum coke that has been thermally treated to drive off the volatile matter and to develop crystalline structure. **D 4175, D02**
- calcined refractory dolomite**, *n*—see **dolomite**, **calcined refractory**. **C 71, C08**
- calcining of refractory materials**, *v*—the heat treatment to which raw refractory materials are subjected, preparatory to further processing or use, for the purpose of eliminating volatile chemically combined constituents and producing volume changes. **C 71, C08**
- calcite**—a doubly refracting mineral used in the manufacture of polarizing prisms. It is uniaxial negative and in the trigonal division of the hexagonal system of crystals. Its indexes are $\epsilon = 1.486$, $\omega = 1.658$; its hardness is 3 on the Mohr scale and specific gravity 2.711. **E 175, E41**
- calcium carbonate equivalent (CCE)**, *n*—the content of carbonate in a liming material or calcareous soil calculated as if all the carbonate is in the form of CaCO₃. **E 2201, E50**
- calcium carbonate equivalents (mg/L as CaCO₃)**—a method for expressing mg/L as ion in terms of calcium carbonate. Concentration in calcium carbonate equivalents is calculated by multiplying concentration in mg/L of the ion by the equivalent weight of calcium carbonate (50) and dividing by the equivalent weight of the ion. **D 6161, D19**
- calcium hypochlorite**—Ca (HClO)₂, a disinfection agent. **D 6161, D19**
- calcium silicate**, *n*—insulation composed principally of hydrous calcium silicate, and which usually contains reinforcing fibers. **C 168, C16**
- calcium-silicate brick**, *n*—a pressed and subsequently autoclaved unit that consists of sand and lime, with or without the inclusion of other materials. **C 1209, C15**
- calcium sulfate**, *n*—the chemical compound CaSO₄. **C 11, C11**
- calcium sulfate**, *n*—in cement manufacture, a material composed essentially of calcium sulfate in one or more of its hydration states: **anhydrite** (CaSO₄), **gypsum** (CaSO₄·2H₂O), or **calcium sulfate hemihydrate** (CaSO₄·½ H₂O). **C 219, C01**
- calcium sulfate dihydrate (CaSO₄·2H₂O)**, *n*—gypsum; the primary product of a forced-oxidation wet flue gas desulfurization system in which additional air is introduced and lime or limestone is used as the reagent. **E 2201, E50**
- calcium sulfite (CaSO₃)**, *n*—the primary product of a wet flue gas desulfurization system where there is no forced oxidation and lime or limestone is used as the reagent. **E 2201, E50**
- calendar staple**—staple formed to provide a hanger for use with calendars or booklets. **F 592, F16**
- calender**, *n*—a machine with two or more parallel, counter-rotating rolls with a controllable, roll-to-roll spacing, rotating at selected surface speeds and controlled temperatures, used for sheeting, laminating, skim coating (topping) and friction coating, to a controlled thickness and/or surface condition. **D 1566, D11**
- calf girth**, *n*—*inbody measurements*, the maximum circumference around the leg between the knee and ankle, parallel to the floor. **D 123, D13**
- calf girth**, *n*—the maximum horizontal circumference of the lower leg, taken between the knee and the ankle. **D 5219, D13**
- calf leather**—leather made from the skins of young cattle from a few

days up to a few months old, the skins weighing up to 25 lb (11.3 kg). It is finer grained, lighter in mass and more supple than cowhide, or kip leathers. **D 1517, D31**

calibrant, *n*—a reference material used for a calibration. **E 135, E01**

calibrate, *v*—to determine and record the relationship between a set of standard units of measure and the output of an instrument or test procedure. **D 123, D13**

calibrate, *v*—to determine the indication or output of a measuring device with respect to that of a standard. **D 4175, D02**

calibrate, *v*—to determine and record the relationship between a set of standard units of measure and the output of an instrument or test procedure. **D 4849, D13**

calibrate, *vt*—(1) to establish the relationship between the response of an instrument and the concentration or mass of the analyte; (2) to establish a table of corrections to improve the accuracy of equipment used to measure physical properties such as mass, volume, temperature, and so forth. **E 135, E01**

calibrate, *v*—to find and eliminate systematic errors of an instrument scale or method of measurement by use of material standards and techniques traceable to an authorized national or international measurement system. **E 284, E12**

calibrated instrument—an instrument for which the response has been documented upon being directly compared with the response of a standard instrument, both having been exposed to the same radiation field under the same conditions; or one for which the response has been documented upon being exposed to a standard radiation field under well-defined conditions. **E 170, E10**

calibrated test stand, *n*—a test stand on which the testing of reference material(s), conducted as specified in the standard, provided acceptable test results. **D 4175, D02**

calibration, *n*—the act or process of calibrating; the recorded relationship resulting from calibrating. **D 123, D13**

calibration, *n*—the act of determining the indication or output of a measuring device or a given engine with respect to a standard. **D 4175, D02**

calibration, *n*—the determination of the values of the significant parameters by comparison with values indicated by a set of reference standards. **D 4175, D02**

calibration, *n*—determination of the values of the significant parameters by comparison with values indicated by a reference instrument or by a set of reference standards. **E 6, E28**

calibration—1) the act or process of determining the relationship between a set of standard units of measure and the output of an instrument or test procedure, 2) the graphical or mathematical relationship relating the desired property (expressed in a standard unit of measure such as micrometers or Kg/mm²) to the instrument output (instrument units such as filar divisions or pixels). **E 7, E04**

calibration, *n*—the act, process, or result of establishing: (1) the relationship between the response of an instrument and the concentration or mass of the substance determined; (2) a table of corrections to improve the accuracy of equipment used to measure physical properties such as mass, volume, temperature, and so forth. **E 135, E01**

calibration, *n*—of a thermometer or thermometric system, the set of operations that establish, under specified conditions, the relationship between the values of a thermometric quantity indicated by a thermometer or thermometric system and the corresponding values of temperature realized by standards. **E 344, E20**

calibration, *n*—the determination of the indications of a thermometer with respect to temperatures established by a standard resulting in scale corrections to be applied when maximum accuracy is required. **E 344, E20**

calibration, *n*—the determination of the resistance-temperature relationship for a specific thermometer. The resistance-temperature relationship may be specified as the ratio of the resistance of the thermometer at a given temperature to its resistance at the ice point as a function of the temperature, or simply as the resistance of the thermometer as a function of the temperature. **E 344, E20**

calibration—the set of operations that establishes, under specified conditions, the relationship between values indicated by a measuring instrument or measuring system, or values represented by a material, and the corresponding known values of measurement, (ISO Guide 25). **E 1187, E36**

calibration, *n*—the set of operations that establishes, under specified conditions, the relationship between values indicated by a measuring instrument or measuring system or values represented by a material, and the corresponding known values of measurement. **E 1732, E30**

calibration—the act of standardizing or determining the deviation from a standard so as to ascertain the proper correction factors. **E 2135, E53**

calibration—to check, adjust, or systematically standardize the gradations of a quantitative measuring signal. **E 2161, E37**

calibration cotton standards, *n*—cotton samples taken from blended bulk source on which fiber properties have been determined under the International Calibration Cotton Standards Program. **D 123, D13**

calibration cotton standards, *n*—cotton samples taken from blended bulk source on which fiber properties have been determined under the International Calibration Cotton Standards Program. **D 7139, D13**

calibration curve—a plot of the potential (emf) of a given ion-selective electrode cell assembly (ion-selective electrode combined with an identified reference electrode) versus the logarithm of the ionic activity (concentration) of a given species. For uniformity, it is recommended that the potential be plotted on the ordinate (vertical axis) with the more positive potentials at the top of the graph and that p_{A} ($-\log$ activity of the species measured, A) or pc_{A} ($-\log$ concentration of species measured, A) be plotted on the abscissa (horizontal axis) with increasing activity to the right. **D 4127, D19**

calibration curve, *n*—the graphical or mathematical representation of a relationship between the assigned (known) values of standards and the measured responses from the measurement system. **D 4175, D02**

calibration curve, *n*—the graphical or mathematical representation of the relationship between the response of an instrument and the concentration or mass of the analyte. **E 135, E01**

calibration curve—graphical or mathematical representation of a relation between a measured parameter and a property of the standard for the substance under consideration. **E 631, E06**

calibration curve—graphical or mathematical representation of a relation between a measured parameter and a property of the standard for the substance under consideration. **E 1605, E06**

calibration date—the date on which the scale is affixed to a thermometer. **E 344, E20**

calibration factor, *n*—the factor by which the change in extensometer reading must be multiplied to obtain the equivalent strain. **E 6, E28**

calibration, instrument, *n*—the comparison of an instrument with, or the adjustment of an instrument to, a known reference(s) often traceable to the National Institute of Standards and Technology (NIST). (See also **standardization, instrument.**) **E 1316, E07**

calibration laboratory—laboratory that performs calibration, (ISO Guide 25). **E 1187, E36**

calibration method—defined technical procedure for performing a calibration, (ISO Guide 25). **E 1187, E36**

calibration oil, *n*—an oil that is used to determine the indication or output of a measuring device or a given engine with respect to a standard. **D 4175, D02**

calibration platform—on a moving platform for applying a force in the contact plane of a tire, and associated means for measuring the applied force. The calibration platform consists of a rigid plate with a high friction surface, in contact with the tire footprint, supported on a frictionless, preferably air, bearing. It may also be instrumented to measure vertical forces (loads). **E 867, E17**

calibration point, *n*—a specific value, established by a reference, at

calibration point, *n*

which the indication or output of a measuring device is determined. **E 344, E20**

calibration reference signals—repeatable signals in the range of expected wheel-force transducer system loading. These signals could either be constant voltages or preferably produced by a strain-gage calibration shunt resistor. **E 867, E17**

calibration source or field—see **electron standard field, γ -ray standard field, and X-ray standard field.**

E 170, E10

calibration standard, *n*—a standard having an accepted value (reference value) for use in calibrating a measurement instrument or system. **D 4175, D02**

calibration standard—solutions of known analyte concentration used to calibrate instruments. **E 1605, E06**

calibration standards—standard solutions used to calibrate instruments. **E 631, E06**

calibration tire, *n*—a witness tire designed to provide a fixed or known test value for selected properties. **F 538, F09**

California bearing ratio, CBR (D)—the ratio of: (1) the force per unit area required to penetrate a soil mass with a 3-in.²(19-cm)² circular piston (approximately 2-in. (51-mm) diameter) at the rate of 0.05 in. (1.3 mm)/min, to (2) that required for corresponding penetration of a standard material. The ratio is usually determined at 0.1-in. (2.5-mm) penetration, although other penetrations are sometimes used. Original California procedures required determination of the ratio at 0.1-in. intervals to 0.5 in. (12.7 mm). Corps of Engineers' procedures require determination of the ratio at 0.1 in. and 0.2 in. (5.1 mm). Where the ratio at 0.2 in. is consistently higher than at 0.1 in., the ratio at 0.2 in. is used. **D 653, D18**

california process—this process requires the accurate drafting of patterns, cutting, and stitching of the upper, sock lining, and platform cover. The upper and sock lining are stitched together. The platform cover is stitched to the other two parts in a separate operation. The last is then inserted into the upper. After the last is inserted, the platform is accurately pressed into place. **F 869, F08**

caliper—See **package testing.** **D 996, D10**

caliper, *n*—of paper and paperboard, see **thickness.** **D 1968, D06**

caliper—the thickness of a sheet of paper measured under specified conditions and usually expressed in thousandths of an inch (mils). **F 149, F05**

caliper—the thickness of a sheet expressed in millimeters or in thousandths of an inch. **F 335, F05**

caliper diameter (Feret's diameter)—the length of a line normal to two parallel lines, tangent to opposite edges of a phase or object. **E 7, E04**

caliper log—a geophysical borehole log that shows to scale the variations with depth in the mean diameter of a cased or uncased borehole. **D 653, D18**

C₅ aliphatic resin, *n*—a resin produced by the cationic polymerization of a low-boiling aliphatic steam-cracker fraction. **D 6440, D01**

call rotation—a system in which emergency medical responses are allocated sequentially to multiple providers. **F 1177, F30**

calm water boom—boom intended for use in calm waters (see Practice F 625 for environmental descriptors). **F 818, F20**

calomel half cell (calomel electrode)—a half cell containing a mercury electrode in contact with a solution of potassium chloride of specified concentration that is saturated with mercurous chloride (calomel). **B 374, B08**

calomel reference electrode—a reference electrode with an internal reference element of mercury/mercurous chloride. The filling solution is usually saturated KCl, saturated with mercurous chloride. **D 4127, D19**

calorific value, *n*—the heat of combustion of a unit quantity of a substance. **D 121, D05**

calorific value, *n*—the heat produced by combustion of a unit quantity of a specimen under specified conditions. **D 5681, D34**

calorific value—the heat of combustion of a unit quantity of a

substance. It may be expressed in joules per gram (J/g), British thermal units per pound (Btu/lb), or calories per gram (cal/g) when required.

NOTE—The unit equivalents are as follows:

1 Btu (International Table) = 1055.06 absolute joules

1 Calorie (International Table) = 4.1868 absolute joules

1 Btu/lb = 2.326 J/g

1.8 Btu/lb = 1.0 cal/g

D 5681, D34

calorific value—the energy of combustion of a unit quantity of refuse-derived fuel. It may be expressed in kilojoules per kilogram (kJ/kg), British thermal units per pound (Btu/lb), or calories per gram (cal/g) (obsolete). **E 856, D34**

calorimeter, *n*—as used in Test Method D 5865, the bomb and its contents, the calorimeter vessel with stirrer, the water in which the bomb is immersed, and the portions of the thermometer and the ignition leads within the calorimeter vessel. **D 121, D05**

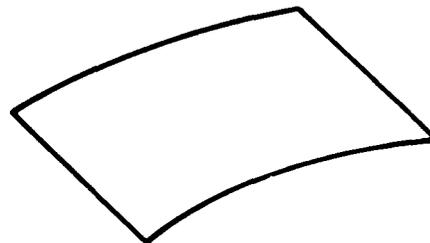
calorimeter—an instrument capable of making absolute measurements of energy deposition (or absorbed dose) in a material through measurement of its change in temperature and a knowledge of the characteristics of its material construction. **E 170, E10**

calorimeter jacket, *n*—the insulating medium surrounding the calorimeter. **D 121, D05**

calorimeter jacket, *n*—the insulating medium surrounding a calorimeter. **D 5681, D34**

calorizing—imparting resistance to oxidation to an iron or steel surface by heating in aluminum powder at 800 to 1000°C (1470 to 1830°F). **B 374, B08**

camber—a single arch of curvature. (See also **waviness.**)



F 109, C21

camber height, *h*—distance between the running surface of the ski and a plane surface, measured with the ski resting freely under its own mass. X_h indicates the location of camber height from the tail of the ski. **F 472, F27**

cambium—the layer of cells that lies between the inner bark and the wood of a tree, that repeatedly subdivides to form new wood and bark cells. **D 9, D07**

cam lock slider, *n*—in zippers, a slider that incorporates a curled projection or projections on the pull that extends through a window or windows to effect a locking action by pressing against the interlocking elements when the cam lock slider is in the locked position. **D 123, D13**

cam lock slider, *n*—a slider that incorporates a curled projection or projections on the pull that extends through a window or windows to effect a locking action by pressing against the interlocking elements when the cam lock slider is in the locked position. **D 2050, D13**

camouflet—the underground cavity created by a fully contained explosive. (ISRM) **D 653, D18**

campaign—the working life of a melting furnace between major cold repairs. **C 162, C14**

camping tentage, *n*—any portable temporary shelter or structure designed to protect persons from the elements, all or a portion of the covering which is made of fabric or other pliable materials. **D 123, D13**

can, *n*—the container used to encapsulate the powder during the pressure consolidation process; it is removed from the final part. **B 899, B02**

can, *n*—*in packaging*, a receptacle generally of 10-gal capacity or less, normally not used as a **shipping container**. **D 996**, D10

Canada balsam—see **balsam, Canada**. **E 175**, E41

canal—that part of a melting furnace leading from the fining area to the forming area. See **channel** and **forehearth**. **C 162**, C14

candela—a unit of luminous intensity (formerly candle). One candela is the luminous intensity in the perpendicular direction of a surface of 1/600 000 m² of a blackbody radiator at the temperature of freezing platinum under a pressure of 101 325 Pa. One candela produces 1 lumen of luminous flux per steradian of a solid angle measured from the source. **E 1316**, E07

candela, *cd*, *n*—the SI unit of luminous intensity; the luminous intensity, in a given direction, of a source that emits monochromatic radiation of frequency 540×10^{12} hertz and that has a radiant intensity in that direction of (1/683) watt per steradian. ^A
E 284, E12

candidate method, *n*—an analytical method or measurement process being considered for standardization. **D 1356**, D22

candidate oil, *n*—an oil that is intended to have the performance characteristics necessary to satisfy a specification and is to be tested against that specification. **D 4175**, D02

candidate tire, *n*—a test tire that is part of a test program. **F 538**, F09

candidate tire set, *n*—a set of candidate tires. **F 538**, F09

candle, *n*—one or more combustible wicks supported by a material that constitutes a fuel which is solid, semi-solid, or quasi-rigid at room temperature, 68° to 80°F (20 to 27° C); it can also contain additives that are used for color, odor, stability, or to modify the burning characteristics; the combined function of which is to sustain a light-producing flame. **F 1972**, F15

candle accessory, *n*—an object designed for use with a candle. **F 1972**, F15

candled ice—ice that has rotted or otherwise formed, by melting during the spring, into long columnar crystals which are very loosely bonded together. A distinctive “chiming” sound accompanies movement during “ice-out.” **D 7099**, D18

candle pitch, *n*—a dark brown-to-black, tarry or solid, by-product residue from soap and candle stock manufacture, refining of vegetable oils, refining of wool grease, or refining of refuse animal fats. **D 4175**, D02

cane—solid glass rods. **C 162**, C14

canister vacuum cleaner, *n*—a portable floor-supported vacuum cleaner, having a nozzle separated from the cleaner housing by a hose and designed for normal-duty cleaning of household dirt. In use, only the nozzle is guided over the surface area to be cleaned. The cleaner may have detachable nozzles, attachments, and wands for both floor and above-the-floor cleaning. The nozzle may employ a driven agitator to assist in cleaning. **F 395**, F11

cannel coal—See **cannel coal** under **coal**. **D 121**, D05

cannot be associated/cannot be connected—these terms are too vague and may be interpreted as reflecting bias as they have no counterpart suggesting that the writer cannot be eliminated either. **E 1658**, E30

canonical-form definition, *n*—see **intensional definition**. **E 1992**, E02

canopy—a covering fixed above cooking equipment and overhanging on all sides of its unclosed sides, whose lower edge is a minimum height of 6 ft 6 in. from the finished floor. The purpose of the canopy is to contain and capture the unwanted by-products resulting from cooking activities and may be Type I or Type II. See **Type I**, **Type II**, and **exhaust hood**. **F 1827**, F26

canopy penetrating agent—an adjuvant that increases the penetration of the spray material into the crop canopy. See **deposition aid**. **E 1519**, E35

cant—a log that has been slabbed on one or more sides, usually with the intention of resawing at right angles to the widest sawn face. **D 9**, D07

cantilever, *n*—an overhanging portion or a member or slab projecting beyond support(s) sufficiently to induce bending and shear stresses

in projecting part(s) when subjected to transverse loading including uniform, concentrated, or other load types. **E 631**, E06

cantilever—a test structure that consists of a freestanding beam that is fixed at one end. **E 2444**, E08

cantilever slide gate—any horizontal slide gate spanning an opening lacking a top or bottom support within that opening (see Specification F 1184). **F 552**, F14

cant strip—a beveled strip used under flashings to modify the angle at the point where the roofing or waterproofing membrane meets any vertical element. **D 1079**, D08

cap, *n*—(1) another name for crown.
(2) a type of bottle closure. **C 162**, C14

cap, *v*—{archaic} to cut off the ends of a glass cylinder. **C 162**, C14

cap—a horizontal wood member, generally square or near square; used to crown and bind the top ends of upright posts and piles together as a unit and to support upper construction. **D 9**, D07

cap—See **container (cover)**. **D 996**, D10

cap—See **railing systems**. **E 631**, E06

cap, *n*—a fitting or plug used to close the end of a pipe, tubular post, newel, or rail. **E 631**, E06

cap, *n*—a fitting or plug used to close the end of a pipe, tubular post, newel, or rail. **E 1481**, E06

cap, *n*—a layer of clay or other low permeability material installed over the top of a closed landfill to prevent entry of rainwater and minimize leachate. **E 2201**, E50

capability index (C_p), *n*—for a stable process, the specification range divided by six times the standard deviation.

$$C_p = \frac{(USL - LSL)}{6 \times s}$$

A 644, A04

capability index (C_{pk}), *n*—for a stable process, the smaller of the upper capability index (CPU) or the lower capability index (CPL). **A 644**, A04

capacitance—that property of a system of conductors and dielectrics that permits the storage of electrical charge when a potential difference exists between the conductors. **E 1142**, E37

capacitance, *C*, *n*—that property of a system of conductors and dielectrics which permits the storage of electrically separated charges when potential differences exist between the conductors. **D 1711**, D09

capacitance—the same as **permittivity, relative**. **D 2864**, D27

capacitor tissue, *n*—very thin (5 to 50 μm) pure, nonporous paper used as the dielectric in capacitors, usually in conjunction with an insulating liquid. **D 1711**, D09

capacity, *n*—**fortensile testing machines**, the maximum force for which the machine is designed. **D 123**, D13

capacity, *n*—**for tensile testing machines**, the maximum force for which the machine is designed. **D 4849**, D13

capacity, *n*—the power which a component of a geothermal facility (e.g., a well, a reservoir, a power plant, or a direct-use facility) is capable of supplying at a point in time, assuming that other required components of the geothermal facility are available. Capacity is expressed in units of power (e.g., Megawatts, kilowatts). **E 957**, E44

cape, skin or leather—skin of South African hair sheep. Fine-grained leather, superior to wool sheep for gloves and garments. Loosely applied to all hair sheep, but should be qualified to show origin, if other than South African. **D 1517**, D31

cap flashing—See **flashing**. **D 1079**, D08

cap head—extra large, flat or dished, round or squared sheet-metal head applied to nail shank during nail manufacture. **F 547**, F16

capillary action—the phenomenon of intrusion of a liquid into interconnected small voids, pores, and channels in a solid, resulting from surface tension. **C 242**, C21

capillary action, *n*—the phenomenon of intrusion of a liquid into interconnected small voids, pores, and channels in a solid, resulting from surface tension. **C 1145**, C28

capillary action (capillarity)

capillary action (capillarity)—the rise or movement of water in the interstices of a soil or rock due to capillary forces. **D 653, D18**
capillary flow—see **capillary action**. **D 653, D18**
capillary fringe—the basal region of the vadose zone comprising sediments that are saturated, or nearly saturated, near the water table, gradually decreasing in water content with increasing elevation above the water table. **D 653, D18**
capillary fringe zone—the zone above the free water elevation in which water is held by capillary action. **D 653, D18**
capillary head, h (L)—the potential, expressed in head of water, that causes the water to flow by capillary action. **D 653, D18**
capillary migration—see **capillary action**. **D 653, D18**
capillary migration—of water, movement of water induced by the force of molecular attraction (surface tension) between the water and the material it contacts. Compare **rising damp**. **E 631, E06**
capillary rise (height of capillary rise), h_c (L)—the height above a free water elevation to which water will rise by capillary action. **D 653, D18**
capillary water—water subject to the influence of capillary action. **D 653, D18**
capital cost, n —the costs of acquiring, substantially improving, expanding, changing the functional use of, or replacing a building or building system. **E 833, E06**
capital cost, n (coûten capital (frais d'immobilisations))—costs of acquiring, substantially improving, expanding, changing the functional use of, or replacing, a **building** or **building system**. **E 631, E06**
capital cost, n (coûten capital (frais d'immobilisations))—costs of acquiring, substantially improving, expanding, changing the functional use of, or replacing, a **building** or **building system**. **E 1480, E06**
cap nail—bright, galvanized or electroplated, plain-shank or threaded, regular-stock-steel, $\frac{3}{4}$ by 0.105 to 6 by 0.135-in. nails with integral nominal 1-in. cap head and medium diamond point. **F 547, F16**
capped steel, n —a **rimmed steel** in which, during ingot solidification, the rimming action was limited by mechanical or chemical means. **A 941, A01**
cap rail—See **railing systems**. **E 631, E06**
cap rail—a secondary railing element, often a handrail, fastened to the top rail of a railing system. (Syn. *rail cap*.) **E 631, E06**
cap rail—a secondary railing element, often a handrail, fastened to the top rail of a railing system. (Syn. *rail cap*.) **E 1481, E06**
cap sheet—a granule-surfaced coated felt used as the top ply of a built-up roofing membrane. **D 1079, D08**
capsomere—a structural subunit of the outer protein shell (capsid) of a virus consisting of protein monomers. **E 1705, E48**
capstan head—See **dual head**. **F 547, F16**
carabiner, n —a self-closing, gated, load-bearing, connective device. **F 1773, F08**
carabiner, locking, n —a carabiner with a gate-locking mechanism. **F 1773, F08**
carabiner, nonlocking, n —a carabiner without a gate-locking mechanism. **F 1773, F08**
caravan, n —for purposes of a tire test, two or more vehicles running in the same time frame, over the same test course(s), under similar but independent conditions. **F 538, F09**
carbide—a compound of carbon with one or more elements, which, in customary formulation, are considered as being more positive than carbon. **E 7, E04**
carbide precipitation "sensitization"—condition which affects some austenitic stainless steels which have been subjected to temperatures in the critical range, typically 800° to 1400°F. Complex chromium carbides precipitate and reside primarily at the grain boundaries, causing deterioration of its corrosion resistance by depleting its adjacent areas of chromium. **F 1789, F16**
carbide, primary, n —carbide precipitated in cast iron during solidification. **A 644, A04**

carbohydrates—molecules consisting of carbon, hydrogen and oxygen that include celluloses, starches and sugars. **E 1705, E48**
carbohydrates not cellulose—the noncellulosic carbohydrates of a cellulosic material. **D 1695, D01**
carbon, n —an element, number 6 of the periodic table of elements, electronic ground state $1s^2 2s^2 2p^2$. **C 709, D02**
carbon, n —in *carbon and graphite technology*, an artifact consisting predominantly of the element carbon and possessing limited long range order. **C 709, D02**
carbon, n —an element, number 6 of the periodic table of elements, electronic ground state $1s^2 2s^2 2p^2$. **D 4175, D02**
carbon, n —in *carbon and graphite technology*, an artifact consisting predominantly of the element carbon and possessing limited long range order. **D 4175, D02**
carbon, n —in *manual transmissions and final drive axles*, a hard, dry, generally black or gray deposit that can be removed by solvents but not by wiping with a cloth. **D 4175, D02**
carbonate carbon, n —the carbon content present in the solid products derived from the combustion or reaction of coal, coal by-products, or coke as carbonates and which is noncombustible in standard industry practice. **D 121, D05**
carbonate hardness—the hardness in a water caused by carbonates and bicarbonates of calcium and magnesium. The amount of hardness equivalent to the alkalinity formed and deposited when water is boiled. In boilers, carbonate hardness is readily removed by blowdown. **D 6161, D19**
carbonation, n —*building (s)*, a process of chemical weathering whereby minerals that contain sodium oxide, calcium oxide, potassium oxide, or other basic oxides are changed to carbonates by the action of carbonic acid derived from atmospheric carbon dioxide and water. **E 631, E06**
carbon black, n —a material consisting essentially of elemental carbon in the form of near-spherical colloidal particles and coalesced particle aggregates of colloidal size, obtained by partial combustion or thermal decomposition of hydrocarbons. **D 1566, D11**
carbon black, n —an engineered material, primarily composed of elemental carbon, obtained from the partial combustion or thermal decomposition of hydrocarbons, existing as aggregates of aciniform morphology which are composed of spheroidal primary particles, uniformity of primary particle sizes within a given aggregate, and turbostratic layering within the primary particles. **D 3053, D24**
carbon black agglomerate, n —a cluster of physically bound and entangled aggregates. **D 3053, D24**
carbon black aggregate, n —a discrete, rigid, colloidal mass of extensively coalesced particles; it is the smallest dispersible unit. **D 3053, D24**
carbon black, carcass grade, n —a type of furnace carbon black having an average particle size in the range from 31 to 200 nm. **D 3053, D24**
carbon black, furnace, n —a type of carbon black produced by the decomposition reaction of hydrocarbons when injected into a high-velocity stream of combustion gases under controlled conditions. **D 3053, D24**
carbon black, hard, n —See **carbon black, tread grade**, the preferred term. **D 3053, D24**
carbon black microstructure, n —arrangement of carbon atoms within a carbon black particle. **D 3053, D24**
carbon black particle, n —a small spheroidally shaped (paracrystalline, non-discrete) component of a carbon black aggregate; it is separable from the aggregate only by fracturing. **D 3053, D24**
carbon black particle diameter, n —arithmetic average of the diameters of particles within a carbon black aggregate as measured by electron microscopy. **D 3053, D24**
carbon black pellet, n —a relatively large agglomerate mass that has been densified in spheroidal form to facilitate handling and processing. **D 3053, D24**

carbon black reinforcing, n—See **carbon black, tread grade**, the preferred term. **D 3053, D24**

carbon black, semi-reinforcing, n—See **carbon black, carcass grade**, the preferred term. **D 3053, D24**

carbon black, soft, n—See **carbon black, carcass grade**, the preferred term. **D 3053, D24**

carbon black structure, n—the quality of irregularity and deviation from sphericity of the shape of a carbon black aggregate. **D 3053, D24**

carbon black, surface activity, n—the inherent ability of the carbon black surface to interact physically or chemically, or both, with rubber or other molecules. **D 3053, D24**

carbon black, target value, n—a consensus value for selected primary properties on which producers center their manufacturing process and users center their specification. **D 3053, D24**

carbon black, thermal, n—a type of carbon black produced under controlled conditions by the thermal decomposition of hydrocarbons in the absence of air or flames. **D 1566, D11**

carbon black, thermal, n—a type of carbon black produced under controlled conditions by the thermal decomposition of hydrocarbons in the absence of air or flames. **D 3053, D24**

carbon black, thermal, acetylenic, n—a thermal black produced from acetylene gas. **D 1566, D11**

carbon black, thermal, acetylenic, n—a thermal black produced from acetylene gas. **D 3053, D24**

carbon black, tread grade, n—a type of furnace carbon black having an average particle size in the range from 1 to 30 nm. **D 3053, D24**

carbon black, typical value, n—a consensus value for those carbon black properties that are not specifically targeted for control in the manufacturing process and that are somewhat dependent upon the targeted properties. **D 3053, D24**

carbon black weight mean particle size, n—ratio equal to the sum of individual particle diameters, each raised to the fourth power, divided by the sum of the individual particle diameters, raised to the third power. **D 3053, D24**

carbon boron steel—carbon steel in which boron has been intentionally added at a minimum of 0.0005 % and a maximum of 0.003 % in order to obtain an expected hardenability. **F 1789, F16**

carbon-ceramic refractory, n—a manufactured refractory comprised of carbon (including graphite) and one or more ceramic materials such as fireclay and silicon carbide. **C 71, C08**

carbon disulfide (CS₂)—mol weight 76.14; clear, colorless, flammable, volatile liquid; boiling point, 45.6°C; freezing point, 111.6°C. **D 4790, D16**

carbon fiber precursor—a material from which carbon fiber is made by pyrolysis. Polyacrylonitrile, rayon, or pitch fibers are commonly used precursors. **D 3878, D30**

carbon foam, n—*in carbon and graphite technology*, a porous carbon product containing regularly shaped, predominantly concave, homogeneously dispersed cells which interact to form a three-dimensional array throughout a continuum material of carbon, predominantly in the non-graphitic state. The final result is either an open or closed cell product. **C 709, D02**

carbon foam, n—*in carbon and graphite technology*, a porous carbon product containing regularly shaped, predominantly concave, homogeneously dispersed cells which interact to form a three-dimensional array throughout a continuum material of carbon, predominantly in the non-graphitic state. The final result is either an open or closed cell product. **D 4175, D02**

carbon form, n—*as used in Test Method D 5061*, microscopically distinguishable carbonaceous textural components of coke, but excluding mineral carbonates. **D 121, D05**

carbon gel (carbon-rubber-gel), n—the portion of rubber that is not leached by a solvent under specified conditions, from an intimate mixture of carbon black and unvulcanized rubber. **D 1566, D11**

carbonitriding, n—**case hardening** in which a suitable steel object is heated above A_c_1 in a gaseous atmosphere of such composition as

to cause simultaneous absorption of carbon and nitrogen by the surface and, by diffusion, to create a concentration gradient.

A 941, A01

carbonized and neutralized wool, n—a term descriptive of scoured wool processed to destroy cellulosic impurities by treating with a mineral acid or an acid salt, drying and baking, crushing, and dusting out the embrittled cellulosic matter followed by neutralization of the acidified wool. **D 123, D13**

carbonized and neutralized wool, n—a term descriptive of scoured wool processed to destroy cellulosic impurities by treating with a mineral acid or an acid salt, drying and baking, crushing, and dusting out the embrittled cellulosic matter followed by neutralization of the acidified wool. **D 4845, D13**

carbonless manifold set—a set that contains multiple plies of carbonless paper consisting of one CB and one CF, or one CB, one or more CFBs and one CF. **F 549, F05**

carbonless paper—a sheet coated or treated to provide manifolding capability without the use of carbon paper interleaves. **F 549, F05**

carbon or carbon sheet—see **carbon paper**. **F 221, F05**

carbon paper—a sheet composed of a supporting substrate on one or both sides of which is a coating containing a transferable (usually colored) material. The coating is of such nature that it will transfer in part or entirely to a copy sheet at the point of pressure contact. **F 149, F05**

carbon paper—a sheet composed of a supporting substrate on one or both sides of which is a coating containing a transferable (usually colored) material. The coating is of such nature that it will transfer in part or entirely to a copy sheet at the point of pressure contact. (F 129) **F 221, F05**

carbon potential, n—the carbon content at the surface of a specimen of pure iron in equilibrium with the carburizing medium considered, and under the conditions specified. **A 941, A01**

carbon reduction process, n—a process to reduce the concentration of carbon in high-carbon fly ash. **E 2201, E50**

carbon refractory, n—a manufactured refractory comprised substantially or entirely of carbon (including graphite). **C 71, C08**

carbon refractory, anthracite-coal base, n—a manufactured refractory comprised substantially of calcined anthracite coal. **C 71, C08**

carbon refractory, graphite-base, n—a manufactured refractory comprised substantially of graphite. **C 71, C08**

carbon refractory, metallurgical-coke-base, n—a manufactured refractory comprised substantially of metallurgical coke. **C 71, C08**

carbon refractory, petroleum-coke-base, n—a manufactured refractory comprised substantially of calcined petroleum coke. **C 71, C08**

carbon residue, n—*in petroleum products*, the part remaining after a sample has been subjected to thermal decomposition. **D 4175, D02**

carbon residue, n—the residue formed by evaporation and thermal degradation of a carbon-containing material. **D 4175, D02**

carbon restoration, n—replacing the carbon lost from the surface layer in previous processing by carburizing this layer to substantially the original carbon level. **A 941, A01**

carbon steel, n—steel for which (1) no minimum content is specified for chromium, cobalt, molybdenum, nickel, titanium, tungsten, or zirconium, or any other element added to obtain a desired alloying effect; (2) for which the specified minimum for copper does not exceed 0.40 %; (3) for which the specified maximum for any of the following elements does not exceed these percentages: manganese 1.65 %, silicon 0.60 %, or copper 0.60 %; and (4) in which the incidental content of the following elements does not exceed these percentages: nickel, 0.25 %; chromium, 0.20 %; and molybdenum, 0.06 %.

A 902, A05

carbon steel, n—a steel that conforms to a specification that prescribes a maximum limit, by **heat analysis** in mass percent, of not more than: 2.00 for carbon and 1.65 for manganese, but does not prescribe a minimum limit for chromium, cobalt, molybdenum,

carbon steel, *n*

nickel, niobium (columbium), tungsten (wolfram), vanadium, or zirconium. **A 941, A01**

carbon steel—steel for which no minimum content is specified or required for chromium, molybdenum, nickel, or any other element added to obtain a desired alloying effect; or steel for which maximum content specified for manganese does not exceed 1.65 %. When specified, boron may be added to killed carbon steel with a maximum allowable of 0.003 %. **F 1789, F16**

carbon tissue—a substrate manufactured for use in the production of carbon paper. **F 221, F05**

carbonyl group—the bivalent radical, —CO—, especially as it occurs in aldehydes or ketones. **D 1695, D01**

carbonyl powder, *n*—a metal powder prepared by the thermal decomposition of a metal carbonyl. **B 243, B09**

carboxyhemoglobin saturation, *n*—the percent of blood hemoglobin converted to carboxyhemoglobin from reaction with inhaled carbon monoxide. **E 176, E05**

carboxyl group—the radical —COOH characteristic of most organic acids. **D 1695, D01**

carboxymethylcellulose, CMC—the common name for a cellulose ether of glycolic acid. It is usually marketed as a water-soluble sodium salt, more properly called sodium carboxymethylcellulose. In the early literature, it is sometimes called cellulose glycolate or cellulose glycolic acid. **D 1695, D01**

carboy, *n*—a container made of glass, ceramic, plastic, or metal, having a capacity of 5 to 15 gal (19 to 57 L) with the pouring and filling opening at the top. **D 996, D10**

carburing, *n*—a process in which an austenitized steel object is brought into contact with a carbonaceous environment of sufficient carbon potential to cause absorption of carbon at the surface and, by diffusion, to create a concentration gradient. **A 941, A01**

carcass, *n*—the fabric, cord, or metal reinforced section, or all three, of a rubber product as distinguished from the rubber tube, cover, or tread. **D 1566, D11**

carcass, *n*—see casing. **D 5681, D34**

carcass, *n*—of tire, the part of a tire structure that does not include the tread and sidewall rubber. **F 538, F09**

carcass, *n*—harvested animal, whether eviscerated or not.

carcass primal, n—basic major cuts into which carcasses and sides are separated.

carcass subprimal, n—smaller cuts derived from primal cuts.

F 2463, F10

carcinogen—an agent producing or inciting cancerous growth.

E 609, E35

carcinogen—cancer-causing agent.

F 1600, F20

carded wool, *n*—scoured wool which has been processed through a carding machine. **D 123, D13**

carded wool, *n*—scoured wool which has been processed through a carding machine. **D 4845, D13**

carding leather—a type of tannage of side leather used on the cards of textile machinery. **D 1517, D31**

cardiovascular tracing, *n*—a display of physiological patterns of the subject's relative blood volume and pulse rate. The cardiograph component records this activity. **E 2035, E52**

care and maintenance, *n*—effective cleaning to remove soil and maximize use life of garments while maintaining (not removing) protective properties. **F 1494, F23**

career apparel, *n*—garments, the styling and performance of which are designed for various end uses so as to be suitable for on-the-job wear in a variety of businesses and professions. (See also dress career apparel and vocational career apparel.) **D 123, D13**

career apparel, *n*—garments, the styling and performance of which are designed for various end uses so as to be suitable for on-the-job wear in a variety of businesses and professions. (See also dress career apparel and vocational career apparel.) **D 7022, D13**

care instructions, *n*—in textiles, a series of directions that describes practices which should refurbish a product without adverse effects

and warn against any part of the directions which one could reasonably be expected to use that may harm the item. **D 123, D13**

care instructions, *n*—in textiles, a series of directions that describes practices which should refurbish a product without adverse effects and warn against any part of the directions which one could reasonably be expected to use that may harm the item.

D 3136, D13

care label, *n*—in textiles, a label or other affixed instructions that report how a product should be refurbished. **D 123, D13**

care label, *n*—in textiles, a label or other affixed instructions that report how a product should be refurbished. **D 3136, D13**

care procedure, *n*—in textiles, one or more refurbishing methods to which products may be subjected for soil and stain removal and aesthetic improvement such as appearance restoration or hand. **D 123, D13**

care procedure, *n*—in textiles, one or more refurbishing methods to which products may be subjected for soil and stain removal and aesthetic improvement such as appearance restoration or hand. **D 3136, D13**

care symbol, *n*—a pictorial symbol that gives directions for refurbishing a consumer textile product. **D 123, D13**

car nail—light-duty or heavy-duty, bright or coated, barbed or helically threaded, regular-stock-steel, 1½ by 0.105-in. (light) or 0.135-in. (heavy) to 6 by 0.225-in. (light) or 0.244-in. (heavy) nails and screw nails with flat or oval countersunk head and medium diamond point. Also, light-duty or heavy-duty, coated, barbed or helically threaded, regular-stock-steel, 1½ by 0.092 or 0.106 to 6 by 0.207 or 0.225-in. nails with oval countersunk 1⁄₄ to 1⁄₃₂-in. head and medium diamond point. **F 547, F16**

carnival—a mobile enterprise principally devoted to offering amusement or entertainment to the public in, upon, or by means of portable amusement rides or devices or temporary structures in any number or combination, whether or not associated with other structures or forms of public attraction. **F 747, F24**

carnival glass—glass having an iridescent coloration obtained by firing metallic salts applied onto a colored glass body. See lusters. **C 162, C14**

C₉ aromatic resin, *n*—a resin produced by the cationic polymerization of heavy aromatic steam-cracker or coal-tar fractions.

D 6440, D01

carpet, *n*—all textile floor coverings not designated as rugs.

D 123, D13

carpet, *n*—all textile floor coverings not designated as rugs.

D 5684, D13

carpet-embedded dust—See dust.

D 1356, D22

carpet lay, *n*—orientation of the pile of a carpet (or fabric) relative to the backing; the tendency of a carpet's pile to lean uniformly in a specific direction relative to the backing. **F 395, F11**

carpet module, *n*—textile floor covering sections usually having dimensions of less than 1 m². **D 123, D13**

carpet module, *n*—textile floor covering sections usually having dimensions of less than 1 m². **D 5684, D13**

carpet shampoo, n—See shampoo.

D 5253, D13

carpet sweep, *v*—remove loose soil particles and lint from the textile floor covering surface using a carpet sweeper. **D 5253, D13**

carpet sweeper, *n*—a manually powered machine which has rotary brushes and which is used for light surface cleaning of carpets and rugs. **D 123, D13**

carpincho leather—leather from the skin of the carpincho, a large South American rodent. The skin is used in making glove leather, usually chrome-tanned and washable. In the glove-leather trade, it is classified as a pigskin. It resembles pigskin in appearance, a characteristic being the occurrence of bristle holes in straight-line groups, usually five holes in a group. **D 1517, D31**

carriage—the device for holding the food product that is manually or automatically reciprocated to bring the product in contact with the knife. **F 1827, F26**

- carriage return**, *n*—an operation which advances the cursor to the beginning of a new line. (See **CR**.) **F 1457, F05**
- carrier**, *n*—*in braiding machinery*, that part of a braiding machine that holds the package of yarn, thread, or cord, and carries the yarn when the machine is operated. **D 123, D13**
- carrier**, *n*—*in braiding machinery*, that part of a braiding machine that holds the package of yarn, thread, or cord, and carries the yarn when the machine is operated. **D 7018, D13**
- carrier**—(1) a gas, liquid, or solid used to propel or transport a pesticide; (2) an organism that bears an infectious agent, but that shows no marked symptoms of the disease caused by that agent. **E 609, E35**
- carrier**—See **scrim**. **E 631, E06**
- carrier**—a liquid, either aqueous or nonaqueous, in which liquid penetrant examination materials are dissolved or suspended. **E 1316, E07**
- carrier**—See **scrim**. **E 1749, E06**
- carrier**—that substance in a developer that conveys a toner, but does not itself become a part of the image in the finished print. In a liquid developer the carrier may be called a dispersant. **F 335, F05**
- carrier detect**, *n*—a communication control character used in an RS232 system to signal the sender that the receiver is on-line. (See **CD**.) **F 1457, F05**
- carrier fluid**—the fluid in which fluorescent and nonfluorescent magnetic particles are suspended to facilitate their application. **E 1316, E07**
- carrier fluid**, *n*—*in impingement or slurry erosion*, fluid medium that transports impinging solid or liquid particles and that gives the particles their momentum relative to the solid surface on which they are impinging. **G 40, G02**
- carrier return**, *n*—a code which instructs the printer to begin a new line. **F 1457, F05**
- carry-in**—manual Lehr loading. **C 162, C14**
- carrying capacity**, *n*—(1) The theoretical maximum population of a biological organism that an ecosystem can sustain indefinitely. **E 2114, E06**
- carton**, *n*—a folding **box**, generally made from **boxboard** for merchandising consumer quantities of products (for example, shelf packages or prime packages). **D 996, D10**
- carton**—See **packaging**. **F 547, F16**
- cartridge**—see **spiral-wound cartridge**. **D 6161, D19**
- cartridge**—a case containing an inked ribbon correction ribbon, or dry ink toner for insertion into an image producing device. **F 221, F05**
- car vacuum cleaner**, *n*—a relatively small, lightweight, portable cleaner that is designed for operation from a d-c power source, generally a 12-V automotive battery (see also **hand-held vacuum cleaner**). **F 395, F11**
- cascade development**—development in which dry toner and carrier are drawn over an electrostatic image by gravity. **F 335, F05**
- cascade impactor**—See **impactor**. **D 1356, D22**
- cascade mixing**—the rearrangement of the constituents of a solid, within the penetration depth of an incident particle, caused by collisions between the incident particles and the atoms of the solid. **E 673, E42**
- cascading**, *n*—a condition where ink is absorbed into the substrate before it has time to spread, causing negative stitch lines or low density bands between print swaths in solid image areas. **F 1857, F05**
- cascading booms**—booming configuration formed by positioning two or more booms in a deflection mode such that successive booms progressively move oil to the desired area. **F 818, F20**
- cascading water**—perched ground water that enters a well casing via cracks or uncovered perforations, trickling, or pouring down the inside of the casing. **D 653, D18**
- case**, *n*—*in casehardening*, the outer portion that has been made harder than the **core** as a result of altered composition or microstructure, or both, from treatments such as **carburizing**, **nitriding**, and **induction hardening**. **A 941, A01**
- case**, *n*—*in textiles*, a shipping unit, usually a carton, box, bale, or other container holding a number of yarn packages. **D 123, D13**
- case**—See **container**. **D 996, D10**
- case**, *n*—*in textiles*, a shipping unit, usually a carton, box, bale, or other container holding a number of yarn packages. **D 4849, D13**
- case**—*in a ferrous alloy*, the outer portion that has been made harder than the inner portion (see **core**) as a result of altered composition, or structure, or both, from treatments such as carburizing, nitriding, and induction hardening. **E 7, E04**
- cased glass**—glassware whose surface layer has a different composition from that of the main glass body. **C 162, C14**
- casehardened**—a term sometimes used for tempered glass. (See **tempered glass**.) **C 162, C14**
- case-hardened, surface-hardened**—surface of steel nail carburized and subsequently hardened, by suitable heat treatment, leaving a soft core. **F 547, F16**
- case hardening**, *n*—a generic term covering any of several processes applicable to **steel** that change the chemical composition or microstructure, or both, of the surface layer. **A 941, A01**
- casehardening**—a condition of stress and set in wood due to drying in which outer fibers are under compressive stress and inner fibers under tensile stress, a condition that often exists during subsequent processing. In commerce, the term often connotes a degree of severity regarded as detrimental in use. **D 9, D07**
- casein adhesive**, *n*—an aqueous colloidal dispersion of casein that may be prepared with or without heat, may contain modifiers, inhibitors, and secondary binders to provide specific adhesive properties, and includes a subclass, usually identified as *casein glue*, that is based on a dry blend of casein, lime, and sodium salts, mixed with water and prepared without heat. **D 907, D14**
- case leather**—see **bag leather**. **D 1517, D31**
- case liner**—See **liner**. **D 996, D10**
- cash flow**—the stream of monetary (dollar) values—costs and benefits—resulting from a project investment. **E 631, E06**
- cash flow**, *n*—the stream of monetary (dollar) values—costs and benefits—resulting from a project investment. **E 833, E06**
- cashmere**, *n*—*in roving, yarn, or fabrics*, cashmere hair or products made therewith having a cashmere coarse-hair content not exceeding a specified maximum percentage by length. **D 123, D13**
- cashmere**, *n*—*in roving, yarn, or fabrics*, cashmere hair or products made therewith having a cashmere coarse-hair content not exceeding a specified maximum percentage by length. **D 4845, D13**
- cashmere coarse-hair**, *n*—those coarse fibers in cashmere hair having widths greater than 30 μm . **D 123, D13**
- cashmere coarse-hair**, *n*—those coarse fibers in cashmere hair having widths greater than 30 μm . **D 4845, D13**
- cashmere coarse-hair content**, *n*—the total length of the cashmere coarse-hair fibers that are present, expressed as a percentage of the total length of all the cashmere hair fibers; that is, the percentage by length of cashmere coarse-hair in cashmere hair. **D 123, D13**
- cashmere coarse-hair content**, *n*—the total length of the cashmere coarse-hair fibers that are present, expressed as a percentage of the total length of all the cashmere hair fibers; that is, the percentage by length of cashmere coarse-hair in cashmere hair. **D 4845, D13**
- cashmere coarse-hair content**, *n*—the total length of the cashmere coarse-hair fibers that are present, expressed as a percentage of the total length of all the cashmere hair fibers; that is, the percentage by length of cashmere coarse-hair in cashmere hair. **D 4845, D13**
- cashmere down**, *n*—those fibers in cashmere hair widths of 30 μm or less. **D 123, D13**
- cashmere down**, *n*—those fibers in cashmere hair having widths of 30 μm or less. **D 4845, D13**
- cashmere hair**, *n*—the fibers produced by a form of goat (*Capra hircus*) indigenous to Asia and known as the cashmere goat. **D 123, D13**
- cashmere hair**, *n*—the fibers produced by a form of goat (*Capra hircus*) indigenous to Asia and known as the cashmere goat. **D 4845, D13**
- casing**—pipe, finished in sections with either threaded connections or bevelled edges to be field welded which is installed temporarily or

casing

permanently to counteract caving, to advance the borehole, or to isolate the zone being monitored, or combination thereof.

D 653, D18

casing, n—the basic tire structure excluding the tread (Syn. *carcass*).

D 5681, D34

casing, n—*of a tire*, a used or treadless tire to which additional tread rubber may be attached for the purpose of retreading. **F 538, F09**

casing head—deep countersunk (32°) head with flat or cupped, circular top surface as found on casing nails to facilitate flush driving of nail. **F 547, F16**

casing nail—bright or galvanized, slender, regular-stock-steel, 1 by 0.067 to 3½ by 0.135-in. nails with flat or cupped 0.099 to 0.177-in. casing head and medium diamond point for countersinking where concealment is important. **F 547, F16**

casing, protective—a section of larger diameter pipe that is emplaced over the upper end of a smaller diameter monitoring well riser or casing to provide structural protection to the well and restrict unauthorized access into the well. **D 653, D18**

casing, surface—pipe used to stabilize a borehole near the surface during the drilling of a borehole that may be left in place or removed once drilling is completed. **D 653, D18**

case—See **barrel**. **D 996, D10**

cassette—an assembly of membrane elements (or modules), membrane aerators, air and permeate manifolds, and hardware in the cage; this is how the membranes are installed or removed from the process tank. **D 6161, D19**

cassette—a light-tight film or plate holder. **E 7, E04**

cassette—a light-tight container for holding radiographic recording media during exposure, for example, film, with or without intensifying or conversion screens. **E 1316, E07**

cassette—a light-tight device for holding film or conversion screens and film in close contact during exposure. **E 1316, E07**

cassette—see **cartridge**. **F 221, F05**

cassiterite (SnO₂)—an inorganic mineral of the tetragonal form used as a source of tin and tin oxide. **C 242, C21**

CASS test (copper accelerated salt spray)—an accelerated corrosion test for some electrodeposits and for anodic coatings on aluminum (see Test Method B 368). **B 374, B08**

cast—an impression or mold taken from a person or thing. **F 869, F08**

castable, n—a combination of refractory grain and a suitable amount of bonding agent that, after the addition of a proper liquid, is generally poured into place to form a refractory shape or structure which becomes rigid because of chemical action (see Classification C 401). **C 71, C08**

castable, n—a combination of filler and suitable binder that is generally poured or compacted into place and which hardens. **C 904, C03**

cast analysis—Deprecated term. Use the preferred term **heat analysis**. **A 941, A01**

cast film—a film made by depositing a layer of plastic, either molten, in solution, or in a dispersion, onto a surface, solidifying and removing the film from the surface. **D 883, D20**

cast film, n—a film made by depositing a layer of plastic, either molten, in solution, or in a dispersion, onto a surface, solidifying the deposit and removing the film from the surface. **F 1251, F04**

casting—a general term for a metal object produced at or near-finished shape by pouring or otherwise introducing molten metal into a mold and allowing it to solidify. **B 846, B05**

casting, n—metal object, at or near dimensions shape, produced by introducing molten metal into a mold or a die and allowing it to solidify.

die casting, n—casting produced by introducing molten metal under substantial pressure into a metal die and characterized by a high degree of fidelity to the die cavity.

investment casting, n—casting produced by surrounding (investing) an expendable pattern (usually wax or plastic) with a refractory slurry that sets at room temperature, after which the pattern is removed through the use of heat, and

the resultant cavity is filled with molten metal and allowed to solidify.

permanent mold casting, n—casting produced by introducing molten metal by gravity or low pressure into a mold constructed of durable material, usually iron or steel, and allowing it to solidify.

sand casting, n—casting produced by pouring molten metal into a sand mold and allowing it to solidify.

semi-permanent mold casting, n—permanent mold casting which is made using an expendable core such as sand. **B 881, B07**

casting—a process of shaping glass by pouring molten glass into molds, onto tables, or between rollers. **C 162, C14**

casting—a process for forming ceramic ware by introducing a body slip into a porous mold which absorbs sufficient water (or other liquid) from the slip to produce a semirigid article.

drain casting (hollow casting)—forming ceramic ware by introducing a body slip into an open porous mold, and then draining off the remaining slip when the case has reached the desired thickness.

solid casting—forming ceramic ware by introducing a body slip into a porous mold which usually consists of two major sections, one section forming the contour of the outside and the other forming the contour of the inside of the ware and allowing a solid cast to form between the two mold faces. **C 242, C21**

casting, centrifugal—a casting produced in a cylindrical mold rotating on its axis with the major axis of the product coinciding with the axis of rotation. The axis of rotation may be horizontal, vertical, or any angle in between. **B 846, B05**

casting, centrifuged—a casting produced in a mold, a number of which may be mounted around a central sprue. The molds are rotated, in a vertical position, about a central axis concentric with the central sprue. **B 846, B05**

casting, continuous—a casting produced by the continuous pouring and solidification of molten metal through a water-cooled mold which determines the cross-sectional shape. The length of the product is not restricted by mold dimensions. **B 846, B05**

casting, drain (hollow casting), v—forming ceramic ware by introducing a body slip into an open, porous mold, and then draining off the remaining slip when the cast piece has reached the desired thickness. **(C21, C 242)** **C 1145, C28**

casting, permanent mold—a product produced in a reusable mold constructed of a durable material, usually iron or steel, with the molten metal being introduced by gravity, low-pressure or vacuum. **B 846, B05**

casting, sand—a casting produced in a sand mold. **B 846, B05**

casting, semicentrifugal—a casting produced in a manner similar to the centrifugal casting except that a central core is used to allow the formation of other than a cylindrical inside surface. The axis of rotation is always vertical. **B 846, B05**

cast-in-place anchor—anchor installed in formwork prior to placement of concrete. **E 2265, E06**

cast iron, n—a generic term for a series of alloys primarily of iron, carbon, and silicon in which the carbon is in excess of the amount which can be retained in solid solution in austenite at the eutectic temperature. **A 644, A04**

cast iron enamel—a porcelain enamel specifically designed for application to cast iron. **C 286, B08**

cast lead head—half-round or bell-shaped lead head serving as head and washer requiring approximately 25 % more lead than compressed lead head. (See **lead head**.) **F 547, F16**

cast replica—See **replica**. **E 7, E04**

cast structure—the structure, on a macroscopic or microscopic scale, of a casting. **E 7, E04**

catalyst—a substance whose presence initiates or changes the rate of a chemical reaction, but does not itself enter into the reaction. **C 904, C03**

catalyst—a material that causes chemical reactions to begin. **D 653, D18**

catalyst, *n*—a substance that initiates or changes the rate of chemical reaction, but is not consumed or changed by the reaction. (See also **hardener**.) (Compare **inhibitor**.) **D 907, D14**

catalyst—a substance whose presence initiates or changes the rate of a chemical reaction, but does not itself enter into the reaction. **D 6161, D19**

catalyst—a substance that increases the rate of a chemical reaction; used extensively in polymerization reactions. **E 631, E06**

catalyst—a substance that increases the rate of a chemical reaction; used extensively in polymerization reactions. **E 1749, E06**

catalyst bed support—an essentially inert plate, grid, particulate bed, or other structural component designed to hold up or bear a quantity of catalyst in a catalytic reactor. **D 3766, D32**

catalyst carrier—a solid, generally porous material upon the surface or into the voids of which catalytic materials are placed to create the desired catalyst. **D 3766, D32**

catalyst substrate—less preferred alternative term for **catalyst carrier**. **D 3766, D32**

catalyst support—less preferred alternative term for **catalyst carrier**. **D 3766, D32**

catalyst system—those materials that, in combination, cause chemical reactions to begin; catalyst systems normally consist of an initiator (catalyst) and an activator. **D 653, D18**

cataphoresis—See **electrophoresis**. **B 374, B08**

catastrophic period, *n*—*in cavitation or liquid impingement erosion*, a stage during which the erosion rate increases so drastically that continued exposure threatens or causes gross disintegration of the exposed surface. This stage is not inevitable; it is observed most commonly with some brittle materials. When it does occur, it may begin during any stage of the more common erosion rate-time pattern. **G 40, G02**

catastrophic wear, *n*—rapidly occurring or accelerating surface damage, deterioration, or change of shape caused by wear to such a degree that the service life of a part is appreciably shortened or its function is destroyed. **G 40, G02**

catcher blade—(also known as a recovery blade or slip sheet), a strip of semi-rigid plastic material that guides the waste toner removed from the photoreceptor into the waste bin. **F 335, F05**

catch up, *n*—a condition that occurs when the non-image area of the plate becomes ink receptive. See **scum**. **D 6488, D01**

category, *n*—*in engine oils*, a designation such as SH, SJ, CF-4, CF, CF-2, CG-4, Energy Conserving, and so forth for a given level of performance in specified engine tests. **D 4175, D02**

catenary:

filament catenary—the difference in length of the filaments in a specified length of tow, end, or strand as a result of unequal tension; the tendency of some filaments in a taut horizontal tow, end, or strand to sag lower than others.

roving catenary—the difference in length of the ends, tows, or strands in a specified length of roving as a result of unequal tension; the tendency of some ends, tows, or strands in a taut horizontal roving to sag lower than others. **D 3878, D30**

catenary configuration (aka “U,” “J” configuration)—booming configuration formed by towing or anchoring each end of a length of boom, resulting in a characteristic “U” or “J” shape. **F 818, F20**

catenary drag force—load imposed on a boom, deployed in a catenary configuration, resulting from towing, current, and/or wind forces. **F 818, F20**

catenary length, *n*—the difference between the length of the shortest and the longest component in a plied yarn or cables cord after twisting. **D 6477, D13**

cat eye—an imperfection; an elongated bubble containing a piece of foreign matter. **C 162, C14**

cathode—the electrode in electrolysis at which positive ions are discharged, negative ions are formed, or other reducing actions occur. **B 374, B08**

cathode—unmelted, electrodeposited, and somewhat rough flat plate normally used for melting. The customary size is about 3 ft (0.914 m) square, about 1/2 to 7/8 in. (12.7 to 22.2 mm) thick, weighing up to about 300 lb (136 kg) and may have hanging loops attached. Cathodes may also be cut to smaller dimensions. **B 846, B05**

cathode—negative electrode. **D 6161, D19**

cathode—the electrode of an electrolytic cell at which reduction is the principal reaction. (Electrons flow toward the cathode in the external circuit.) **G 15, G01**

cathode efficiency—the current efficiency of a specified cathodic process. **B 374, B08**

cathode fall—the potential difference between the cathode and the electric discharge plasma. **B 542, B02**

cathode film—the layer of solution in contact with the cathode that differs in composition from that of the bulk of the solution. **B 374, B08**

cathode lens—a lens field terminated on one side by a surface at zero potential (cathode) normal to the optic axis. A cathode lens occurs in any system in which a cathode is imaged by its own electron emission, be it thermionic, photoelectric, secondary, or field emission. **E 7, E04**

cathode polarization—See **polarization**. **B 374, B08**

cathodic (cathode) material transfer—see **material transfer**. **B 542, B02**

cathodic corrosion—corrosion of a metal when it is a cathode. (It usually happens to metals because of a rise in pH at the cathode or as a result of the formation of hydrides.) **G 15, G01**

cathodic inhibitor—a corrosion inhibitor whose primary action is to slow the kinetics of the cathodic reaction, producing a negative shift in corrosion potential. **G 15, G01**

cathodic polarization—the change of the electrode potential in the active (negative) direction due to current flow. (See **polarization**.) **G 15, G01**

cathodic protection, *n*—protection of a metal from corrosion by making it a cathode through the galvanic sacrifice of a less noble metal or through an impressed electric current. **B 899, B02**

cathodic protection—a technique to reduce the corrosion rate of a metal surface by making it the cathode of an electrochemical cell. **G 15, G01**

catholyte—the portion of the electrolyte in the vicinity of the cathode; in a divided cell the portion of the cathode side of the diaphragm. **B 374, B08**

catholyte—the electrolyte adjacent to the cathode of an electrolytic cell. **G 15, G01**

cation—a positively-charged ion. **B 374, B08**

cation—an ion that moves, or would move toward a cathode; thus nearly always synonymous with positive ion. **D 653, D18**

cation—positively charged ion. **D 6161, D19**

cation—a positively charged ion. **G 15, G01**

cation conductivity, *n*—a conductivity measurement performed on water after cations have been exchanged for protons using cation exchange media. **D 1129, D19**

cation exchange—see **base exchange**. **D 653, D18**

cation exchange capacity (CEC)—the total capacity of a porous system to absorb cations from a solution. **D 653, D18**

cation-exchange material, *n*—a material capable of the reversible exchange of positively charged ions. **D 1129, D19**

cation exchange material—a material capable of the reversible exchange of positively charged ions. **D 6161, D19**

cation exchange membrane—membrane containing fixed anionic charges and mobile cations that can be exchanged with other cations present in an external fluid in contact with the membrane. **D 6161, D19**

cationic detergent—under **detergent**, see **cationic detergent**. **D 459, D12**

cationic emulsion, *n*—a type of emulsion such that a particular emulsifying agent establishes a predominance of positive charges on the discontinuous phase. **D 8, D04**

cationic emulsion—an emulsion in which the emulsifying system establishes a predominance of positive charges on the discontinuous phase. **D 1079, D08**

cationic polyelectrolyte—a polymer containing positively charged groups used for coagulation/flocculation, usually dimethyl - aminoethyl methacrylate or dimethyl-aminoethyl acrylate. See **polyelectrolyte**. **D 6161, D19**

cationic surfactant—a chemical compound that produces positively charged surface active ions in solution. **D 459, D12**

cationic surfactant—a surface-active agent in which the active portion of the molecule containing the lipophilic segment forms exclusively a positive ion (cation) when placed in aqueous solution. **E 1519, E35**

cat scratch—an imperfection; surface irregularities on glassware resembling the marks of a cat's claws. **C 162, C14**

caul, n—a sheet of material employed singly or in pairs in hot or cold pressing of assemblies being bonded. **D 907, D14**

caul, n—a flat or contoured tool used to distribute pressure and to define a surface for the top of the laminate during laminate consolidation or cure. **D 3878, D30**

caul—a sheet of material employed singly or in pairs in hot or cold pressing of assemblies being bonded. **E 631, E06**

caul—a sheet of material employed singly or in pairs in hot or cold pressing of assemblies being bonded. **E 1749, E06**

caulk, v—in *building construction*, to install or apply a sealant across or into a joint, crack, or crevice. **C 717, C24**

caulk, n—See **sealant**. **C 717, C24**

caulk, v—to fill joints, **cracks**, or crevices in order to prevent the passage of air or water. **E 631, E06**

caulking, n—See **sealant**. **C 717, C24**

caulking, n—a material ranging in physical characteristics from plastic, to solid, to preformed, used to seal and waterproof joints and overlaps in structures, other assemblies, or portions thereof where movement may occur. **C 1154, C17**

caulking—a composition of vehicle and pigment, used at ambient temperatures for filling joints, that remains plastic for an extended time after application. **D 1079, D08**

caulking—material ranging in physical characteristics from plastic, to solid, to preformed, used to seal and waterproof joints and overlaps in structures, other assemblies or portions thereof where movement may occur. **D 2946, C17**

caulking compound, n—See **sealant**. **C 717, C24**

caulking compound, n—a soft, plastic material, consisting of pigment and vehicle, used for sealing joints in buildings and other structures where normal structural movement may occur. **D 16, D01**

cauls, n—sheets of material employed singly or in pairs in hot or cold pressing of assemblies being bonded. Cauls are employed usually to protect either the faces or the press platen or both against marring and staining, to prevent sticking, to facilitate press loading, or to impart a desired surface texture or finish, and to provide uniform pressure distribution.

NOTE—Cauls may be made of any material such as aluminum, stainless steel, hardboard, fiberboard, or plastic, with the length and width generally equal to the platen size of the press in which they are employed. **D 1038, D07**

caustic cracking—stress corrosion cracking of metals in caustic solutions. (See also **stress-corrosion cracking**.) **G 15, G01**

caustic dip—in *diffusion coatings*, a strongly alkaline treatment applied by dip or spray for neutralizing acid residues. **B 374, B08**

caustic embrittlement, n—a form of metal failure that occurs in steam boilers at riveted joints and at tube ends, the cracking being predominantly intercrystalline. **D 1129, D19**

caustic embrittlement—See **caustic cracking**. **G 15, G01**

cave ice—ice formed in an open or closed cave. **D 7099, D18**

caves or washouts, n—zones of increased hole diameter caused by rock fragments that fall from the walls of a borehole and can block

the hole or contaminate the cuttings and which erode or abrade the sidewall of the borehole by the action of the drilling. These zones can affect the accuracy of certain geophysical logs (especially density). Corrections to other geophysical logs can be made if a caliper log is available. The most common causes of caves or washouts include soft or fractured lithologies, the presence of water-producing zones, and the downhole pressure of the drilling medium (fluid or air) that often causes differential erosion of various strata within the borehole. **D 121, D05**

caving; sloughing—the inflow of unconsolidated material into a borehole which occurs when the borehole walls lose their cohesive strength. **D 653, D18**

cavitating disk device (or apparatus), n—a flow cavitation test device in which cavitating wakes are produced by holes in, or protuberances on, a disk rotating within a liquid-filled chamber. Erosion test specimens are attached flush with the surface of the disk, at the location where the bubbles are presumed to collapse. **G 40, G02**

cavitating jet, n—a continuous liquid jet (sometimes submerged) in which cavitation is induced by the nozzle design, or sometimes by an obstruction placed in the center of the flow passage. **G 40, G02**

cavitating wake, n—See **flow cavitation**. **G 40, G02**

cavitation, n—the formation of vapor-filled cavities in the interior or on the solid boundaries of liquids in motion where the pressure is reduced to a critical value without a change in ambient temperature. **E 1620, E29**

cavitation—the formation and rapid collapse within a liquid of cavities or bubbles that contain vapor or gas or both. **G 15, G01**

cavitation, n, n—the formation and subsequent collapse, within a liquid, of cavities or bubbles that contain vapor or gas or both. **G 40, G02**

cavitation cloud, n—a collection of a large number of cavitation bubbles. The bubbles in a cloud are small, typically less than 1 mm (0.04 in.) in cross section. A surface that is being eroded by cavitation is usually obscured by a cavitation cloud. **G 40, G02**

cavitation corrosion, n—a form of localized, accelerated corrosion characterized by deep pitting and caused by high mechanical forces resulting from coolant vapor bubble collapse at the surface of the metal. **D 4725, D15**

cavitation corrosion—the conjoint action of cavitation-erosion and corrosion. **G 15, G01**

cavitation damage—the degradation of a solid body resulting from its exposure to cavitation. (This may include loss of material, surface deformation, or changes in properties or appearance.) **G 15, G01**

cavitation damage, n—See **damage**. **G 40, G02**

cavitation-erosion—loss of material from a solid surface due to mechanical action of continuing exposure to cavitation. **G 15, G01**

cavitation erosion, n—progressive loss of original material from a solid surface due to continued exposure to cavitation. **G 40, G02**

cavitation erosion corrosion, n—the mechanical removal of protective films on metal by the formation and collapse of vapor bubbles in a liquid, and the abrasive action of a liquid, which may contain suspended solids, moving at high velocity. **D 4725, D15**

cavitation erosion test, n—a procedure whereby the surface of a solid is subjected to cavitation attack under specified, or measurable, or at least repeatable conditions. **G 40, G02**

cavitation number, σ , n—a dimensionless number that measures the tendency for cavitation to occur in a flowing stream of liquid, and that is computed from the equation:

$$\sigma = \left(P_o - P_v \right) / \frac{1}{2} \rho V_o^2$$

where:

P_v = vapor pressure,

P_o = static pressure in the stream in an undisturbed state,

V_o = undisturbed stream velocity, and

ρ = liquid density.

- G 40, G02**
- cavitation tunnel, n**—a flow cavitation test facility in which liquid is pumped through a pipe or tunnel, and cavitation is induced in a test section by conducting the flow through a constriction, or around an obstacle, or a combination of these. **G 40, G02**
- cavity**—a natural underground opening that may be small or large. **D 653, D18**
- cavity**—underground opening created by a fully contained explosive. (ISRM) **D 653, D18**
- cavity, n**—in specimen preparation, the part of the hollow space of a mold that forms one specimen. **D 883, D20**
- cavity**—that portion of the oven in which food may be heated, cooked, or defrosted. **F 1827, F26**
- CB**—an abbreviation for coated back, referring to a carbonless paper of the two-coat, transfer type. **F 549, F05**
- “C” blade**—blade clincher resembling the letter “C”; designed to fasten partially overlapping container panels. **F 592, F16**
- CBR**—an abbreviation for *chemical, biological, radiological*. **E 631, E06**
- CBR**—an abbreviation for *chemical, biological, radiological*. **E 1749, E06**
- CCITT**—abbreviation for *Comite Consultatif International Telegraphique et Telephonique* (Consultive Committee for International Telephone and Telegraph). **F 1457, F05**
- CD**—abbreviation for **carrier detect**. **F 1457, F05**
- CED** (*cupriethylenediamine*) **viscosity**—see **viscosity, cupriethylene-diamine**. **D 1695, D01**
- ceiling limit**—an exposure which shall not be exceeded during any part of the workday. If instantaneous monitoring is not feasible, then the ceiling limit shall be assessed as a 15-min time-weighted average exposure which shall not be exceeded at any time over a working day except for substances which cause immediate irritation upon short exposure. **E 1542, E34**
- ceiling protective membrane, n**—a ceiling membrane attached to or suspended from the structural members of the floor or ceiling assembly, usually by hanger wire or threaded rods, consisting of a grid suspension system with lay-in ceiling panels or a grid of steel furring channels to which the ceiling membrane is directly attached, intended to provide fire protection, acoustical and or aesthetic enhancements, or both. **E 176, E05**
- cell, n**—a single small cavity surrounded partially or completely by walls. **C 717, C24**
- cell**—a general term for the minute units of wood structure having distinct cell walls and cell cavities including wood fibers, vessel segments, and other elements of diverse structure and function. **D 9, D07**
- cell, n**—a small cavity surrounded partially or completely by walls. **D 883, D20**
- cell, n**—a single small cavity surrounded partially or completely by walls. **D 1566, D11**
- cell, n**—a portion of a landfill that is isolated, usually by means of soil or an impermeable barrier, from its surroundings. **E 2201, E50**
- cell, n**—a small partially or completely enclosed cavity. (D20) **F 412, F17**
- cell, n**—a small partially or completely enclosed cavity. **F 1251, F04**
- cell, n**—“the smallest structural unit of an organism that is capable of independent functioning, consisting of one or more nuclei, cytoplasm, and various organelles, all surrounded by a semipermeable cell membrane”. **F 2312, F04**
- cellar**—a space wholly or partly below **average grade** having more than one half of its clear height (measured from floor level to ceiling level) below **average grade**. **E 631, E06**
- cellar**—See **space categories**. **E 631, E06**
- cellar**—See **building space**. **E 631, E06**
- cellar**—See **space categories**. **E 1480, E06**
- cell (bubble), n**—in *carbon and graphite technology*, a single small cavity formed by gaseous displacement in a precursor material in its plastic state, and surrounded completely by its walls when formed. Cells can be open or closed. **C 709, D02**
- cell (bubble), n**—in *carbon and graphite technology*, a single small cavity formed by gaseous displacement in a precursor material in its plastic state, and surrounded completely by its walls when formed. Cells can be open or closed. **D 4175, D02**
- cell, closed**—a cell totally enclosed by its walls and hence not interconnecting with other cells. (ISO) (See **cell** and **cell, open**.) **D 883, D20**
- cell, closed, n**—a cell totally enclosed by its walls, hence not interconnecting with other cells. **D 1566, D11**
- cell, closed**—a cell totally enclosed by its walls and hence not interconnecting with other cells. (ISO, D20)(See also **cell** and **cell, open**.) **F 412, F17**
- cell, closed**—see **closed cell**. **F 1251, F04**
- cell count, n**—in *carbon and graphite technology*, in closed-cell foams, the number of cells aligned in one plane in one linear inch, as determined by stereoscopic image analysis. **C 709, D02**
- cell count, n**—in *carbon and graphite technology*, in closed-cell foams, the number of cells aligned in one plane in one linear inch, as determined by stereoscopic image analysis. **D 4175, D02**
- cell culture, n**—the *in vitro* growth or maintenance of cells. **F 2312, F04**
- cell, open**—a cell not totally enclosed by its walls and hence interconnecting with other cells. (See **cell** and **cell, closed**.) **D 883, D20**
- cell, open, n**—a cell not totally enclosed by its walls and hence interconnecting with other cells. **D 1566, D11**
- cell, open**—a cell not totally enclosed by its walls and hence interconnecting with other cells. (D20) (See also **cell** and **cell, closed**.) **F 412, F17**
- cell, open**—see **open cell**. **F 1251, F04**
- cellophane pulps**—pulps used in the manufacture of cellophane, and subject to various specifications by the manufacturers, including those of purity, moisture content, sheet properties, and viscosity. **D 1695, D01**
- cells/core holes, n**—continuous openings or perforations within extruded clay products. **C 43, C15**
- cell size, n**—in *carbon and graphite technology*, the average diameter of the cells in the final foam product. **C 709, D02**
- cell size, n**—in *carbon and graphite technology*, the average diameter of the cells in the final foam product. **D 4175, D02**
- cell temperature, n**—the temperature of the semiconductor junction of a photovoltaic cell. **E 1328, E44**
- cell therapy, n**—the administration of cells (any kind and form) to repair, modify or regenerate the recipient’s cells, tissues, and organs or their structure and function, or both. Cell therapy technologies can be applied in tissue engineering to generate TEMPs. **F 2312, F04**
- cellular, adj**—having a composition of plastic or rubber with relative density decreased by the presence of cells disposed throughout its mass. In closed-cell materials, the cells are predominantly separate from each other. In open-cell materials, the cells are predominantly interconnected. **C 717, C24**
- cellular adhesive**—see **foamed adhesive**. **D 907, D14**
- cellular concrete, n**—a lightweight hydraulic-cement concrete having a homogeneous void or cell structure attained using gas-forming chemicals or foaming agents. **C 125, C09**
- cellular elastomeric, n**—insulation composed principally of natural or synthetic elastomers, or both, processed to form a flexible, semirigid, or rigid foam which has a predominantly closed-cell structure. **C 168, C16**
- cellular glass, n**—insulation composed of glass processed to form a rigid foam having a predominantly closed-cell structure. **C 168, C16**
- cellular material, n**—a generic term for materials containing many cells (either open, closed, or both) dispersed through the mass. **C 717, C24**

cellular material, n

cellular material, n—a generic term for materials containing many cells (either open, closed, or both) dispersed throughout the mass.

D 1566, D11

cellular material, collapse, n—undesirable densification of a cellular material resulting from the breakdown of its cellular structure.

D 1566, D11

cellular material, cored, n—cellular material containing a multiplicity of holes (usually, but not necessarily, cylindrical in shape), molded or cut into the material in some pattern normally perpendicular to the largest surface, and extending part or all the way through the piece.

D 1566, D11

cellular material, flexible, n—a cellular organic polymeric material that will not rupture when a specimen 200 by 25 by 25 mm (8 by 1 by 1 in.) is bent around a 25-mm (1-in.) diameter mandrel at a uniform rate of one lap in 5 s at a temperature between 18 and 29°C.

D 1566, D11

cellular plastic—a plastic containing numerous cells, intentionally introduced, interconnecting or not, distributed throughout the mass. (See also **syntactic cellular plastics**.)

D 883, D20

cellular plastic—a plastic containing numerous cells, intentionally introduced, interconnecting or not, distributed throughout the mass. (D20)

F 412, F17

cellular plastic—a plastic containing numerous cells, intentionally introduced, interconnecting or not, distributed throughout the mass. (D 883, D20)

F 869, F08

cellular polyimide, n—insulation composed of the reaction product in which the bonds formed between monomers during polymerization are essentially imide units forming a cellular structure.

C 168, C16

cellular polystyrene, n—insulation composed principally of polymerized styrene resin processed to form a rigid foam having a predominantly closed-cell structure.

C 168, C16

cellular polystyrene, n—polymerized styrene resin processed to form a rigid foam having a predominately closed-cell structure making it suitable as thermal insulation.

E 631, E06

cellular polyurethane, n—insulation composed principally of the catalyzed reaction product of polyisocyanate and polyhydroxy compounds, processed usually with fluorocarbon gas to form a rigid foam having a predominantly closed-cell structure.

C 168, C16

cellular rubber, n—rubber products containing cells or hollow receptacles which may be open, interconnecting, or closed and not interconnecting.

D 1566, D11

cellular striation, n—a condition characterized by a layer within a cellular material that differs greatly from the characteristic cell structure.

D 883, D20

cellular striation, n—a condition characterized by a layer within a cellular material that differs greatly from the characteristic cell structure.

D 1566, D11

cellulose—the carbohydrate that is the principal constituent of wood and forms the structural framework of the wood cells. **D 9, D07**

cellulose—(1) the main solid constituent of woody plants; it occurs widely elsewhere in the vegetable kingdom, and to a small extent in the animal kingdom. (2) chemically, cellulose is β -1-4 glucan of high degree of polymerization. It is desirable to apply "cellulose" to this material only and to designate the predominantly cellulosic residue obtained by subjecting woody tissues to various pulping processes as "cellulosic residues," "cellulosic pulps," or the like.

D 1695, D01

cellulose—an amorphous carbohydrate ($C_6H_{10}O_5$) that is the principal constituent of wood and plants.

D 6161, D19

cellulose acetate—in the broad sense, any of several esters of cellulose and acetic acid. (see also **cellulose triacetate**)

D 1695, D01

cellulose acetate butyrate—a mixed ester of cellulose containing both acetate and butyrate groups.

D 1695, D01

cellulose acetate butyrate (CAB) plastics—plastic made by compounding a cellulose acetate butyrate ester with plasticizers and other ingredients. Cellulose acetate butyrate ester is a derivative of

cellulose (obtained from cotton or wool pulp, or both) made by converting some of the hydroxyl groups in cellulose to acetate and butyrate groups with chemicals.

F 412, F17

cellulose acetate (CA)—in the broad sense, any of several esters of cellulose and acetic acid.

D 6161, D19

cellulose acetate phthalate—a mixed ester of cellulose containing both acetate and phthalate groups.

D 1695, D01

cellulose acetate propionate—a mixed ester of cellulose containing both acetate and propionate groups.

D 1695, D01

cellulose derivative—a substance derived from cellulose by substitution of one or more of the hydroxyl groups with some other radical. Most derivatives are ethers or esters.

D 1695, D01

cellulose esters—derivatives of cellulose in which one or more of the hydroxyl hydrogens have been replaced acyl groups.

D 1695, D01

cellulose ethers—derivatives of cellulose in which one or more of the hydroxyl hydrogens have been replaced by alkyl groups.

D 1695, D01

cellulose I—the crystalline modification of cellulose that normally occurs in nature.

D 1695, D01

cellulose II—the crystalline modification of cellulose that is found in mercerized cellulose, in regenerated cellulose, and in cellulose produced by the hydrolysis of various cellulose derivatives.

D 1695, D01

cellulose III—a crystalline modification of cellulose produced by treatment, under certain conditions, with ammonia or sometimes by amines. The method of removing the reagent determines the modification produced.

D 1695, D01

cellulose IV—a crystalline modification of cellulose produced by heat treatment of cellulose II.

D 1695, D01

cellulose lacquer—see **lacquer**.

D 16, D01

cellulose lacquer—a liquid coating composition containing as the basic film-forming ingredient a cellulose ester or ether and plasticizers with or without resins or pigments.

D 1695, D01

cellulose mixed ester—a cellulose ester containing more than one type of acyl group.

D 1695, D01

cellulose nitrate—any of various nitrate esters of cellulose.

D 1695, D01

cellulose plastics—plastics based on cellulose compounds, such as esters (cellulose acetate) and ethers (ethylcellulose).

D 1695, D01

cellulose propionate—any ester of cellulose with propionic acid.

D 1695, D01

cellulose, purified cotton—see **cotton cellulose, purified**.

D 1695, D01

cellulose, purified wood—see **wood cellulose, purified**.

D 1695, D01

cellulose sodium glycolate—see **carboxymethyl cellulose**.

D 1695, D01

cellulose triacetate—that form of cellulose acetate in which the degree of substitution approaches 3 sufficiently that the product is not soluble in acetone.

D 1695, D01

cellulose X—a crystalline modification of cellulose produced by treatment of cellulose with strong hydrochloric acid or phosphoric acid.

D 1695, D01

cellulose xanthates—the salts of cellulose xanthic acid. Commonly, cellulose xanthate refers to sodium cellulose xanthate, the essential constituent of the viscose solution, from which viscose rayon is spun.

D 1695, D01

cellulosic fiber, n—insulation composed principally of cellulose fibers usually derived from paper, paperboard stock, or wood, with or without binders.

C 168, C16

cellulosic fiberboard—a generic term for a homogeneous panel made from lignocellulosic fibers (usually wood or cane) characterized by an integral bond produced by inter-felting of the fibers, to which other materials may have been added during manufacture to improve certain properties, but which has not been consolidated under heat and pressure as a separate stage in manufacture, said board having a density of less than 31 lb/ft³ (specific gravity 0.50) but having a density of more than 10 lb/ft³ (specific gravity 0.16).

D 1554, D07

cellulosic plastics, *n*—plastics based on cellulose compounds, such as esters (cellulose acetate) and ethers (ethyl cellulose). **D 883, D20**

Celsius, *adj*—pertaining to or denoting something related to the expression of temperature in degrees Celsius. **E 344, E20**

Celsius—designation of the degree on the International Practical Temperature Scale; also used for the name of the scale, as “Celsius Temperature Scale.” Formerly (prior to 1948) called “Centigrade.” The Celsius temperature scale is related to the International Kelvin Temperature Scale by the equation $T_c = T - 273.15$ K. **E 1142, E37**

celsius (°C)—the designation of the degree on the International Practical Temperature Scale. Formerly called centigrade, °C = °K minus 273.15. K = Kelvin. °C = (°F-32)*0.556. **D 6161, D19**

cement; Portland cement—commonly known as Portland cement. A mixture that consists of a calcareous argillaceous, or other silica-, alumina-, and iron-oxide bearing materials that is manufactured and formulated to produce various types which are defined in Specification C 150. Portland cement is also considered a hydraulic cement because it must be mixed with water to form a cement-water paste that has the ability to harden and develop strength even if cured under water (see **ASTM cement types**). **D 653, D18**

cement, *n*—see Discussion under **adhesive**. **D 907, D14**

cement, *v*—see **bond**. **D 907, D14**

cement, *n*—a general term for a binding element. See specific terms such as Portland cement, Keene’s cement, and adhesive cement. **E 631, E06**

cement, API, Class A—a cement intended for use from the surface to a depth of 6000 ft (1828 m). This cement is similar to ASTM Type I cement. **D 653, D18**

cement, API, Class B—a cement intended for use from the surface to a depth of 6000 ft (1828 m) when conditions require moderate- to high-sulfate resistance. This cement is similar to ASTM Type II cement. **D 653, D18**

cement, API, Class C—this cement is intended for use from the surface to a depth of 6000 ft (1828 m) when conditions require high early strength. This cement is similar to ASTM Type III cement. Also available as a high sulfate resistant type. **D 653, D18**

cement, API, Class G—this cement is intended for use from the surface to a depth of 8000 ft (2438 m). It can be used with accelerators or retarders to cover a wide range of well depths and temperatures. No additions other than calcium sulfate or water, or both, can be interground or blended with the clinker during manufacture of the cement. Also available as several sulfate-resistant types. **D 653, D18**

cement, API, Class H—this cement is intended for use from the surface to a depth of 8000 ft (2438 m). It can be used with accelerators or retarders to cover a wide range of well depths and temperatures. No additions other than calcium sulfate or water, or both, can be interground or blended with the clinker during manufacture of the cement. Also available as a sulfate-resistant type. **D 653, D18**

cement, API, Class J—this cement is intended for use from depths of 12 000 to 16 000 ft (3658 to 4877 m) under conditions of extremely high temperatures and pressures. It can be used with accelerators and retarders to cover a range of well depths and temperatures. No additions of retarders other than calcium sulfate, or water, or both, can be interground or blended with the clinker during manufacture of the cement. **D 653, D18**

cementation, *n*—the introduction of one or more elements into the outer portion of a steel object by means of diffusion at high temperature. **A 941, A01**

cementation—See **pack cementation**. **B 374, B08**

cement-bonded particle board, *n*—manufactured flat sheets of hydraulic cementitious matrices and fibrous wood particles. **C 1154, C17**

cement bond (sonic) log—a borehole geophysical log that can be used to determine the effectiveness of a cement seal of the annular space of a well. **D 653, D18**

cement-coated—surface coated by tumbling or immersion in natural

resin or shellac to produce a limited temporary bond between driven nail and surrounding wood, provided coating is not removed during driving, and to reduce rusting during storage. **F 547, F16**

cement construction—a process in which the outsole is attached to the upper by cementing instead of sewing or by other methods. Also known as the compo process, after Compo Industries, Inc., which introduced this method commercially into the U.S. about 1930; also known as cement process and as cemented process. **F 869, F08**

cemented carbide, *n*—sintered material characterized by high strength and wear resistance and comprising one or more carbides of refractory metals as the main component bonded by metallic binder phase. **B 243, B09**

cemented materials—materials consisting of one or more substances that develop hardness by chemical reaction after placement of the material in a fill. **D 5681, D34**

cement factor—quantity of cement contained in a unit volume of concrete or grout, expressed as weight, or volume (specify which). **D 653, D18**

cement, finishing, *n*—a mixture of dry fibrous or powdery materials, or both, that when mixed with water develops a plastic consistency, and when dried in place forms a relatively hard, protective surface. **C 168, C16**

cement grout—a grout in which the primary cementing agent is Portland cement. **D 653, D18**

cement, insulating, *n*—a mixture of dry granular, flaky, fibrous, or powdery materials that when mixed with water develops a plastic consistency, and when dried in place forms a coherent covering that affords substantial resistance to heat transmission. **C 168, C16**

cementite, *n*—a very hard and brittle compound of iron and carbon corresponding to the empirical formula Fe₃C, commonly known as iron carbide. **A 644, A04**

cementite—a very hard and brittle compound of iron and carbon corresponding to the empirical formula Fe₃C. It is commonly known as iron carbide and possesses an orthorhombic lattice. In “plain-carbon steels” some of the iron atoms in the cementite lattice are replaced by manganese, and in “alloy steels” by other elements such as chromium or tungsten. Cementite will often appear as distinct lamellae or as spheroids or globules of varying size in hypo-eutectoid steels. Cementite is in metastable equilibrium and has a tendency to decompose into iron and graphite, although the reaction rate is very slow. **E 7, E04**

cementite, primary, *n*—cementite precipitated in cast iron during solidification. Also known as primary carbide. (See **cementite**.) **A 644, A04**

cementitious ash, *n*—fly ash, which hardens irreversibly when mixed with water. Also referred to as self-cementing ash. **E 2201, E50**

cementitious factor—quantity of cement and other cementitious materials contained in a unit volume of concrete or grout, expressed as weight or volume (specify which). **D 653, D18**

cementitious material, *n*—a material that, when mixed with water, with or without aggregate, provides the plasticity and the cohesive and adhesive properties necessary for placement, and the formation of a rigid mass. **C 11, C11**

Cementitious material, *n*—Committee C12 standards for mortar and grout consider the following as cementitious materials: Hydraulic cements, pozzolans, hydrated lime, lime putty, and ground granulated blast furnace slag. **C 1180, C12**

cementitious material (hydraulic), *n*—an inorganic material or a mixture of inorganic materials that sets and develops strength by chemical reaction with water by formation of hydrates and is capable of doing so under water. **C 125, C09**

cementitious material, hydraulic, *n*—an inorganic material or a mixture of inorganic materials which sets and develops strength by chemical reaction with water by formation of hydrates, and which is capable of doing so underwater. **C 219, C01**

cementitious material (hydraulic), *n*—an inorganic material or a mixture of inorganic materials that sets and develops strength by

cementitious material (hydraulic), *n*

chemical reaction with water by formation of hydrates and is capable of doing so under water. **E 2201, E50**

cementitious mixture, *n*—a mixture (mortar, concrete, or grout) containing hydraulic cement. **C 125, C09**

cementitious mixture, *n*—a combination of more than any one of the following materials to make a cement paste: hydraulic cement; Portland cement; coal fly ash; FBC ash; lime; ground granulated blast furnace slag; lime kiln dust; cement kiln dust. It may be used by itself for grout, or used to bind aggregates or fine materials to make concrete or controlled low strength materials (CLSM), or used for soil stabilization and solidification. **E 2201, E50**

Cement-Lime Mortar—Cement-Lime Mortar primarily consists of hydraulic cement, hydrated lime or lime putty, mason's sand and water. **C 51, C07**

cement paste, *n*—an unhardened or hardened mixture of finely divided hydraulic cementitious material and water. **C 219, C01**

cement, rubber, *n*—an adhesive that is either a liquid dispersion or solution of raw or compounded rubber, or both. **D 1566, D11**

center—inner layers whose grain direction runs parallel to that of the outer plies; may be of parallel laminated plies. (See also **core**.) **D 1038, D07**

center back waist length, *n*—*in body measurements*, the vertical distance along the spine from the cervicale to the waist. **D 123, D13**

center back waist length, *n*—the distance from the cervicale to the center back waist level, taken along the spine (contour). **D 5219, D13**

centerburst—the region of greatest amplitude in an interferogram. **E 131, E13**

center front waist length, *n*—*in body measurements*, the vertical distance from the neck baseline at the center front to the waist level. **D 123, D13**

center front waist length, *n*—the distance from the center front neck base line to the center front waist level (contour). **D 5219, D13**

center green (CG) or mid green (MG), *n*—that temperature which unifies the visual and instrumental evaluation methods and is defined by the equation:

$$CG = MG = \frac{SG + SB}{2} = T^{*520}$$

See 3.2.7.2 for description of T^{*520} . **E 344, E20**

centering—an operation on lens elements wherein the element is optically aligned with the axis of rotation and the edges ground concentric with the optical axis. **C 162, C14**

centerline—the vertical axis around which character elements are located for letters, numerals, or symbols of an OCR font. **F 149, F05**

centerline, *n*—*in foot protective devices*, a line which extends from the toe of the footwear horizontally along the sole to the heel vertically to the top of the footwear, and diagonally to the point of intersection at the toe. **F 1494, F23**

center match—matched lumber with tongues and grooves precisely centered on the edges. **D 9, D07**

center of tire contact, *n*—the intersection of the wheel plane and the vertical projection of the spin axis of a wheel onto the road plane. **F 538, F09**

center rib, *n*—a rib at or near the circumferential centerline of the tread band. **F 538, F09**

center row, *n*—a row located at or near the circumferential centerline. **F 538, F09**

center stop—a device to receive and hold the drop bar on a double gate. **F 552, F14**

center wavelength, *n*—a wavelength, usually near the middle of the band of radiant power over which a radiation thermometer responds, that is used to characterize its performance. **E 344, E20**

center wear, *n*—a type of irregular wear characterized by a wear rate continuously increasing from shoulder to center of the tread band. **F 538, F09**

centigrade—since 1948, now called Celsius, a temperature scale. **D 6161, D19**

Centigrade—see **Celsius**. **E 1142, E37**

central conductor—a conductor passed through a hollow part and used to produce circular magnetization within the part. **E 1316, E07**

centralizer—a device that assists in the centering of a casing or riser within a borehole or another casing. **D 653, D18**

central pencil—a bundle of rays originating in the axis with an angular aperture equal to the effective aperture of the lens. These rays pass through the lens aperture and contribute to the formation of the image. **E 7, E04**

central vacuum cleaning system, *n*—a cleaning system consisting of a stationary vacuum producer and dust collector that incorporates the use of a tubing system internal to a building structure and a flexible hose, or both, for conveying dust from the area being cleaned to the dust collector. The system is designed for all-purpose cleaning including various types of larger debris and may be designed for liquid pickup. The system is used by inserting one end of a hose into a wall vacuum inlet valve and attaching a cleaning nozzle to the other end. In use, the nozzle is guided over the surface area to be cleaned. The system may contain a driven agitator to assist in dirt removal and it normally has detachable nozzles, attachments, and wands for both floor and above-the-floor cleaning. **F 395, F11**

central vacuum tubing, *n*—plastic tubing used for residential central vacuum systems in which outside diameter is controlled and where the wall thickness is usually small when compared to the diameter. **F 412, F17**

centrifugal atomizer—a device wherein a rotating solid surface is the primary source of energy utilized to produce a spray.

NOTE—Alternatively, an atomizer that rotates to distribute the liquid. **E 1620, E29**

centrifugal cast button, *n*—see *rotation cast button*. **D 5497, D13**

centrifugal pressure nozzle—see **swirl chamber atomizer**. **E 1620, E29**

centrifuge—machine that separates a mixture of solids and liquids by centrifugal force. **E 1705, E48**

centrifuged rubber latex, *n*—latex, the rubber concentration of which has been increased by the removal of water by centrifugal force. **D 1566, D11**

centrifuge moisture equivalent—see **moisture equivalent**. **D 653, D18**

centripetal acceleration [ML^2/T^2], *n*—*of a vehicle*, the component of the vector acceleration (of a point in a vehicle) perpendicular to the tangent of the path of the point and parallel to the road plane. **F 538, F09**

centroid wavelength, *n*—wavelength marking the center, in terms of area under a curve, of a function of wavelength weighted by multiplication with a specified response function. **E 284, E12**

centronics interface, *n*—a parallel interface standard that connects elements of a communications system. **F 1457, F05**

ceramic article—an article having a glazed or unglazed body of crystalline or partly crystalline structure, or of glass, which body is produced from essentially inorganic, nonmetallic substances and either is formed from a molten mass which solidifies on cooling, or is formed and simultaneously or subsequently matured by the action of the heat. **C 242, C21**

ceramic coating—an inorganic, essentially nonmetallic coating, on metal. **C 286, B08**

ceramic colorant—see **color oxide**. **C 286, B08**

ceramic glass enamel (also ceramic enamel or glass enamel)—a decorative, usually colored, vitreous inorganic coating for bonding to glass at temperatures above 425°C (800°F). **C 162, C14**

ceramic ink—an ink containing a ceramic pigment that develops its color on firing. Also known as stamping, screening, or printing ink. **C 286, B08**

ceramic junction reference electrode—a reference electrode in

- which the filling solution contacts the sample solution by means of a small porous ceramic junction. **D 4127, D19**
- ceramic marking**—marking by fusing a ceramic colorant onto the glass surface. **E 344, E20**
- ceramic membrane**—generally a glass, silica, alumina, or carbon based membrane. Generally used in micro and ultrafiltration. They tend to withstand high temperatures and wide pH ranges and be more chemically inert than polymeric membranes. **D 6161, D19**
- ceramic-metal coating**—a mixture of one or more ceramic materials in combination with a metallic phase applied to a metallic substrate which may or may not require heat treatment prior to service. This term may also be used for coatings applied to nonmetallic substrates, for example, graphite. **C 286, B08**
- ceramic mosaic tile**—an unglazed tile formed by either the dust-pressed or plastic method, usually $\frac{1}{4}$ to $\frac{3}{8}$ in. (6.4 to 9.5 mm) thick, and having a facial area of less than 6 in.² (39 cm²) and which is usually mounted on sheets approximately 1 by 2 ft (0.3 by 0.6 m) to facilitate setting. **C 242, C21**
- ceramic paste**—a French term synonymous with “ceramic body.” **C 242, C21**
- ceramic process**—the production of articles or coatings from essentially inorganic, nonmetallic materials, the article or coating being made permanent and suitable for utilitarian and decorative purposes by the action of heat at temperatures sufficient to cause sintering, solid-state reactions, bonding, or conversion partially or wholly to the glassy state. **C 242, C21**
- ceramics**—a general term applied to the art or technique of producing articles by a ceramic process, or to the articles so produced. **C 242, C21**
- ceramic whiteware**—a fired ware consisting of a glazed or unglazed ceramic body which is commonly white and of fine texture, designating such product classifications as tile, china, porcelain, semivitreous ware and earthenware.
- alumina whiteware*—any ceramic whiteware in which alumina (Al₂O₃) is an essential crystalline phase.
- cordierite whiteware*—any ceramic whiteware in which cordierite (2MgO·2Al₂O₃·5SiO₂) is the essential crystalline phase.
- forsterite whiteware*—any ceramic whiteware in which forsterite (2MgO·SiO₂) is the essential crystalline phase.
- steatite whiteware*—any ceramic whiteware in which magnesium metasilicate (MgO·SiO₂) is the essential crystalline phase.
- titanium whiteware*—any ceramic whiteware in which titania (TiO₂) is the essential crystalline phase.
- zircon whiteware*—any ceramic whiteware in which zircon (ZrO₂·SiO₂) is the essential crystalline phase. **C 242, C21**
- ceric-cerous sulfate dosimeter**—a liquid chemical radiation dosimetry system composed of water with ceric sulfate or ceric ammonium sulfate in aqueous sulfuric acid solution, and whose response is based quantitatively on the amount of reduction of ceric to cerous ions by ionizing radiation, as analyzed by spectrophotometry or electrochemical potentiometry. It is generally considered to be a reference-standard dosimetry system. **E 170, E10**
- cermet**, *n*—sintered material containing at least one metallic phase and at least one nonmetallic phase that is generally of a ceramic nature. **B 243, B09**
- cermet**, *n*—a composite material or article comprised of a ceramic and a metal or metal alloy, interdistributed in any of various geometrical forms but intimately bonded together. **C 1145, C28**
- cermet coating*—see **ceramic-metal coating**. **C 286, B08**
- certainty equivalent technique**—a technique used to adjust economic measures of project worth to reflect risk exposure and risk attitude. **E 631, E06**
- certainty equivalent technique**, *n*—a technique used to adjust economic measures of project worth to reflect risk exposure and risk attitude. **E 833, E06**
- certificate of competence**—document issued under the rules of a certification system indicating that adequate confidence is provided that the named person is competent in performing specific services, (EN 45020). **E 1187, E36**
- certificate of compliance**, *n*—*in manufactured products*, a document that states that the product was manufactured, sampled, tested, and inspected in accordance with the requirements of the specification (including year of issue) and any other requirements specified in the purchase order or contract, and has been found to meet such requirements. **A 941, A01**
- certificate of compliance**—document or electronic record, signed by an authorized party, affirming that the supplier of the fastener or related service, or both, has met the requirements of the relevant specifications, contract, or regulation. **F 1789, F16**
- certificate of conformance**—document or electronic record affirming that the fastener has met the requirements of the relevant specifications, contract, or regulation. **F 1789, F16**
- certificate of conformity**—document issued under the rules of a certification system, indicating that adequate confidence is provided that a duty identified product, process or service is in conformity with a specific standard or other normative document, (ISO Guide 2). **E 1187, E36**
- certification**—*in protectivecoatings*, the written documentation of the qualification of personnel or material. **D 4538, D33**
- certification**, *n*—a written declaration that a particular product or service complies with stated criteria. **E 631, E06**
- certification**—the process of testing and evaluating against certain specifications the competence of a person, organization, or other entity in performing a function or service, usually for a specified period of time. (HUD Guidelines) **E 1605, E06**
- certification**, *n*—a system whereby an organization determines that a manufacturer has demonstrated the ability to make a product that complies with the requirements of the specification, authorizes the manufacturer to use a label on products that comply with the requirements of the specification, and conducts a follow-up program to verify the methods the manufacturer uses to determine compliance with the requirements of this specification. **F 1494, F23**
- certification**—procedure and action by a duly authorized body of determining, verifying, and attesting in writing to the qualifications of personnel, processes, procedures, or items in accordance with applicable requirements. **F 1789, F16**
- certification body**—body that conducts certification of conformity, (ISO Guide 2). **E 1187, E36**
- certification body**, *n*—a body that conducts certifications of conformity. **E 1732, E30**
- certification of conformity**, *n*—document issued under the rules of a certification system indicating that adequate confidence is provided that a duly identified product, process or service is in conformity with a specific standard or other normative document. **E 1732, E30**
- certification organization**, *n*—an independent, third party organization that determines product compliance with the requirements of the specification with a labeling and listing follow-up program. **F 1494, F23**
- certification scheme**—certification system as related to specified products, processes or services to which the same particular standards and rules, and the same procedure, apply, (ISO Guide 2). **E 1187, E36**
- certification system**—system that has its own rules of procedure and management for carrying out certification of conformity, (ISO Guide 2). **E 1187, E36**
- certified quality assurance system**—system so designated officially by a recognized accrediting body as having met all of the criteria within a national or an international third party quality system standard. **F 1789, F16**
- certified reference material**—a reference material, the composition or properties of which are certified by a recognized standardizing agency or group. Typically such a material is accompanied by documentation (certificate). **E 7, E04**

certified reference material, *n*

certified reference material, *n*—a reference material, the composition or properties of which are certified by a recognized standardizing agency or group. **E 131, E13**

certified reference material—a material that has been characterized by a recognized standard or testing laboratory, for some of its chemical or physical properties, and that is generally used for calibration of a measurement system, or for development or evaluation of a measurement method. **E 170, E10**

certified reference material (CRM), *n*—a reference material, accompanied by a certificate, one or more of whose property values are certified by a procedure which establishes traceability to an accurate realization of the unit in which the property values are expressed, and for which each certified value is accompanied by an uncertainty at a stated level of confidence. **E 135, E01**

Certified Reference Material (CRM)—a reference material accompanied by a certificate, one or more of whose property values are certified by a procedure that establishes its traceability to an accurate realization of the unit in which the property values are expressed. **E 1605, E06**

certified reference material (CRM), *n*—a reference material, accompanied by a certificate, one or more of whose property values are certified by a procedure that establishes traceability to an accurate realization of the unit in which the property values are expressed, and for which each certified value is accompanied by an uncertainty at a stated level of confidence. **E 1732, E30**

certifying organization, *n*—in *product specifications*, the entity responsible for the conformance and certification of the product to the specification requirements. **A 941, A01**

cervical, *n*—in *body measurements*, the most prominent bone at the base of the neck. **F 1494, F23**

cervicale, *n*—in *anatomy*, the prominent point of the seventh or lowest neck vertebra at the back of the body. **D 123, D13**

cervicale, *n*—the prominent point of the seventh or lowest neck vertebra at the back of the body. **D 5219, D13**

cervicale height, *n*—the vertical distance from the cervicale to the floor, taken with subject standing and without shoes.

*cervicale height (infant special case), *n**—the straight distance from the cervicale to the soles of the feet, taken with subject lying down flat with legs extended and foot positioned at 1.57 rad (90°) to the leg. **D 5219, D13**

cervicale to bust point, *n*—in *body measurements*, the distance from the cervicale around the base of the neck and down to the bust point. **D 123, D13**

cervicale to knee height, *n*—the vertical distance from the cervicale to a point level with the midpoint of the back of the knee (or crease).

*cervicale to knee height (infant special case), *n**—the straight distance from the cervicale to a point level with the midpoint of the back of the knee (or crease), taken with subject lying down flat with legs extended. **D 5219, D13**

cervicale to wrist length, *n*—the distance from the cervicale over the top of the shoulder joint, along the outside of the arm, over the elbow to the prominent wrist bone, taken with the arm bent 1.57 rad (90°) and the hand placed on the hip. **D 5219, D13**

cervical to wrist, *n*—in *body measurements*, with the arm bent, the distance from the cervical to the shoulder joints, along the outside of the arm, over the elbow to the greater prominence on the outside of the wrist. **D 123, D13**

cetane index, *n*—an approximation of the cetane number (the ignition performance) of distillate diesel fuel, which does not contain a cetane improver additive, calculated from the density and the mid-boiling point temperature (see also *dieselindex*). **D 4175, D02**

cetane number, *n*—a measure of the ignition performance of a diesel fuel oil obtained by comparing it to reference fuels in a standardized engine test. **D 4175, D02**

cetane number, *cn* *n*—a measure of the ignition performance of a diesel fuel obtained by comparing it to reference fuels in a standardized engine test. **D 4175, D02**

CF—an abbreviation for coated front, referring to a carbonless paper of the two-coat, transfer type. **F 549, F05**

CFB—an abbreviation for coated front and backed, referring to a carbonless paper of the two-coat, transfer type. **F 549, F05**

CFR—Code of Federal Regulations. **E 631, E06**

CFU—colony forming unit; unit used in the measure of total bacteria count (TBC). **D 6161, D19**

cGMP—abbreviation for current good manufacturing practices as defined in CFR Title 21, Parts 210 and 211. **E 1705, E48**

cgs-emu system of units—the system for measuring physical quantities in which the base units are the centimetre, gram, and second, and the numerical value of the magnetic constant, Γ_m , is unity. **A 340, A06**

chafe mark—See *abrasion mark*. **D 3990, D13**

chafer fabric, *n*—in *tire fabrics*, a woven fabric, usually coated with unvulcanized rubber, which is laid around the bead of a tire before vulcanization. **D 123, D13**

chafer fabric, *n*—woven fabric, usually coated with unvulcanized rubber, which is laid around the bead of a tire before vulcanization. **D 6477, D13**

chain, *n*—in *zippers*, the assemblage formed by interlocking several elements of two stringers. **D 123, D13**

chain, *n*—the assemblage formed by interlocking several elements of two stringers. **D 2050, D13**

chain length distribution—in a linear polymer like cellulose, the frequency distribution of molecular size, usually expressed in units of degree of polymerization. **D 1695, D01**

chain marks—marks made on the bottoms of glass articles as they ride through a Lehr on a chain belt slightly overheated. **C 162, C14**

chain of custody, *n*—procedures and documents that account for the possession of a sample by tracking its handling and storage from its point of collection to its final disposition. **E 1732, E30**

chain printer—a type of printer that employs an endless chain, each link of which contains a fully formed character. The chain is caused to transverse the width of the paper form. Hammers are caused to strike the back of the form, synchronized in such a way as to produce the desired characters in their proper position. **F 909, F05**

chain sampling, *n*—in *acceptance sampling*, a sampling plan for which the decision to accept or reject a lot is based in part on the results of inspection of the lot and in part on the results of inspection of the immediately preceding lots. **D 123, D13**

chain saw, *n*—a portable power operated tool used for cutting wood which has cutters linked in a chain. **F 1494, F23**

chain speed, *n*—the velocity of synchronized movement of linked cutters around a bar and sprocket. **F 1494, F23**

chainstop, *n*—for *chainsaw cut resistance*, the resulting action when a material clogs (jams) the drive sprocket or slows the speed sufficiently to prevent advancement of the chain saw. **F 1494, F23**

chain thickness, *n*—in *zippers*, the measurement from front to back of the chain. **D 123, D13**

chain thickness, *n*—the measurement from front to back of the chain. **D 2050, D13**

chain width, *n*—the measurement between the shoulders of the interlocked elements or between the outermost edges of the bead if the bead extends beyond the elements. **D 123, D13**

chain width, *n*—the measurement between the shoulders of the interlocked elements or between the outermost edges of the bead if the bead extends beyond the elements. **D 2050, D13**

chalk, *n*—in *building construction*, a powder formed by chalking. **C 717, C24**

chalkboard enamel—a special type of mat porcelain enamel used to provide a writing surface for chalk. **C 286, B08**

chalking, *v*—in *building construction*, formation of a powder on the surface of a sealant, coating, or membrane that is caused by the disintegration of the polymer or binding medium due to weathering. **C 717, C24**

chalking_n—(plastics) a powdery residue on the surface of a material

- resulting from degradation or migration of an ingredient, or both. **D 883, D20**
- chalking, n*—see **powdering**. **D 6488, D01**
- chalking, n**—formation on a pigmented coating of a friable powder evolved from the film itself at or just beneath the surface. **E 631, E06**
- chalking, n**—formation on a pigmented coating of a friable powder evolved from the film itself at or just beneath the surface. **E 1605, E06**
- chalking, n**—*in plastics*, a powdery residue on the surface of a material resulting from degradation or migration of an ingredient, or both. (D20) **F 412, F17**
- chalking resistance, n**—the ability of a pigmented coating to resist the formation of a friable powder on its surface caused by the disintegration of the binding medium by degradative weather factors. **D 16, D01**
- chalking (rubber), n**—the formation of a powdery residue on the surface of a rubber, commonly resulting from surface degradation. **D 1566, D11**
- chalky or chalked**—the condition of a porcelain enameled surface that has lost its natural gloss and become powdery. **C 286, B08**
- challenge chemical**—a chemical used to contact a protective clothing material sample to determine chemical/protective clothing material interactions or compatibility. **F 1494, F23**
- challenge suspension, n**—a liquid containing an agent that is used to test the penetration resistance of materials. **F 1494, F23**
- chamber**—a large room excavated underground, for example, for a powerhouse, pump station, or for storage. (ISRM) **D 653, D18**
- chamber blasting (coyotehole blasting)**—a method of quarry blasting in which large explosive charges are confined in small tunnel chambers inside the quarry face. (ISRM) **D 653, D18**
- chamfer**—the broken edge of the jaw serrations and the external edges of the box lock surfaces. **F 921, F04**
- chamfer**—the broken external edges of the instrument. **F 1078, F04**
- chamois leather**—a soft, pliable absorbent leather which is recognized in this country and abroad as being made from the inner side of a sheepskin, known technically as fleshier, from which the outer or grain side has been split prior to tanning. **D 1517, D31**
- champion, n**—an advocate, or small group of advocates, in an agency that recognizes the need for a pavement management system and works to get it adopted and implemented. **E 867, E17**
- chance error, n**—error that has equal probability of being positive or negative. The mean of the chance errors resulting from a series of observations tends toward zero as the number of observations approaches infinity. **D 121, D05**
- change in surface appearance**—*for pile yarn floor coverings*, the physical affect of changing the use-surface by mechanical means or foot traffic. **D 5684, D13**
- channel**—(1) in container glass, that part of a forehearth which carries the glass from the melter to the flow spout and in which temperature adjustments are made.
- (2) in fiber glass, the structure to deliver glass from the melter to the refiner or forehearth. **C 162, C14**
- channel**—a natural or artificial waterway that periodically or continuously contains moving water. **D 4410, D19**
- channel**—*EIA*, an interval of the measured energy of backscattered particles defined by adjacent energy thresholds in the analog-to-digital converter used for spectrum production. **E 673, E42**
- channel**—any unimpaired pathway across the entire width of the intended seal. **F 1327, F02**
- channel, acoustic emission**—an assembly of a sensor, preamplifier or impedance matching transformer, filters secondary amplifier or other instrumentation as needed, connecting cables, and detector or processor.
- may be processed independently or in predetermined groups having similar sensitivity and frequency characteristics. **E 1316, E07**
- channel-fill deposits**—deposits of sediment within a channel, partly or completely filling the channel. Such materials accumulate where the transporting capacity has been insufficient to remove it as rapidly as it has been delivered. **D 4410, D19**
- channel glazing**—the method of glazing in which lights or panels are set in a channel formed by two stops. **C 717, C24**
- channeling**—the process of forming a vertical cavity resulting from a faulty cement job in the annular space. **D 653, D18**
- channeling**—the preferential flow of fluid through passages of lower resistance that can occur in fixed beds or columns of particles owing to nonuniform packing, irregular sizes and shapes of the particles, gas pockets, wall effects, and other causes. **D 2652, D28**
- channeling**—unequal flow distribution in the desalination bundle or filter bed. **D 6161, D19**
- channeling**—motion of energetic particles along certain axial or planar directions of a crystalline solid as the particles penetrate the specimen. The potentials of the individual atoms of the solid combine to reduce scattering with those atoms. **E 673, E42**
- channeling**—*SIMS*, the process by which particles preferentially penetrate crystalline specimens in certain crystallographic directions because of the relatively open arrangement of atoms presented to the impinging particle beam. **E 673, E42**
- channel mopping*—See **mopping, (3) strip**. **D 1079, D08**
- channelyzer, n**—a pulse height analyzer; places voltage pulses into appropriate size bins for the size distribution data. **F 2312, F04**
- char, v**—to form carbonaceous residue during pyrolysis or during incomplete combustion. **E 176, E05**
- char, n**—a carbonaceous residue formed by pyrolysis or incomplete combustion. **E 176, E05**
- character, n**—any language symbol (for example, letter, numeral, punctuation mark, or other sign), other symbol or ornament. **E 2195, E30**
- character**—(1) a member of a set of elements upon which agreement has been reached and that is used for the organization, control, or representation of information. Characters may be letters, digits, punctuation marks, or other symbols, often represented in the form of a spatial arrangement of adjacent or connected strokes or in the form of other physical conditions in data media.
- (2) a letter, digit, or other symbol that is used as part of the organization, control, or representation of data. A character is often in the form of a spatial arrangement of adjacent or connected strokes. **F 149, F05**
- character alignment**—the vertical or horizontal position of characters with respect to a given reference line. **F 149, F05**
- character boundary**—*in character recognition*, the largest rectangle with a side parallel to the document reference edge, each of whose sides is tangential to a given character outline. **F 149, F05**
- character cel, n**—the rectangular-shaped areas on a page containing a single character with its portion of the space which separates it from adjacent characters. **F 1457, F05**
- character erase**—an OCR graphic shape that will cover a single character or a single space and will be read by the interpreter as a deletion. **F 149, F05**
- characteristic**—a distinguishing feature or trait. In grading lumber and other wood products, a feature in or on the wood which by its nature, extent, and frequency of occurrence determines the grade or level of quality. **D 9, D07**
- characteristic, n**—a property of items in a sample or population which, when measured, counted, or otherwise observed, helps to distinguish between the items. **D 123, D13**
- characteristic, n**—a property of items in a sample or population that can be measured, counted, or otherwise observed, such as viscosity, flash point, or concentration. **D 5681, D34**
- characteristic, n**—a property of items in a sample or population that can be measured, counted, or otherwise observed. **D 5681, D34**

NOTE—A channel for examining fiberglass reinforced plastic (FRP) may utilize more than one sensor with associated electronics. Channels

characteristic, *n*

characteristic, *n*—a property of items in a sample or population which, when measured, counted or otherwise observed, helps to distinguish between the items. **E 456, E11**

characteristic—a directly measurable distinguishing property of the pavement surface. Examples are pavement longitudinal profile, transverse profile, and separations in the continuity of a pavement surface. (See Terminology E 867). **E 867, E17**

characteristic, *n*—*in terminology*, any of the properties that constitute or distinguish a concept. **E 1992, E02**

characteristic curve—the curve showing the relationship between exposure and resulting density in a photographic image. It is usually plotted as the density against the log exposure. Called also the “H and D curve” and the “sensitometric curve.” **E 7, E04**

characteristic curve—the plot of density versus log of exposure or of relative exposure. (Also called the D-log E curve or the *H* and *D* curve.) **E 1316, E07**

characteristic electron loss phenomena—*AES*, the inelastic scattering of electrons in solids that produces a discrete energy loss determined by the characteristics of the material. The most probable form is due to excitation of valence electrons. For some solids (for example, nontransition metals), inelastic scattering is dominated by plasmon excitations (a collective excitation of valence electrons). For other solids, the inelastic scattering may be due to a combination of plasmon excitation and single valence electron excitations. Inelastic scattering can also occur through the excitation of core level electrons when this is energetically possible. **E 673, E42**

characteristic emulsion curve—see **emulsion calibration curve**. **E 135, E01**

characteristic impedance of the medium, ρc ; [$\text{ML}^{-2}\text{T}^{-1}$]; mks rayl(Pa·s/m)—the specific normal acoustic impedance at a point in a plane wave in a free field. It is a pure specific resistance since the sound pressure and the particle velocity are in phase and it is equal in magnitude to the product of the density of the medium, ρ , and the speed of sound in the medium, c . Its value when the medium is air at 20°C and 101.325 kPa is 413 mks rayl (Pa·s/m). **C 634, E33**

characteristic product size, *n*—the screen size corresponding to 63.2 % cumulative passing by mass. **D 5681, D34**

characteristic radiation—X-radiation of a particular set of wavelengths, produced by and characteristic of a particular element used as a target whenever its excitation potential is exceeded. **E 7, E04**

characteristic radiation, *n*—of X rays, a unique set of X rays emitted by an element. **E 135, E01**

characteristics—see **hazardous waste characteristics**. **E 631, E06**

characteristic value—the 5 % fractile (value with a 95 % probability of being exceeded, with a confidence of 90 %). **E 2265, E06**

characteristic X-rays—photons emitted by ionized atoms and having a particular distribution in energy and intensity characteristic of the atomic number and chemical environment of the atom; in XPS, the term is ordinarily used in reference to the X-ray source of the spectrometer. **E 673, E42**

characterize, *v*—to specify the parameters or performance of an instrument or method of measurement. **E 284, E12**

character outline limit (COL)—the minimum, nominal, and maximum limits of a given graphic shape. **F 149, F05**

character pitch, *n*—the number of characters that can be printed in a horizontal 1 in. (25.4 mm). **F 1457, F05**

character reader—an input unit that performs character recognition. **F 149, F05**

character reading—machine reading of alpha or numeric characters, or symbols, or both, by optical means (as opposed to optical mark reading). **F 149, F05**

character recognition—(1) The identification of characters by automatic means.

(2) See **magnetic ink character recognition; optical character recognition**. **F 149, F05**

characters, *n*—*in bar code symbols*, the smallest group of elements that represent one or more numbers, letters, punctuation marks or other information. **F 1294, F05**

character set—(1) a finite set of different characters upon which agreement has been reached and that is considered complete for some purpose, for example, each of the character sets contained in ANSI X3.17-81 Character Set for Optical Character Recognition (OCR-A) and ANSI X3.49-75 (R 1982) Character Set for Optical Character Recognition (OCR-B).

(2) an ordered set of unique representations called characters, for example, the 26 letters of the English alphabet, Boolean 0 and 1, the set of symbols in the Morse code, and the 128 ASCII characters. **F 149, F05**

character set, *n*—those characters available for encodation in a particular automatic identification technology. **F 1294, F05**

character set—the collection of all the characters available in a given font. **F 1457, F05**

character skew—the rotational deviation of the printed image from its intended orientation relative to a document reference edge. **F 149, F05**

character spacing—the pitch distance between adjacent characters. **F 149, F05**

character stroke width—the distance between the average edges of a character element. **F 149, F05**

character subset—a selection of characters from a character set, comprising all characters that have a specified common feature, for example, in each of the character sets contained in ANSI X3.17-81 Character Set for Optical Character Recognition (OCR-A) and ANSI X3.49-75, (R 1982) Character Set for Optical Character Recognition (OCR-B), the digits 0 to 9 may constitute a character subset. **F 149, F05**

charge, *n*—See batch (3). **C 162, C14**

charge, *v*—to add batch to a melter. **C 162, C14**

charge:
charge modification—any method used to alter the amount or the distribution of charge on a specimen surface.

charge neutralization—*ISS, SIMS*, a technique in which a surface under ion bombardment is maintained at a known potential by compensating for the accumulated charge.

charge referencing—any method used to adjust the energy scale calibration of a spectrometer to accommodate the effects of steady-state charging of a specimen surface. **E 673, E42**

charge acceptance—the apparent surface voltage present on an electrostatic recording medium immediately after charging. **F 335, F05**

charge capacity—see **thermal capacity**. **E 772, E44**

charge-coupled device (CCD), *n*—a light-detecting video device in which individual components are connected so that the electrical charge or signal at the output of one component provides the input to the next. **E 1316, E07**

charge coupled device, CCD, *n*—an array (linear or matrix) of transductive elements wherein packets of electrons are set in each element as a result of the quantity of light received during an exposure interval, and where these packets are recovered from the array in the form of a pulse height-modulated electric signal. **F 1294, F05**

charged area development—(CAD), a process in electrostatic copying where the photoconductive element is charged with a charge of the opposite sign as that of the toner. A light source is used to discharge all areas on the photoconductor that are NOT to receive toner to form the image. The toner is attracted to the non-discharged areas of the photoconductor when the latent electrostatic image is developed. **F 335, F05**

charge decay—loss of charge on the deposited powder due to electrical leakage. **C 286, B08**

charge decay rate—loss of charge per unit of time. **C 286, B08**

charged particle equilibrium—a condition that exists in an incremental volume within a material under irradiation if the kinetic

- energies and number of charged particles (of each type) entering that volume are equal to those leaving that volume. **E 170, E10**
- charge-mosaic membranes**—synthetic membranes composed of two-dimensional or three dimensional alternating cation and anion exchange channels throughout the membrane. **D 6161, D19**
- charge neutralizer gun**—an electron gun used to dissipate the charges which tend to build up on specimen surfaces, within an electron-diffraction camera, which would introduce undesired electrostatic fields. **E 7, E04**
- charge retention**—the ability of an electrically charged layer to retain its initial charge. **C 286, B08**
- charge to mass ratio**—ratio of the charge on a powder expressed in coulombs to the mass of the powder expressed in kilograms. **C 286, B08**
- charging**—the process of establishing an electrostatic surface charge of uniform density on an insulating medium. **F 335, F05**
- charging potential**—*insurface analysis*, the electrical potential of the surface of an insulating specimen caused by irradiation. If the specimen is heterogeneous, there may be different charging potentials on different areas of the surface. **E 673, E42**
- charring, *n***—the formation of carbonaceous residue as the result of pyrolysis or incomplete combustion. **D 123, D13**
- charring, *n***—the formation of carbonaceous residue as the result of pyrolysis or incomplete combustion. **D 4391, D13**
- charring, *n***—the formation of carbonaceous residue as the result of pyrolysis or incomplete combustion. **F 819, F18**
- charring**—the formation of a carbonaceous residue as the result of pyrolysis or incomplete combustion. **F 1494, F23**
- chatoyance, *n***—appearance characterized by a changeable luster or color, sometimes including a spatially-undulating narrow white band or stripe. **E 284, E12**
- chat sawn**—a surface with shallow linear grooves, produced by gangsawing with coarse chat sand. **C 119, C18**
- chatter, *n***—an undesirable pattern created on the surface of a work piece, usually at regularly spaced intervals, due to an out-of-round, out-of-balance condition or due to an induced natural frequency, or its harmonics, or both, in a grinding machine. **C 1145, C28**
- chatter marks, *n***—defect on calendered sheeting consisting of transverse narrow bands of alternately thicker and thinner material. **D 1566, D11**
- chatter sleek**—[archaic] See **frictive track**. **C 162, C14**
- check**—an imperfection; a surface crack in a glass article. **C 162, C14**
- check**—a separation of the wood along the fiber direction that usually extends across the rings of annual growth, commonly resulting from stresses set up in wood during seasoning.
- end check**—a seasoning check occurring on the end of a board or other piece of wood.
- heart check**—a check that extends across the growth layers in one or more directions from the pith toward, but not to, the surface of a piece of wood. A synonym is *pith check*.
- pith check**—see *heart check*.
- roller check**—a crack in the wood structure caused by a piece of cupped lumber being flattened between machine rollers.
- star check**—a heart check in which the separation extends in more than one direction from the pith.
- surface check**—a check occurring on the surface of a piece of wood, usually on the tangential face not extending through the piece.
- through check**—a check that extends through a piece of wood, or from a surface to the opposite or to an adjoining surface. **D 9, D07**
- check analysis**—Deprecated term. Use the preferred term **product analysis**. **A 941, A01**
- check analysis**—see *product analysis*. **F 1789, F16**
- check character, *n***—a calculated character included within a symbol whose value is used to perform a mathematical check of the accuracy of the decoded data. **F 1294, F05**
- checkered head**—flat head with raised or depressed, checker or grid marks of various designs. **F 547, F16**
- checkers**—(1) an open structure of firebrick serving as a heat exchanger.
(2) slang for regenerators of this type.
(3) slang for refractory brick used in such a construction. **C 162, C14**
- Check Fuel, *n***—*for quality control testing*, a spark-ignition engine fuel of selected characteristics having an octane number accepted reference value (O.N._{ARV}) determined by round-robin testing under reproducibility conditions. **D 4175, D02**
- checking**—*in protective coatings*, the formation of slight breaks in a coating film that do not penetrate to the underlying surface. **D 4538, D33**
- checking (coatings), *n***—phenomenon manifested in paint films by slight breaks in the film that do not penetrate to the underlying surface. **E 631, E06**
- checking (coatings), *n***—phenomenon manifested in paint films by slight breaks in the film that do not penetrate to the underlying surface. **E 1605, E06**
- checking resistance, *n***—the ability of a coating to resist slight breaks in the film that do not penetrate to the previously applied coating or to the substrate. The breaks should be called cracks if penetration extends to the previously applied coating or to the substrate. See **cracking resistance**. **D 16, D01**
- check valve**—a valve that will allow water to pass in one direction but will close and prevent flow in the opposite direction. **D 6161, D19**
- cheesemelter**—a low input unit, designed to melt cheese on top of specialty foods, but usually incapable of fully cooking a food item such as steak or chicken. See **broiler, overfired**. **F 1827, F26**
- chelate compound**—a compound in which the metal is contained as an integral part of a ring structure and is not readily ionized. **B 374, B08**
- chelating agent**—a compound capable of forming a chelate compound with a metal ion. See **chelate compound**. **B 374, B08**
- chelating agent**—a sequestering or complexing agent that, in aqueous solution, renders a metallic ion inactive through the formation of an inner ring structure with the ion. **D 459, D12**
- chelating agents**—a sequestering or complexing agent that, in aqueous solution, renders a metallic ion inactive through the formation of an inner ring structure with the ion. **D 6161, D19**
- chemical:**
- effects**—AES, any change in the shape of an Auger spectrum or in the Auger peak energy for an element which is due to chemical bonding.
- shift**—AES, XPS, a change in peak energy because of a change in the chemical environment of the atom. **E 673, E42**
- chemical adsorption**—see **chemisorption**. **D 2652, D28**
- chemical anchors**—chemical materials that provide anchorage between a bolt or bar and a drilled hole. **F 1789, F16**
- chemical attack**—chemical reaction or solvent effect, causing failure or deterioration of plastic and rubber parts, organic coating, metals, or lithography involved in the completed package. **D 3064, D10**
- chemical carbonless transfer paper**—a transfer paper that produces a visible image by transferring a relatively colorless material from one sheet to another where it reacts to form a visible image. **F 549, F05**
- chemical cellulose**—a chemically purified cellulosic material that is intended for chemical treatment to produce derivatives. **D 1695, D01**
- chemical cleaner**—see **cleaner, chemical**. **F 412, F17**
- chemical conversion coating**—a protective or decorative nonmetallic coating produced *in situ* by chemical reaction of a metal with a chosen environment. (It is often used to prepare the surface prior to the application of an organic coating.) **G 15, G01**
- chemical cotton**—chemical cellulose prepared from cotton; generally, but not necessarily, cotton linters. **D 1695, D01**
- chemical deposition, *n***—the precipitation of one metal from a

chemical deposition, *n*

solution of its salts by the addition of another metal or reagent to the solution. **B 243, B09**

chemical durability—the lasting quality (both physical and chemical) of a glass surface. It is frequently evaluated, after prolonged weathering or storing, in terms of chemical and physical changes in the glass surface, or in terms of changes in the contents of a vessel. **C 162, C14**

chemical feed pump—a pump used to meter chemicals, such as chlorine of polyphosphate, into a feed water supply. **D 6161, D19**

chemical grout—any grouting material characterized by being a true solution; no particles in suspension. See also **particulate grout**. **D 653, D18**

chemical grout system—any mixture of materials used for grouting purposes in which all elements of the system are true solutions (no particles in suspension). **D 653, D18**

chemical lime—a quicklime or hydrated lime whose chemical and physical characteristics and method of processing make it suitable for one or more of the many and varied chemical and industrial uses of the product. **C 51, C07**

chemical luminescence, *n*—luminescence resulting from a chemical reaction. (See also **luminescence**.) **E 284, E12**

chemically bonded brick, *n*—see **unburned brick**. **C 71, C08**

chemically curing sealant, *n*—a sealant that cures primarily through chemical reaction. **D 5535, D04**

chemically foamed polymeric material—a cellular material in which the cells are formed by gases generated from thermal decomposition or other chemical reaction. **D 883, D20**

chemically foamed polymeric material, *n*—a cellular material in which the cells are formed by gases generated by thermal decomposition or other chemical reaction. **F 1251, F04**

chemically formed polymeric material—a cellular material in which the cells are formed by gases generated from thermal decomposition or other chemical reaction. (D20) **F 412, F17**

chemically precipitated metal powder, *n*—powder produced by the reduction of a metal from a solution of its salts either by the addition of another metal higher in the electromotive series or by other reducing agent. **B 243, B09**

chemically refined copper—copper recovered from an aqueous solution by other than electrolytic means. Usually when this term is used alone it refers to chemically refined tough pitch copper. This designation applies to the following:

—copper cast in refinery shapes suitable for hot or cold working, or both, and by extension, to fabricators products made therefrom, —ingots or ingot bars suitable for remelting. **B 846, B05**

chemically strengthened—glass that has been ion-exchanged to produce a compressive stress layer at the treated surface. **C 162, C14**

chemical milling—the shaping of a work piece by immersion in an etchant employing a resist for selective removal of material. **B 374, B08**

chemical plating—deposition of a metal coating by chemical, non-electrolytic methods. See also **immersion plate, contact plating**. **B 374, B08**

chemical polishing—the improvement in surface smoothing of a metal by simple immersion in a suitable solution. See **bright dip (nonelectrolytic)**. **B 374, B08**

chemical porcelain—See *chemical porcelain* under **porcelain**. **C 242, C21**

chemical potential—(μ_i or \bar{G}_i) the partial molar free energy of component *i*, that is, the change in free energy of a solution upon adding one mole of component *i* to an infinite amount of solution of given composition,

$$(\delta G/\delta n_i)_{T,P,n_{j \neq i}} = \bar{G}_i = \mu_i$$

where:

G = Gibbs free energy, and

n_i = number of moles of the *i*th component.

E 7, E04

chemical protective clothing (CPC), *n*—any material or combination of materials used in an item of clothing for the purpose of isolating parts of the body from direct contact with a potentially hazardous chemical. **F 1494, F23**

chemical-protective suit ensemble—the combination of a chemical-protective suit (totally encapsulating, splash-protective) with the wearer's respiratory protective equipment, gloves, boots, communications system, and cooling device, or some combination of those. **F 1494, F23**

chemical pulp, *n*—fibrous material obtained by a predominantly chemical treatment of wood or other plant material; principal processes are sulfate (also known as kraft), sulfite, and soda. (see **mechanical pulp** and **semichemical pulp**) **D 1968, D06**

chemical pulps—in the paper industry, pulps produced by chemical processes, as contrasted to those produced by mechanical processes. (see also **chemical wood pulp**). **D 1695, D01**

chemical reaction papers—papers that produce a visible image by the reaction of relatively colorless materials which come into contact under pressure. **F 221, F05**

chemical repellent—any substance whose odor, taste, appearance, tactile sensation, or combination thereof produces an aversion response in the target animal. **E 609, E35**

chemical resistance—for *asbestos cement products*, the ability of the product to resist chemical attack, dissolution, decomposition or other chemical changes when in contact with liquid, gaseous, or solid media normally encountered in its service environment. **D 2946, C17**

chemical resistance, *n*—the ability to resist chemical attack. **D 4439, D35**

chemical resistance—the ability to resist chemical attack. **E 631, E06**

chemical resistance—the ability to resist chemical attack. **E 1749, E06**

chemical resistance—the ability to resist chemical attack. **F 412, F17**

chemical-resistant—the ability of a material to resist degradation by reaction with, dissolution by, or reduction of physical continuity from contact with a chemical agent or agents, thereby retaining its capacity to perform as a structural or aesthetic entity. **C 904, C03**

chemical-resistant carbon brick—a brick comprised of carbon (including graphite) that is carbon bonded and fired to a minimum temperature of 1850°F (1010°C). This brick exhibits good resistance to thermal shock and resists exposure to a wide range of alkalies and acids, particularly hydrofluoric acid. When used in oxidizing conditions, temperature exposure should be less than 600°F (315°C). **C 904, C03**

chemical-resistant construction unit—a modular nonmetallic material, either vitreous or nonvitreous, used in industrial processes primarily for applications where chemical, thermal, and mechanical resistance is required. **C 904, C03**

chemical-resistant fireclay or shale brick—a kiln fired brick from clay, shale, or mixtures thereof that exhibits low absorption and high resistance to a wide range of chemical environments. This brick should not be used in hot caustic or where hydrofluoric acid or other fluoride chemical compounds are found. Commonly referred to as acid-resistant brick or acid-proof brick. **C 904, C03**

chemical-resistant polymer concrete—a construction material composed of a continuous phase (binder) of a polymer and a discontinuous phase (aggregate) generally used in applications where chemical resistance is required. **C 904, C03**

chemical-resistant polymer machinery grout—an intimate mixture of liquid resinous material, selected filler materials, and setting agent, which harden by chemical reaction to provide support for machine bases. **C 904, C03**

chemical-resistant resin grout—a mixture of liquid resin, filler and setting agent. The components form a mixture that subsequently hardens by chemical reaction. The setting agent may be separate or incorporated in the filler. **C 904, C03**

chemical-resistant resin monolithic surfacing—an intimate mixture of liquid resinous materials, selected filler materials, and setting agent. These components are mixed together, placed to a minimum

thickness of 60 mils (1.5 mm), then hardened to form a bonded overlay. **C 904, C03**

chemical-resistant resin mortar—an intimate mixture of liquid resinous material, selected filler materials, and setting agent. These components form a trowelable mortar that subsequently hardens by chemical reaction. **C 904, C03**

chemical-resistant tile grout—an intimate mixture of liquid resinous material, selected filler materials, and setting agent. These components form a flowable mixture that subsequently hardens by chemical reaction. **C 904, C03**

chemical sanitizing—solution to destroy or kill any residual bacteria from multiple-use tableware. **F 1827, F26**

chemical sanitizing, recirculated wash, fresh water rinse type—machines with a final rinse using fresh water from an outside source combined with chemical sanitizing solution; additional parts: chemical sanitizing equipment. See **dishwashing machine, commercial**. **F 1827, F26**

chemical sanitizing, stationary rack, dump type—machines with chemical sanitizing solution added to the rinse cycle; additional parts: chemical sanitizing equipment. See **dishwashing machine, commercial**. **F 1827, F26**

chemical setting silicate and silica chemical-resistant mortar—an intimate mixture of a silicate or silica binder, a chemically inert solid filler, and a setting agent. The binder may be a liquid silicate or silica, or a powder to which water is added. These components are subsequently hardened by the chemical reaction between the setting agent and the binder. **C 904, C03**

chemical shift (NMR), δ —the defining equation for δ is the following:

$$\delta = \frac{\Delta\nu}{\nu_R} \times 10^6$$

where ν_R is the frequency with which the reference substance is in resonance at the magnetic field used in the experiment and $\Delta\nu$ is the frequency difference between the reference substance and the substance whose chemical shift is being determined, at constant field. The sign of $\Delta\nu$ is to be chosen such that shifts to the high frequency side of the reference shall be positive. **E 131, E13**

chemical treatment, n —a passivating treatment normally applied to metallic coatings to retard the formation of corrosion products (storage stain) during shipment and storage. **A 902, A05**

chemical wash, n —in rug cleaning, a specialized professional process used on oriental rugs. **D 123, D13**

chemical wash, n —in rug cleaning, a specialized professional process used on oriental rugs. **D 5253, D13**

chemical wood pulp—a term used in the paper industry for pulps obtained by digestion of wood with solutions of various chemicals. **D 1695, D01**

chemisorption, n —adsorption, especially when irreversible, by means of chemical forces in contrast with physical forces. **D 1356, D22**

chemisorption (chemical adsorption)—the binding of an adsorbate to the surface of a solid at strengths approximating those of a chemical bond. **D 2652, D28**

chest, n —in garment construction, a measurement taken from below each armhole seam straight across the garment while it is laid flat. **F 1494, F23**

chest/bust girth, n —the horizontal circumference around the body, taken under the arms and across the fullest part of the chest/bust apex including the lower portion of the shoulder blades. **D 5219, D13**

chest girth, n —in body measurements, the circumference of the body over the shoulder blades, under the arms and across the upper chest. (Compare **bust girth**.) **D 123, D13**

chest girth, n —in body measurements, the circumference of the body over the shoulder blades, under the arms and across the upper chest. (See **bust girth**.) **F 1494, F23**

chest harness, n —a type of harness worn around the chest for upper body support. **F 1490, F32**

chestnut extract—a vegetable tanning agent extracted from the wood of the chestnut tree and used in tanning/re-tanning heavy leathers. **D 1517, D31**

chevron configuration—booming configuration used in narrow watercourses, formed by positioning two lengths of boom in a deflection mode, the leading end of each length is positioned in the middle of the watercourse and the trailing ends lead to opposite shores. **F 818, F20**

chewable surface—surface easily accessible to children (usually up to five feet from the floor or ground), and likely to be chewed-on, such as window sills, balusters, and handrails. See **accessible surface**. **E 631, E06**

chewable surface—surface easily accessible to children (usually up to five feet from the floor or ground), and likely to be chewed-on, such as window sills, balusters, and handrails. See **accessible surface**. **E 1605, E06**

child-occupied facility—a facility constructed prior to 1978 that is visited regularly by the same child, six years of age or under, at least two different days within any week, for at least three hours per visit, six hours per week, and 60 hours per year. (40 CFR 745.223, adapted) **E 1605, E06**

child-resistant packaging—See **packaging**. **D 996, D10**

chill, n —an object, usually metal, imbedded in a portion of the mold to accelerate the local rate of heat removal from the metal being cast. **A 644, A04**

chill, v —to accelerate the freezing rate of cast iron, usually in a localized region, to refine the graphite structure or cause formation of primary carbides. **A 644, A04**

chilled iron, n —a cast iron that would normally solidify free of primary carbide which is purposely caused to solidify as white cast iron, locally or entirely, by accelerated cooling. **A 644, A04**

chill mark—a wrinkled surface condition on glassware resulting from uneven cooling in the forming process. **C 162, C14**

chill, microstructural, n —a localized region of primary carbides in a casting made from a cast iron that would normally solidify free of primary carbides. **A 644, A04**

chime (chine), n —in packaging, the rim of a **container**, such as a **drum, barrel, or can**. **D 996, D10**

chimney effect, n —a phenomenon consisting of a vertical movement of a localized mass of air or other gases due to temperature differences. **D 1356, D22**

chimney effect—upward thrust of smoke and hot gases by convection currents confined in a vertical enclosure. **E 176, E05**

china—a glazed or unglazed vitreous ceramic whiteware made by the china process and used for nontechnical purposes, designating such products as dinnerware, sanitary ware, and artware when they are vitreous. (See also **bone china**.) **C 242, C21**

china clay—See **kaolin**. **C 242, C21**

china process—the method of producing glazed ware by which the ceramic body is fired to maturity, following which the glaze is applied and matured by firing at a lower temperature. **C 242, C21**

china sanitary ware (sanitary plumbing fixtures)—glazed, vitrified whiteware fixtures having a sanitary service function. **C 242, C21**

Chinese script eutectic—a configuration of eutectic constituents, found particularly in some cast alloys of aluminum containing iron and silicon and in magnesium alloys containing silicon, which resembles in appearance the characters in Chinese script. **E 7, E04**

Chinese wok range—equipment characterized as having one or more “wells” or chamber and designed to use a wok as the cooking utensil. See **range**. **F 1827, F26**

chip—an irregularly shaped fragment dislodged from a stone surface. **C 119, C18**

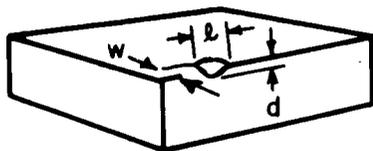
chip—an imperfection due to breakage of a small fragment out of an otherwise regular surface. **C 162, C14**

chip—a small piece of broken-off material, or the location where a small piece of the unit material has been broken off. **C 896, C04**

chip

chip—crushed angular rock fragment of a size smaller than a few centimetres. (ISRM) **D 653, D18**

chip—area along an edge or corner where the material has broken off.



where:

w = width

l = length, and

d = depth.

F 109, C21

chip and tear, n —a special type of irregular wear characterized by a rough tread surface which may contain cracks, abrasion pits or surface ruptures. **F 538, F09**

chipboard—See **paperboard**. **D 996, D10**

chip marks—shallow depressions or indentations in or on the surface of dressed lumber caused by chips or shavings getting embedded in the surface during dressing. **D 9, D07**

chipped glass—a glass article with chipped surface produced intentionally. **C 162, C14**

chipped tire, n —a classified scrap tire particle that has a basic geometrical shape, which generally is 2 in. (5.08 cm) or smaller and has most of the bead wire removed. Also referred to as a *tire chip*. **D 5681, D34**

chipping—the process of removing thin extra glass prior to grinding. **C 162, C14**

chipping—fracturing and breaking away of fragments of a porcelain enameled surface. **C 286, B08**

chipping resistance, n —the ability of a coating or layers of coatings to resist removal, usually in small pieces, resulting from impact by hard objects or from wear during service. **D 16, D01**

chipping resistance (coatings)—ability of a coating or layers of coatings to resist removal, usually in small pieces, resulting from impact by hard objects or from wear during service. **E 631, E06**

chipping resistance (coatings)—ability of a coating or layers of coatings to resist removal, usually in small pieces, resulting from impact by hard objects or from wear during service. **E 1605, E06**

chips—small fragments of wood chopped or broken by cuts such as by a planer, chipper, mechanical hog, hammermill. **D 9, D07**

chips—small pieces of wood chopped off a block by ax-like cuts as in a chipper of the paper industry, or produced by mechanical hogs, hammermills, etc. **D 1554, D07**

chips—minor damage to the pultruded surface that removes material but does not cause a crack or craze. **D 3918, D20**

chip size, n —the range of rubber particle sizes resulting from the processing of whole tires. **D 5681, D34**

chirping—the process of dispersing the zero phase difference points for different wavelengths across the interferogram, so that the magnitude of the signal is reduced in the short region of the interferogram where all wavelengths would otherwise constructively interfere. **E 131, E13**

chirp test, n —the progressive application of brake torque required to produce the maximum value of longitudinal braking force that will occur prior to wheel lockup, with subsequent brake release to prevent any wheel lockup (tire slide). **E 867, E17**

chisel—the steel cutting tool used in percussion drilling. (ISRM) **D 653, D18**

chisel point—point with two major planes forming “V” and pair of minor planes on each flank; forming hexagonal cross section. **F 547, F16**

chisel point—point with two symmetrically beveled planes forming “V” at end of staple leg, resulting in straight penetration. (See **cross-cut chisel point**.) **F 592, F16**

chitosan, n —a linear polysaccharide consisting of $\beta(1 \rightarrow 4)$ linked 2-acetamido-2-deoxy-D-glucopyranose (GlcNAc) and 2-amino-2-deoxy-D-glucopyranose (GlcN). Chitosan is a polysaccharide derived by *N*-deacetylation of chitin. **F 2312, F04**

chloramine—a combination of chlorine and ammonia in water which has bactericidal qualities for a longer time than does free chlorine. **D 6161, D19**

chlorinated poly(vinyl chloride)—a poly(vinyl chloride) (PVC) polymer modified by additional chlorination. **D 883, D20**

chlorinated poly(vinyl chloride) plastics—plastics based on chlorinated poly(vinyl chloride) in which the chlorinated poly(vinyl chloride) is in the greatest amount by weight. **D 883, D20**

chlorinated poly(vinyl chloride) plastics—plastics based on chlorinated poly(vinyl chloride) in which the chlorinated poly(vinyl chloride) is in the greatest amount by weight. (D20) **F 412, F17**

chlorine—chemical used for its qualities as a bleaching or oxidizing agent and disinfectant in water purification. **D 6161, D19**

chlorine bleach, n —a bleach that releases the hypochlorite ion in solution, for example, sodium hypochlorite. **D 123, D13**

chlorine bleach, n —a bleach that releases the hypochlorite ion in solution, for example, sodium hypochlorite. **D 3136, D13**

chlorine, combined available, n —residual chlorine combined with ammonia nitrogen or nitrogenous compounds. **D 1129, D19**

chlorine demand—the amount of chlorine used up by reacting with oxidizable substances in water before chlorine residual can be measured. **D 6161, D19**

chlorine, free available, n —the hypochlorite ions (OCl^-), hypochlorous acid (HOCl) or the combination thereof present in water. **D 1129, D19**

chlorine, free available—the chlorine (Cl_2), hypochlorite ions (OCl^-), hypochlorous acid (HOCl) or the combination thereof present in water. **D 6161, D19**

chlorine number—the number of grams of chlorine gas or of bleaching powder (expressed as its equivalent in chlorine) that is consumed by 100 g of oven-dry pulp in a definite time under certain specified conditions. The chlorine number is an indication of the bleach requirement of the pulp and an indirect estimate of the lignin content. **D 1695, D01**

chlorine or volatile halide extraction—See **extraction**. **E 7, E04**

chlorine requirement, n —the amount of chlorine required to achieve, under specified conditions, the objectives of chlorination. **D 1129, D19**

chlorine residual, n —the amount of available chlorine present in water at any specified time. **D 1129, D19**

chlorine, residual—the amount of available chlorine present in water at any specified time. **D 6161, D19**

chlorine, total available—the sum of free available chlorine plus chloramines present in water. **D 6161, D19**

chlorofluorocarbon plastic, n —a plastic based on polymers made with monomers composed of chlorine, fluorine, and carbon only. **F 1251, F04**

chlorofluorocarbon plastics—plastics based on polymers made with monomers composed of chlorine, fluorine, and carbon only. (ISO) **D 883, D20**

chlorofluorocarbon plastics—plastics based on polymers made with monomers composed of chlorine, fluorine, and carbon only. (ISO, D20) **F 412, F17**

chlorofluorohydrocarbon plastic, n —a plastic based on polymers made with monomers composed of chlorine, fluorine, hydrogen, and carbon only. **F 1251, F04**

chlorofluorohydrocarbon plastics, n —plastics based on polymers made with monomers composed of chlorine, fluorine, hydrogen, and carbon only. (ISO) **D 883, D20**

chlorofluorohydrocarbon plastics, n —plastics based on polymers made with monomers composed of chlorine, fluorine, hydrogen, and carbon only. (ISO, D20) **F 412, F17**

chlorosity, n —the concentration of the dissolved chloride equivalent in water at 20°C. **D 1129, D19**

chock, *n*—a device that is placed in a crack or pocket in rock and designed to withstand a load applied through webbing, rope, wire, or a carabiner. **F 1773, F08**

chock, active, *n*—a chock containing moving parts that control its width. **F 1773, F08**

chock, passive, *n*—a chock containing no moving parts. **F 1773, F08**

choke—an imperfection consisting of an insufficient opening in the finish and neck of a container. **C 162, C14**

chopped fiber—fiber glass strand which has been chopped to specified lengths. **C 162, C14**

chopped strand, *n*—*in glass textiles*, a strand made from short predetermined lengths of cut continuous filament and used as a reinforcing material. (See also **strand**.) **D 123, D13**

chopped strand, *n*—*in glass textiles*, a strand made for short predetermined lengths of cut continuous filament and used as a reinforcing material. (See also **strand**.) **D 7018, D13**

chopped tire, *n*—a scrap tire that is cut into relatively large pieces of unspecified dimensions. **D 5681, D34**

chord length—(LTS) the straight-line distance between the snowboard tail and the snowboard tip with the snowboard pressed flat to a plane surface to take out the camber. **F 1107, F27**

chord length, *n*—the straight line distance between the two ends of a curved needle. **F 1840, F04**

chord length, L_{TS} —straight line distance measured between the ski tail and ski tip with the ski pressed against a plane surface.

NOTE—Either method at the manufacturer's discretion may be used to indicate nominal ski length or ski size when rounded to common increment. **F 472, F27**

chord modulus, *n*—*in a stress-strain curve*, the ratio of the change in stress to the change in strain between two specified points on the curve. **D 123, D13**

chord modulus, *n*—*in a stress-strain curve*, the ratio of the change in stress to the change in strain between two specified points on the curve. **D 4848, D13**

"C" *Horizon*—see **horizon**. **D 653, D18**

chroma, *n*—see **color**. (For consensus technical definition see **chroma** in Terminology E 284). **E 253, E18**

chroma, *n*—(1) attribute of color used to indicate the degree of departure of the color from a neutral color of the same lightness. See also **Munsell chroma**.

(2) C^* , (in the CIE 1976 L^* , a^* , b^* or L^* , u^* , v^* system) the quantity $C^*_{ab} = (a^{*2} + b^{*2})^{1/2}$ or $C^*_{uv} = (u^{*2} + v^{*2})^{1/2}$.

(3) attribute of a visual perception, produced by an object color, that permits a judgment to be made of the amount of pure chromatic color present, irrespective of the amount of achromatic color. **E 284, E12**

chromatic, *adj*—perceived as having a hue; not white, gray, or black. **E 284, E12**

chromatic aberration—a defect in a lens or lens system as a result of which the lens possesses different focal lengths for radiation of different wavelengths. **E 7, E04**

chromatic aberration—a defect in a lens or lens system as a result of which the lens possesses different focal lengths for radiation of different wavelengths. **E 175, E41**

chromatic adaptation, *n*—changes in the visual system's sensitivities due to changes in the spectral quality of illuminating and viewing conditions. **E 284, E12**

chromaticity, *n*—the color quality of a color stimulus definable by its chromaticity coordinates, or by its dominant (or complementary) wavelength and its purity taken together. **E 284, E12**

chromaticity coordinates, *n*—the ratio of each of the tristimulus values of any viewed light to the sum of the three. **E 284, E12**

chromaticity diagram, *n*—a plane diagram in which points specified by chromaticity coordinates represent the chromaticities of lights (color stimuli). **E 284, E12**

chromaticness, *n*—(1) attribute of visual perception combining the hue and saturation.

(2) attribute of a visual perception according to which the color of an area appears to be more or less chromatic. **E 284, E12**

chromating—the process for producing a conversion coating (q.v.) containing chromium compounds. **B 374, B08**

chrome brick, *n*—a refractory brick, which may be burned or unburned, manufactured predominantly or entirely of refractory-grade chrome ore, and having a Cr_2O_3 content of 30 % or greater (see also **chromic oxide brick**). **C 71, C08**

chrome-finished griddle—equipment with a polished chrome-finished cooking surface that is easier to clean and radiates less heat towards the chef and the kitchen. See **griddle**. **F 1827, F26**

chrome-magnesia brick, *n*—a refractory brick, which may be burned or unburned, manufactured predominantly of a mixture of refractory-grade chrome ore and refractory-grade magnesia in which the refractory-grade chrome ore predominates by weight; the refractory-grade magnesia may be either seawater magnesia, dead-burned magnesite, fused magnesia, or a combination of these materials. **C 71, C08**

chrome ore, refractory-grade, *n*—a refractory ore consisting essentially of chrome-bearing spinel with only minor amounts of accessory minerals and having physical and chemical properties suitable for making refractory products. **C 71, C08**

chrome retannage—the process of applying trivalent chromium salts as a secondary adjunct to the main tannage to impart or enhance certain leather properties; usually applied after splitting and shaving. **D 1517, D31**

chrome tannage—conversion of raw hides/skin into leather with chromium compounds, thereby substantially increasing strength properties and resistance to various biological and physical agents. **D 1517, D31**

chromia-alumina brick, *n*—a refractory brick, which may be burned or unburned, manufactured predominantly of a mixture of chromic oxide (Cr_2O_3) and a high-alumina raw material, with the chromic oxide content being 50 % or greater by weight and with alumina (Al_2O_3) predominating by weight among the other constituent oxides. **C 71, C08**

chromic oxide brick—a refractory brick, which may be burned or unburned, manufactured predominantly of chromic oxide (Cr_2O_3) and having a Cr_2O_3 content of 90 % or greater (may also be called **chromia brick**). **C 71, C08**

chromizing—a surface treatment at elevated temperatures, generally carried out in pack, vapor, or salt baths, in which an alloy is formed by the inward diffusion of chromium into the base metal. **B 374, B08**

chronic ecotoxicity test, *n*—a comparative ecotoxicity test in which a representative subpopulation of organisms is exposed to different treat rates of a test material and is observed for a period of time which constitutes a major portion of their life span. **D 4175, D02**

chronic ecotoxicity test, *n*—a comparative ecotoxicity test in which a representative subpopulation of organisms is exposed to different treat rates of a test material and is observed for a period of time which constitutes a major portion of their life span. **D 6384, D02**

chronic test—a comparative study in which organisms that are subjected to different treatments are observed for a long period or a substantial portion of their life span. **E 943, E47**

chronic toxicity test, *n*—a comparative toxicity test in which a representative subpopulation of organisms are exposed to different treat rates of a test material and is observed for a period of time which constitutes a major portion of their life span. **D 4175, D02**

chrysotile, *n*—an asbestos mineral belonging to the serpentine group, having a chemical composition close to $Mg_3Si_2O_5(OH)_4$. **D 2946, C17**

chrysotile asbestos—see **chrysotile**. **D 2946, C17**

chunk glass—[archaic] optical glass obtained in breaking open a pot of transfer glass. **C 162, C14**

CIAP—an abbreviation for *corrosion inhibiting adhesive primer*. **E 631, E06**

CIAP—an abbreviation for *corrosion inhibiting adhesive primer*. E 1749, E06

cidaphobia—sensitivity of target animals that increases their aversion to the high mortality within the population. E 609, E35

CIE, *n*—abbreviation for International Commission on Illumination, which in French is Commission Internationale de l'Éclairage. D 2946, C17

CIE, *n*—the abbreviation for the French title of the International Commission on Illumination, or Commission Internationale de l'Éclairage. D 4175, D02

CIE, *n*—the abbreviation for the French title of the International Commission on Illumination, Commission Internationale de l'Éclairage. E 284, E12

CIE color-rendering index, R, *n*—measure of the degree to which the computed chromaticity of a CIE test color sample illuminated by a test illuminant conforms to that of the same sample illuminated by a reference illuminant. E 284, E12

CIELAB color difference, *n*—color difference calculated by using the CIE 1976 $L^* a^* b^*$ opponent-color scales, based on applying a cube-root transformation to CIE 1931 tristimulus values X, Y, Z or CIE 1964 tristimulus values X_{10}, Y_{10}, Z_{10} . E 284, E12

CIELUV color difference, *n*—color difference calculated by using the CIE 1976 $L^* u^* v^*$ opponent-color scales, based on a linear transformation of CIE chromaticity coordinates x, y , or x_{10}, y_{10} and a cube-root transformation of Y or Y_{10} to L^* , applied to CIE 1931 tristimulus values X, Y, Z or CIE 1964 tristimulus values X_{10}, Y_{10}, Z_{10} . E 284, E12

CIE observer, *n*—for *colordetermination*, see **standard observer**, **CIE 1931** and **supplementary observer**, **CIE 1964**. D 2946, C17

CIE primaries, *n*—the primary color stimuli used in the CIE system of colorimetry. E 284, E12

CIE source C, *n*—see **standard source**. D 2946, C17

CIE spectral tristimulus values, *n*—tristimulus values or color-matching functions of the spectral components of an equal-energy spectrum in the CIE (XYZ) system. E 284, E12

CIE 1931 standard colorimetric system, *n*—a system for determining the tristimulus values of any spectral power distribution using the set of reference color stimuli X, Y, Z and the three CIE color-matching functions $\bar{x}(\lambda), \bar{y}(\lambda), \bar{z}(\lambda)$ adopted by the CIE in 1931. E 284, E12

CIE standard illuminant A, *n*—colorimetric illuminant, representing the full radiator at 2855.6 K, defined by the CIE in terms of a relative spectral power distribution. E 284, E12

CIE standard illuminant B, *n*—colorimetric illuminant, representing direct sunlight with a correlated color temperature of 4874 K, defined by the CIE in terms of a relative spectral power distribution. Declared obsolete by the CIE in 1983. E 284, E12

CIE Standard Illuminant C, *n*—Colorimetric illuminant, representing daylight with a correlated color temperature of 6774 K, defined by the CIE in terms of a relative spectral power distribution. D 4175, D02

CIE standard illuminant C, *n*—colorimetric illuminant, representing daylight with a correlated color temperature of 6774 K, defined by the CIE in terms of a relative spectral power distribution. E 284, E12

CIE standard illuminant D₆₅, *n*—colorimetric illuminant, representing daylight with a correlated color temperature of 6504 K, defined by the CIE in terms of a relative spectral power distribution. E 284, E12

CIE 1931 standard observer, *n*—ideal colorimetric observer with color matching functions $x(\lambda), y(\lambda), z(\lambda)$ corresponding to a field of view subtending a 2° angle on the retina; commonly called the “2° Standard Observer.” D 4175, D02

CIE 1931 standard observer, *n*—ideal colorimetric observer with color matching functions $\bar{x}(\lambda), \bar{y}(\lambda), \bar{z}(\lambda)$ corresponding to a field of view subtending a 2° angle on the retina; commonly called the “2° standard observer.” E 284, E12

CIE standard source A, *n*—a gas-filled tungsten-filament lamp operated at a correlated color temperature of 2855.6 K. E 284, E12

CIE standard source B, *n*—standard source A combined with a specified liquid filter, to provide radiant flux with a correlated color temperature of 4874 K. Declared obsolete by the CIE in 1983. E 284, E12

CIE standard source C, *n*—standard source A combined with a specified liquid filter, to provide radiant flux with a correlated color temperature of 6774 K. E 284, E12

CIE 1964 supplementary standard colorimetric system, *n*—a system for determining the tristimulus values of any spectral power distribution using the set of reference color stimuli X_{10}, Y_{10}, Z_{10} , and the three CIE color-matching functions $\bar{x}_{10}(\lambda), \bar{y}_{10}(\lambda), \bar{z}_{10}(\lambda)$ adopted by the CIE in 1964. E 284, E12

CIE 1964 supplementary standard observer, *n*—ideal colorimetric observer with color matching functions $\bar{x}_{10}(\lambda), \bar{y}_{10}(\lambda), \bar{z}_{10}(\lambda)$ corresponding to a field of view subtending a 10° angle on the retina; commonly called the “10° standard observer.” E 284, E12

CIE 1976 uniform-chromaticity-scale diagram, *n*—the uniform-chromaticity-scale diagram produced by plotting in rectangular coordinates v' against u' , quantities defined as follows:

$$u' = 4X/(X + 15Y + 3Z) = 4x/(-2x + 12y + 3)$$

$$v' = 9Y/(X + 15Y + 3Z) = 9y/(-2x + 12y + 3)$$

for the CIE 1931 standard colorimetric system, or v'_{10} against u'_{10} for the CIE 1964 supplementary standard colorimetric system, in which case in the above formulae X_{10}, Y_{10}, Z_{10} are used instead of X, Y, Z and x_{10}, y_{10} instead of x, y . E 284, E12

CIE 1976 (u', v') or (u'_{10}, v'_{10}) chromaticity diagram, *n*—chromaticity diagram in which the CIE 1976 $L^* u^* v^*$ (CIE-LUV) chromaticity coordinates are plotted, with u' (or u'_{10}) as abscissa and v' (or v'_{10}) as ordinate. E 284, E12

CIE 1931 (x, y) chromaticity diagram, *n*—chromaticity diagram for the CIE 1931 standard observer, in which the CIE 1931 chromaticity coordinates are plotted, with x as abscissa and y as ordinate. E 284, E12

CIE 1964 (x_{10}, y_{10}) chromaticity diagram, *n*—chromaticity diagram for the CIE 1964 supplementary standard observer, in which the CIE 1964 chromaticity coordinates are plotted, with x_{10} as abscissa and y_{10} as ordinate. E 284, E12

cigar-box nail—bright, smooth, or barbed, regular-stock-steel, 1/2, 5/8, 3/4, and by 0.044-in. nails with flat slightly countersunk 0.099-in. head and medium diamond point. F 547, F16

cinematography—an instrumentation system for filming, measuring, and analyzing movements of the athlete, usually including a computerized digitizer for data analysis. F 869, F08

cine-radiography—the production of a series of radiographs that can be viewed rapidly in sequence, thus creating an illusion of continuity. E 1316, E07

CIP—cleaning-in-place. D 6161, D19

circle, *n*—circular blank fabricated from plate, sheet, or foil. B 881, B07

circuit—in filament winding, the winding produced by a single revolution of mandrel or form. D 883, D20

circuit grouting—a grouting method by which grout is circulated through a pipe extending to the bottom of the hole and back up the hole via the annular space outside the pipe. Then the excess grout is diverted back over a screen to the agitator tank by means of a packing gland at the top of the hole. The method is used where holes tend to cave and sloughing material might otherwise clog openings to be grouted. D 653, D18

circuit resistance—electrical resistance as measured between two test points whose internal contacts, when held closed, complete a circuit. F 2112, F01

circular anisotropic phase, *n*—as used in *Test Method D 5061*, a group of binder-phase anisotropic carbon textures that are distinguished by approximately circular domains (that is length equals width) and composed of fine circular (0.5- to 1.0- μm), medium

- circular (1.0- to 1.5- μm), and coarse circular (1.5- to 2.0- μm) size categories. **D 121, D05**
- circular bend**, *n*—simultaneous, multidirectional deformation of a fabric in which one face of a flat specimen becomes concave and the other becomes convex. **D 123, D13**
- circular bend**, *n*—simultaneous, multidirectional deformation of a fabric in which one face of a flat specimen becomes concave and the other becomes convex. **D 4850, D13**
- circular field**—see **field, circular**. **E 1316, E07**
- circularity**, *n*—ratio of a single ink dot height divided by its width with 1.0 being a perfect circle. **F 1857, F05**
- circular magnetization**—the magnetization in a part resulting from current passed directly through the part or through a central conductor. **E 1316, E07**
- circular mil (cmil)**—a unit of area equal to the area of a circle one mil (0.001 in., 0.0254 mm) in diameter. The area of a circle in circular mils is equal to the square of the diameter in mils [area(cmils) = diameter(mils)²], 1 cmil = 7.854×10^{-7} in.² [5.067×10^{-10} m²]. **B 354, B01**
- circular reinforcement**—a circular-shaped line of reinforcement. **C 822, C13**
- circular ride**—an amusement ride whose motion is primarily rotary in a fixed or variable plane from horizontal to 45° above horizontal. **F 747, F24**
- circulation**—applies to the fluid rotary drilling method; drilling fluid movement from the mud pit, through the pump, hose and swivel, drill pipe, annular space in the hole and returning to the mud pit. **D 653, D18**
- circulation rate** [$\text{L}^3 \text{T}^{-1}$]—in *fatigue testing*, the volume rate of change of the environment chamber volume. **E 1823, E08**
- circulation space**—See **space categories**. **E 631, E06**
- circulation space**—See **space categories**. **E 1480, E06**
- circulation system**—the system that moves the beverage within the bowl to ensure proper cooling and mixing. **F 1827, F26**
- circumduction**—the movement of a body part about an axis so as to describe a cone or the conical movement of a body part about an axis. **F 869, F08**
- circumferential**, *adj*—descriptor for directional illuminating (or viewing) geometry in which the illuminator provides radiation (or the receiver possesses responsivity) in many beams (or directions), normally distributed at uniform intervals throughout the 360° of azimuth of the measurement. The number and angular distribution of the beams (or directions) should be specified. (See also **annular**.) **E 284, E12**
- circumferential coils**—see **encircling coils**. **E 1316, E07**
- circumferential line**, *n*—on a tire, any real or imaginary circle on the surface of a tire, lying in a plane that is perpendicular to the spin axis. **F 538, F09**
- circumferential patternation**, *n*—measurements taken in a circumferential direction, showing the variation in liquid flux about the nozzle axis. **E 1620, E29**
- circumferential reinforcement**—reinforcement that is approximately perpendicular to the longitudinal axis of the concrete pipe. **C 822, C13**
- ciromg accelerator**—a material added to cement to decrease the time for curing. Examples are sodium chloride, calcium sulfate (gypsum), and aluminum powder. **D 653, D18**
- citric acid**— $\text{C}_3\text{H}_4(\text{OH})(\text{CO}_2\text{H})_3$, membrane cleaning chemical. **D 6161, D19**
- C.L.A.**, *n*—in measuring surface finish, the arithmetic average of the absolute distances of all profile points from the mean line for a given distance. **D 4175, D02**
- clad**—See **cladding**. **E 131, E13**
- clad**—surface sheathed. **F 547, F16**
- cladding**—nonload-bearing stone used as the facing material in wall construction that contains other materials. **C 119, C18**
- cladding**, *n*—of *anoptical fiber*, a layer of a optically transparent lower refractive index material in intimate contact with a core of higher refractive index material used to achieve total internal reflection. **E 131, E13**
- cladding ratio**—ratio by percent thickness of the component layers, for example. **B 846, B05**
- cladding system**, *n*—material assembly applied to a building as a non-load-bearing wall, or attached to a wall surface as a protective and ornamental covering. **E 631, E06**
- clad wire**—wire comprised of a given metal covered with a relatively thick application of a different metal. The bonding process is normally a combination of heat and pressure and results in a metallurgical bond. **B 354, B01**
- clamp**, *n*—that part of a testing machine used to grip the specimen by means of suitable jaws. **D 123, D13**
- clamp**, *n*—that part of a testing machine used to grip the specimen by means of suitable jaws. **D 4849, D13**
- clamp**, *n*—an interconnection component whose mechanism to secure the longitudinal element is through a squeezing action. **F 1582, F04**
- clamping force**—compression force transmitted to the base material as a result of preload in the anchor. **E 2265, E06**
- clamping pressure**—the pressure exerted by the lip of the lock-strip gasket on material installed in the channel, when the lock-strip is in place. **C 717, C24**
- clamp load**—sometimes called preload or initial load. It is a tension on a bolt or screw, which results in equal and opposite forces which exist at the interface between two members generated through the cumulative effect of tightening one or more fasteners. **F 1789, F16**
- clarifier**—a tank in which precipitate settles and supernatant overflows, a liquid-solids separation unit using gravity to remove solids by sedimentation. **D 6161, D19**
- clarity**, *n*—the characteristic of a transparent body whereby distinct high-contrast images or high-contrast objects (separated by some distance from the body) are observable through the body. **E 284, E12**
- clark degree**—number of grains of substance per one British imperial gallon of water expressed CaCO_3 . Concentration in Clark or English degree is calculated by dividing concentration in calcium carbonate equivalents by 14.3. One grain weighs 1/7000 lb and one imperial gallon of water weighs 10 lbs at 25°C. **D 6161, D19**
- class**—the descriptive term for categorizing solvent removers with similar characteristics. **E 1316, E07**
- class**, *n*—a group, set, or kind marked by common attributes or a common attribute (source: *Webster's Unabridged Dictionary*, 1967) (use: Test Method E 1387) CRIM. **E 1732, E30**
- class C fly ash**, *n*—fly ash, which meets criteria defined in ASTM C 618 for use in concrete. **E 2201, E50**
- class characteristic(s)**, *n*—the attribute(s) that establish membership in a class. **E 1732, E30**
- classes of buildings**, *adj* (catégories d'immeubles)—buildings categorized by selected attributes concerning **facility serviceability** and performance. **E 631, E06**
- classes of buildings**, *adj* (catégories d'immeubles)—buildings categorized by selected attributes concerning **facility serviceability** and performance. **E 1480, E06**
- class F fly ash**, *n*—fly ash, which meets criteria defined in ASTM C 618 for use in concrete. **E 2201, E50**
- classic gully**—a channel that is formed by gully erosion and is not interrupted by mechanical tillage operations to fill the resulting void. Gully depth can exceed 30 m. (See **gully erosion**.) **D 4410, D19**
- classification**, *n*—separation of a powder into fractions according to particle size. **B 243, B09**
- classification**, *n*—in *engine oils*, the systematic arrangement into categories in accordance with different levels of performance in specified engine tests. **D 4175, D02**
- classification**, *n*—a method of sorting stimuli into predefined categories. **E 253, E18**

classification, *n*

classification, *n*—the systematic arrangement of persons or objects into categories (groups or classes) based on shared traits or characteristics (source: Osterburg and Ward, *Criminal Investigation*, 1992, p. 835) (use: Test Method E 1387). **E 1732, E30**

classifier, *n*—equipment designed to separate oversized tire shreds from the desired size. **D 5681, D34**

Class III quaternary equilibrium—in a four-component system, the stable univariant coexistence of five phases, three of which appear in both of the associated bivariant equilibria at temperatures and pressures above, while the other two phases occur in all three of the associated bivariant equilibria below; for example, $L + \alpha + \beta = \gamma + \delta$. **E 7, E04**

Class III quinary equilibrium—in a five-component system, the stable univariant coexistence of six phases, three of which appear in all three of the associated bivariant equilibria at temperatures and pressures above, while the other three occur in all three of the associated bivariant equilibria below; for example, $L + \alpha + \beta = \gamma + \delta + \epsilon$. **E 7, E04**

Class III ternary equilibrium—in a three-component system, the stable univariant coexistence of four phases, one of which must disappear at higher temperature or pressure; for example, the ternary peritectic equilibrium, $L + \alpha + \beta = \gamma$. **E 7, E04**

Class II quaternary equilibrium—in a four-component system, the stable univariant coexistence of five phases, two of which appear in each of the three associated bivariant equilibria at temperatures and pressures above, while the other three phases all occur in both of the associated bivariant equilibria below; for example, $L + \alpha = \beta + \gamma + \delta$. **E 7, E04**

Class II quinary equilibrium—in a five-component system, the stable univariant coexistence of six phases, two of which appear in each of the four associated bivariant equilibria at temperatures and pressures above, while the other four phases occur in both of the associated bivariant equilibria below; for example, $L + \alpha = \beta + \gamma + \delta + \epsilon$. **E 7, E04**

Class II ternary equilibrium—in a three-component system, the stable univariant coexistence of four phases, two of which appear in both of the associated bivariant equilibria at higher temperature and pressure, while the other two phases occur in both bivariant equilibria below; for example, $L + \alpha = \beta + \gamma$. **E 7, E04**

Class I quaternary equilibrium—in a four-component system, the stable univariant coexistence of five phases, one of which must disappear upon lowering the temperature or pressure; for example, the quaternary eutectic equilibrium, $L = \alpha + \beta + \gamma + \delta$. **E 7, E04**

Class I quinary equilibrium—in a five-component system, the stable univariant coexistence of six phases, one of which must disappear upon lowering the temperature or pressure; for example, the quinary eutectic equilibrium, $L = \alpha + \beta + \gamma + \sigma + \epsilon$. **E 7, E04**

Class I ternary equilibrium—in a three-component system, the stable univariant coexistence of four phases, one of which must disappear upon lowering the temperature or pressure; for example, the ternary eutectic equilibrium, $L = \alpha + \beta + \delta$. **E 7, E04**

Class IV quaternary equilibrium—in a four-component system, the stable univariant coexistence of five phases, one of which must disappear at higher temperature or pressure; for example, the quaternary peritectic equilibrium, $L + \alpha + \beta + \gamma = \delta$. **E 7, E04**

Class IV quinary equilibrium—in a five-component system, the stable univariant coexistence of six phases, four of which appear in both associated bivariant equilibria at temperatures and pressures above, while the other two occur in all four associated bivariant equilibria below; for example, $L + \alpha + \beta + \gamma = \delta + \epsilon$. **E 7, E04**

Class V quinary equilibrium—in a five-component system, the stable univariant coexistence of six phases, one of which must disappear upon increasing the temperature or pressure; for example, the quinary peritectic equilibrium, $L + \alpha + \beta + \gamma + \delta = \epsilon$. **E 7, E04**

Clausius-Clapeyron equation—the rate of change of the pressure of a heterogeneous equilibrium with change of temperature dP/dT is equal to the heat of transformation from the low to the high

temperature state ΔH_v divided by the product of the absolute temperature of the equilibrium and the volume change of the transformation $T\Delta V$:

$$dP/dT = \Delta H_v/T\Delta V$$

or,

$$d \ln P/d T \approx H_v/RT$$

where R is the gas constant and the equilibrium is not near a critical point. **E 7, E04**

clay, *n*—an earthy or stony mineral aggregate consisting essentially of hydrous silicates of alumina, plastic when sufficiently pulverized and wetted, rigid when dry, and vitreous when fired to a sufficiently high temperature. **C 43, C15**

clay—a natural mineral agglomerate, consisting essentially of hydrous aluminum silicates; plastic when sufficiently wetted, rigid when dried en masse, and vitrified when fired to a sufficiently high temperature. **C 242, C21**

clay—an earthy or stony mineral aggregate consisting essentially of hydrous silicates of alumina, plastic when sufficiently pulverized and wetted, rigid when dry, and vitreous when fired to a sufficiently high temperature. **C 896, C04**

clay (clay soil)—fine-grained soil or the fine-grained portion of soil that can be made to exhibit plasticity (putty-like properties) within a range of water contents, and that exhibits considerable strength when air-dry. The term has been used to designate the percentage finer than 0.002 mm (0.005 mm in some cases), but it is strongly recommended that this usage be discontinued, since there is ample evidence from an engineering standpoint that the properties described in the above definition are many times more important. **D 653, D18**

clay roof tile, *n*—a solid unit of clay or shale, or both, formed into any of a range of generally rectangular planar shapes while plastic and fired in kiln. Clay roof tile is a ceramic product. See Specification C 1167. **C 43, C15**

clay size—that portion of the soil finer than 0.002 mm (0.005 mm in some cases) (see also **clay**). **D 653, D18**

clay size (fluvial sediment)—0.00024 to 0.004 mm in diameter. **D 4410, D19**

clay soil—see **clay**. **D 653, D18**

CLC—corrected lead concentration. **E 631, E06**

clean—free of contaminants. **E 1316, E07**

clean, *n*—free from visible or tactile contamination. **F 1646, F13**

cleanability—the relative ease with which soils or stains can be removed from a material. **C 286, B08**

clean coal combustion—the burning of coal, coal culm, or coal fines in a furnace designed to operate to minimize emissions (that is, a fluidized bed or aerated fluidized bed, etc.) or coal burned in the presence of alkaline materials, which combine to reduce these emissions. **D 5681, D34**

clean coal technology combustion products, *n*—products generated from any technology, including technologies applied at the pre-combustion, combustion, or post combustion stage, at a new or existing facility which will achieve significant reductions in air emissions of sulfur dioxide or oxides of nitrogen associated with the utilization of coal in the generation of electricity, or process steam which was not in widespread use as of November 15, 1990. **E 2201, E50**

cleaned—oil and other foreign matter removed from surface by tumbling with sawdust or by chemical process. **F 547, F16**

cleaned component—the result of substantially removing toner, dust and other undesirable materials, either by mechanical an/or chemical means. **F 335, F05**

cleaner—a solution, usually alkaline, used to remove oil, grease, drawing compounds, and loose dirt from metal as a step in preparing the surface for porcelain enameling. **C 286, B08**

cleaner blade—(also known as wiper blade), a blade which cleans the

- surface of the photoreceptor to mechanically remove toner and debris. **F 335, F05**
- cleaner, chemical**—an organic solvent used to remove foreign matter from the surface of plastic pipe and fittings. **F 412, F17**
- cleaner, mechanical**—an abrasive material or device used to remove foreign matter and gloss from the surface of plastic pipe and fittings. **F 412, F17**
- clean-finish seam-finish, *n***—a finish for the raw edges of the seam allowances of a plain seam, in which the raw seam allowance is folded under and edge stitched. **D 123, D13**
- clean-finish seam finish, *n***—in home sewing, a seam finish in which the cut edge is folded under and the fold line is edge stitched. (Syn. **turned and stitched seam finish**.) **D 4965, D13**
- cleaning**—the removal of grease, oxides, or other foreign material from a surface.
- alkaline cleaning*—cleaning by means of alkaline solutions.
- anodic or reverse cleaning*—electrolytic cleaning in which the work is the anode.
- cathodic or direct cleaning*—electrolytic cleaning in which the work is the cathode.
- diphase cleaning*—cleaning by means of solutions that contain a solvent layer and an aqueous layer. Cleaning is effected both by solvent and emulsifying action.
- direct current cleaning*—See *cathodic or direct cleaning*.
- electrolytic cleaning*—alkaline cleaning in which a current is passed through the solution, the work being one of the electrodes.
- emulsion cleaning*—cleaning by means of solutions containing organic solvents, water, and emulsifying agents.
- immersion*—See *soak cleaning*.
- reverse current cleaning*—See *anodic or reverse cleaning*.
- soak cleaning*—cleaning by immersion without the use of current, usually in alkaline solution.
- solvent cleaning*—cleaning by means of organic solvents.
- spray cleaning*—cleaning by means of spraying.
- ultrasonic cleaning*—cleaning by any chemical means aided by ultrasonic energy. **B 374, B08**
- cleaning**—the removal of unwanted materials, such as mold release agents. **B 374, B08**
- cleaning**—a process of removing undesirable matter.
- dry cleaning*—cleaning fabrics in a substantially nonaqueous liquid medium.
- wet cleaning*—a term used in the dry cleaning industry to denote cleaning in an aqueous medium. **D 459, D12**
- cleaning**—removal of marks, dust, and other extraneous materials from the surface. **D 2825, D21**
- cleaning ability, dry, *n***—the potential of a vacuum cleaner to remove dirt from a surface (sometimes referred to in the industry as *cleanability, dry*). **F 395, F11**
- cleaning agent, *n***—a chemical compound or formulation of several compounds which loosens, disperses, dissolves, or emulsifies soil to facilitate removal by mechanical action. **D 123, D13**
- cleaning agent, *n***—a chemical compound or formulation of several compounds which loosens, disperses, dissolves, or emulsifies soil to facilitate removal by mechanical action. **D 3136, D13**
- cleaning agent, *n***—a chemical compound or formulation of several compounds which loosens, disperses, dissolves, or emulsifies soil to facilitate removal by mechanical action. **D 7023, D13**
- cleaning effectiveness, dry, *n***—the ratio of the quantity of dirt removed to the quantity of dirt distributed on a test area. **F 395, F11**
- cleaning effectiveness factor (CEF), *n***—the fraction of contaminant removed from an initially contaminated test coupon as determined by gravimetric techniques. **G 126, G04**
- cleaning-emulsifiable solvent**—two-stage cleaning system wherein a concentrate containing organic solvents and surface-active agents is applied to a surface, subsequently emulsified, and removed along with the soil, by water rinsing. **B 374, B08**
- cleaning tool, *n***—a customer-installed device for a vacuum cleaner that is applied to the surface to be cleaned and is attached to the hose or the nozzle, for specialty cleaning functions. **F 395, F11**
- cleanliness**—the degree of freedom from undesirable and unintentional ink transfer from carbon paper and inked ribbons. **F 221, F05**
- cleanliness, *n***—the degree to which an oxygen system is free of contaminant. **G 126, G04**
- cleanup, *n***—wet-sweeping, HEPA-vacuuming, and washing down of surfaces within the work area at the end of each day. Compare **final cleanup**. **E 631, E06**
- clean-up**—in leak testing, the time required for a leak testing system to reduce its signal output to 37 % of the signal indicated at the time the tracer gas ceases to enter the leak system. Also called *clean-up time*. **E 1316, E07**
- clean wool fiber present, *n***—in raw wool, the mass of wool base present in the raw wool, adjusted to a moisture content of 12 %, an alcohol-extractable content of 1.5 %, and a mineral matter content of 0.5 %. **D 123, D13**
- clean wool fiber present, *n***—in raw wool, the mass of wool base present in the raw wool, adjusted to a moisture content of 12 %, an alcohol-extractable content of 1.5 %, and a mineral matter content of 0.5 %. **D 4845, D13**
- clear**—free of defects or imperfections. **D 9, D07**
- clear**—free of turbidity. **D 4790, D16**
- clearance**—plain section of shank between head and shank deformation (disregarding gripmarks). **F 547, F16**
- clearance area, *n***—work area and additional spaces outside the work area where lead contamination may have occurred during lead hazard control and other building maintenance or modification activities. **E 1605, E06**
- clearance examination, *n***—a process conducted after a lead hazard reduction activity, or other building maintenance and modification activities, to determine that no lead hazards remain in the area examined. **E 1605, E06**
- clearance level, *n***—the amount of lead in samples collected during a clearance examination that is not to be equaled or exceeded so that a residential dwelling or child-occupied facility may be classified as adequately clean and safe for re-occupancy, as promulgated by authorities having jurisdiction. **E 1605, E06**
- clear area**—that region of a document reserved for OCR characters and the required clear space around these characters. **F 149, F05**
- clear area, *n***—a space containing no dark marks, which precedes the start character of a symbol and which follows the stop character. Also, the region of a document reserved for OCR characters and the required unmarked space around these characters. (See also **quiet zone**.) **F 1294, F05**
- clear cross test**—an experimental method for determining which of two conceivable two-phase equilibria is real; at that composition at which the two conceivable two-phase fields cross, an alloy is brought to equilibrium and the phases identified; the same principle may be applied to higher-order equilibria in higher-order systems. **E 7, E04**
- clear frit**—a frit that remains essentially transparent or non-opaque when processed into a porcelain enamel. **C 286, B08**
- clear glass focusing screen**—a glass screen polished on both sides and mounted for use in a camera, in lieu of photo-sensitive material, for the purpose of establishing a plane on which to focus an image prior to recording it. **E 7, E04**
- clear glaze*—See *clear glaze* under **glaze**. **C 242, C21**
- clear ice**—ice that is transparent and contains only a moderate number of air bubbles. **D 7099, D18**
- clear to send, *n***—a control circuit that indicates to the data terminal equipment that data can or cannot be transmitted. (See **CTS**.) **F 1457, F05**

clear well

clear well—a collection basin that houses filtered or clarified water.

D 6161, D19

cleat, *n*—the joint system of coal seams, usually oriented normal or nearly normal to the bedding.

D 121, D05

cleat, *n*—a wood or metal strip attached along the edge of a **panel** of a **container** for the attaching of an adjacent panel, or fastened to the panel between the edges, or to barrel heads, for reinforcement and stiffening.

D 996, D10

cleat—L-shaped nail.

F 547, F16

cleated fiberboard box—See **box**.

D 996, D10

cleated plywood box—See **box**.

D 996, D10

cleat nail—bright, regular-stock-steel, 1½ by 0.080 to 1 7⁄8 by 0.106-in. nails with oval 3⁄16 to ¼-in. head and duckbill or clinch point. (See **clinch nail**.)

F 547, F16

cleavage—in *crystallography*, the splitting, or tendency to split, along planes determined by the crystal structure. In *petrology*, a tendency to cleave or split along definite, parallel, closely spaced planes. It is a secondary structure, commonly confined to bedded rocks.

D 653, D18

cleavage—the tendency to cleave or split along definite parallel planes, which may be highly inclined to the bedding. It is a secondary structure and is ordinarily accompanied by at least some recrystallization of the rock. (ISRM)

D 653, D18

cleavage, *n*—in an *adhesively bonded joint*, a separation in the joint caused by wedge or other crack-opening type action.

D 907, D14

cleavage crack—damage produced by the translation of a hard, sharp object across a glass surface. This fracture system typically includes a plastically deformed groove on the damaged surface, together with median and lateral cracks emanating from this groove.

C 162, C14

cleavage-peel strength, *n*—the force per unit width of bondline required to produce progressive separation by wedge or other crack-opening type action of two adherends where one or both undergo significant bending.

D 907, D14

cleavage planes—the parallel surfaces along which a rock or mineral cleaves or separates; the planes of least cohesion, usually parallel to a certain face of the mineral or crystal.

D 653, D18

cleavage planes—that family of planes of a crystal along which the crystal is easily split.

E 7, E04

cleavage strength, *n*—the force per unit width of bond line required to produce progressive separation by wedge or other crack-opening type action of two adherends.

D 907, D14

cleft water—water that exists in or circulates along the geological discontinuities in a rock mass.

D 653, D18

climatological types, *n*—major regions of significantly different recurring weather patterns. In weathering, several distinct climatological types are used to evaluate the atmospheric durability of materials. Within any single climatological variation, at a specific geographic location, short term weather patterns may fluctuate significantly. This may cause variability in short term exposures. Major climatic variations that are used for the study of weathering are:

G 113, G03

climber, *n*—a person engaging in the sport of climbing and mountaineering.

F 1773, F08

climbing and mountaineering, *n*—the sport of ascending, descending, and traversing on mountainous terrain, snow and ice, and natural and simulated rock surfaces.

F 1773, F08

climbing and mountaineering equipment, *n*—the equipment exclusively designed for use in climbing and mountaineering.

F 1773, F08

climbing drum peel test—See **test, climbing drum peel**.

E 631, E06

climbing drum peel test—See **test, climbing drum peel**.

E 1749, E06

clinch—point end bent sideways to provide increased holding power or to eliminate protrusion of point end of excessively long fastener, or both.

F 547, F16

clinch—protruding point end turned over or flattened when driven or driven against clinching plate.

F 592, F16

clinched point—pointed end of nail, having been driven through

member bent sideways. (See **brad-clinchedpoint**, **J-clinched point**, **plate-clinched point**.)

F 547, F16

clincher—part of tool that folds fastener legs to form clinch.

F 592, F16

clinching plate—(See **anvil**.) Also, hardened flat metal plate; used in clinching nails and staples designed for clinching.

F 592, F16

clinch nail—any nail designed for clinching after driving. Bright, regular-stock-steel, 1 by 0.080 to 4 by 0.177-in. nails with oval 3⁄16 to 3⁄8-in. head and duckbill or clinch point. (See **cleat nail**.)

F 547, F16

clinch point—end of wire flattened or notched or both for easy clinching when striking anvil plate or “nail buck.” (See **self-clinching**.)

F 547, F16

clinch point—point designed to facilitate clinching when driven against clinching plate. (See **step point**.)

F 592, F16

clinch strip, *n*—high-modulus or high-hardness compound applied between the carcass and the sidewall in the bead area to reinforce the bead.

F 538, F09

clinical accuracy, *n*—ability of an infrared ear canal thermometer to give a reading close to *true temperature* of the site that it purports to represent.

E 344, E20

clinical bias, \bar{x}_d , *n*—mean difference between IR thermometer output and an internal body site temperature from *subjects* at specified conditions of ambient temperature and humidity and averaged over a selected group of subjects.

E 344, E20

clinical certification—a standardized process for evaluation and recognition of an acceptable level of competence in a specific aspect of patient care.

F 1177, F30

clinical experience—exposure to and practice in an area of patient care.

F 1177, F30

clinical/field preceptor—an individual who supervises and evaluates the students during clinical or field experiences under the direction of the course instructor/coordinator.

F 1177, F30

clinical medical practice—patient diagnosis and treatment, including treatment protocols, which are the purview of qualified professionals (as determined by the state or other appropriate authority).

F 1177, F30

clinical repeatability, s_p , *n*—pooled standard deviation of changes in multiple *ear canal temperature* readings as taken from the same subject from the same ear with the same *infrared thermometer* by the same operator within a relatively short time.

E 344, E20

clinical thermometer, *n*—thermometer of any type designed to measure human body temperature.

E 344, E20

clinker, *n*—generally a fused or partly fused by-product of the combustion of coal, but also including lava and portland-cement clinker, and partly vitrified slag and brick.

D 8, D04

clip, *n*—in *shingles*—See **storm anchor**.

C 1154, C17

clip, *n*—for *shingles*, see **storm anchor (clip)**.

D 2946, C17

clip, *n*—a small fastening device, usually of metal, designed to hold an element or **component** in place.

E 631, E06

clip—See **strip**.

F 592, F16

clip, *n*—a mechanical means of joining two loops.

F 1379, F14

clip mark, *n*—a visible deformation near the edge of a fabric parallel with the lengthwise direction caused by pressure exerted by a clasping device on a clip tenter frame. (See also **pin mark**.)

D 123, D13

clip mark, *n*—a visual deformation near the edge of a fabric parallel with the lengthwise direction caused by pressure exerted by a clasping device on a clip tenter frame. (See also *pin mark*.)

D 3990, D13

clipped head—misnomer for D head. (See **notched head**.)

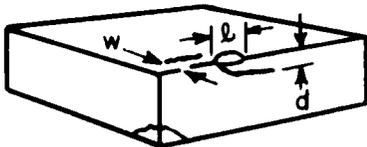
F 592, F16

clipper—the shearing machine used to dimension dry or green veneers to width.

D 1038, D07

clipping—in *fatigue spectrumloading*, the process of decreasing or increasing the magnitude of all loads (strains) that are, respectively, above or below a specified level, referred to as clipping

- level; the loads (strains) are decreased or increased to the clipping level. **E 1823, E08**
- clo, n**—unit of thermal resistance equal to $0.155 \text{ Km}^2/\text{W}$. **D 123, D13**
- clo, n**—a unit of thermal resistance (insulation) equal to $0.155 \text{ K}\cdot\text{m}^2/\text{W}$. **F 1494, F23**
- clogging, n**—the restriction of a flow path due to the accumulation of material along the flow path boundaries. **D 4175, D02**
- clogging, n**—*forgeotextiles*, the condition where soil particles move into and are retained in the openings of the fabric, thereby reducing the hydraulic conductivity. **D 4439, D35**
- clogging, v**—the restriction of normal product flow. Most commonly due to product drying in a product flow passage area of the mechanical break-up system. **D 6655, D10**
- clogging potential, n**—*in geotextiles*, the tendency for a given geotextile to decrease permeability due to soil particles that have either lodged in the geotextile openings or have built up a restrictive layer on the surface of the geotextile. **D 4439, D35**
- closed assembly time, n**—the time between the assembling of adhesive-coated surfaces and the application of heat or pressure, or both, to set the adhesive. **D 907, D14**
- closed-cavity ice**—ice formed in a closed space, cavity, or cave, in permafrost. **D 7099, D18**
- closed cell, n**—*in carbon and graphite technology*, a cell totally enclosed by its walls and hence not interconnected with other cells. A closed cell foam is a foam consisting predominantly of closed cells. **C 709, D02**
- closed cell, n**—a cell totally enclosed by its walls and hence not interconnecting with other cells. **C 717, C24**
- closed cell, n**—*in carbon and graphite technology*, a cell totally enclosed by its walls and hence not interconnected with other cells. A closed cell foam is a foam consisting predominantly of closed cells. **D 4175, D02**
- closed cell, n**—a cell totally enclosed by its walls and hence not interconnecting with other cells. (See also **cell** and **open cell**.) **F 1251, F04**
- closed-cell cellular plastics**—cellular plastics in which almost all the cells are noninterconnecting. **D 883, D20**
- closed-cell cellular plastics**—cellular plastics in which almost all the cells are noninterconnecting. (D20) **F 412, F17**
- closed cell foam, n**—a material comprised predominantly of individual non-interconnecting cellular voids. **C 168, C16**
- closed-cell foamed plastic, n**—a plastic in which almost all the cells are noninterconnecting. **F 1251, F04**
- closed-cell foamed plastics**—See **closed-cell cellular plastics**. **F 412, F17**
- closed cell material, n**—a cellular material in which substantially all cells in the mass are closed cells. **C 717, C24**
- closed cell sealant backing, n**—*in building construction*, a flexible and somewhat compressible extruded shape (usually cylindrical), with a surface skin, that is composed of closed cell material. **C 717, C24**
- closed chip**—fractured area on the edge or corner when the material has not broken off (Syn. *potential chip*).



where:

W = width

l = length, and

d = depth.

F 109, C21

closed construction—a method by which a **building, system, assembly, or component** is manufactured, in such a manner that portions

cannot be readily inspected at the installation site without disassembly or destruction. **E 631, E06**

closed construction—See **building construction**. **E 631, E06**

closed-face fabric, n—a face or shell fabric of closed construction so that no open-face areas appear. **D 123, D13**

closed-loop, adj—refers to a testing mode in which the collection medium volume is fixed. **F 1494, F23**

closed pore, n—a pore not communicating or connected with an exterior surface. **B 243, B09**

closed porosity—See **closed porosity** under **porosity**. **C 242, C21**

closed pot—a pot having a crown protecting the glass from the furnace atmosphere. **C 162, C14**

closed system—a building system having interchangeability of only its own **subsystems, subassemblies, and components**. **E 631, E06**

closed system—See **building system**. **E 631, E06**

closed-system freezing—freezing that occurs under conditions that preclude the gain or loss of water by the system. **D 7099, D18**

closed-system pingo—a pingo formed by the doming of frozen ground due to the freezing of injected water. The water is provided by the expulsion of pore water during the growth of permafrost. Closed-system pingos are found in poorly-drained terrain in the continuous permafrost zone. **D 7099, D18**

closed talik—a body of unfrozen ground occupying a depression in the permafrost table below a lake or river. **D 7099, D18**

closeness sum of squares (CSS), n—a statistic used to quantify the degree of agreement between the results from two test methods after bias-correction using the methodology of this practice. **D 4175, D02**

close nipple—a nipple with no shoulder or unthreaded portion between two threads; the shortest possible pipe nipple with complete threads. **B 846, B05**

close out—enclosure of honeycomb or other core material within a structure that may contain hard edges or attachment points, or both. **E 631, E06**

close out—enclosure of honeycomb or other core material within a structure that may contain hard edges or attachment points, or both. **E 1749, E06**

close packed—a geometric arrangement whereby a collection of equally sized spheres (atoms) may be packed together in a minimum total volume. **E 7, E04**

closure—See **compression joint**. **C 896, C04**

closure—the opening is reduced in dimension to the extent that it cannot be used for its intended purpose. (ISRM) **D 653, D18**

closure—*in grouting*, closure refers to achieving the desired reduction in grout take by splitting the hole spacing. If closure is being achieved, there will be a progressive decrease in grout take as primary, secondary, tertiary, and quaternary holes are grouted. **D 653, D18**

closure, n—*in packaging*, a means of closing a **container** to retain the contents.

plug, n—*in packaging*, a type of **closure** that is designed to be inserted into a **container** opening. It may be held by friction or by screw threads. (See **cap**.) **D 996, D10**

closure—process by which a person cognitively completes patterns or shapes that are incompletely perceived. **E 1316, E07**

closure, n—the decommissioning of a disposal facility. **E 2201, E50**

closure, n—point on supply current wave form where arc is initiated. **F 819, F18**

closure or screw cap, n—a fitment that attaches the pump to the container. **D 6655, D10**

closure plan, n—a written plan that describes the steps the owner or operator of the disposal facility will take to close the facility in accordance with regulatory or other requirements. **E 2201, E50**

closure strip, n—an asphalt or rubber preformed filler strip having the same shape and pitch as the corrugated product, used to close openings in the corrugated sheets at window beads, eaves, lower edge of siding, and similar places. **C 1154, C17**

closure strip—asphalt or rubber preformed filler strip having the

closure strip

same shape and pitch as the asbestos-cement corrugated product and used to close openings in the corrugated sheets at window beads, eaves, lower edge of siding, and similar places.

D 2946, C17

cloth, *n*—any textile fabric, but especially one designed for apparel, domestic, or industrial use. (See also **fabric**.)

D 123, D13

clothing ensemble, *n*—a group of garments worn together on the body at the same time.

F 1494, F23

cloud, *n*—any collection of particulate matter in the atmosphere dense enough to be perceptible to the eye, especially a collection of water drops.

cloud water, *n*—an aggregate of condensed water vapor or ice crystals that are suspended in the atmosphere.

D 1356, D22

cloud, *n*—any collection of particulate matter in the atmosphere dense enough to be perceptible to the eye, especially a collection of water drops.

E 1620, E29

cloud cover—that portion of the sky which is covered by clouds, usually expressed in tenths of sky covered.

E 772, E44

cloud development—see **aerosol development**.

F 335, F05

cloud point, *n*—in *petroleum products and biodiesel fuels*, the temperature of a liquid specimen when the smallest observable cluster of wax crystals first appears upon cooling under prescribed conditions.

D 4175, D02

cloud point, *n*—in *petroleum products and biodiesel fuels*, the temperature of a liquid specimen when a wax crystal structure that is similar in appearance to a cloud is formed upon cooling under prescribed conditions.

D 4175, D02

cloud point, *n*—the temperature at which a defined liquid mixture, under controlled cooling, produces perceptible haze or cloudiness due to the formation of fine particles of an incompatible material.

D 6440, D01

cloud point of phenol—the temperature at which a separate phase forms when a homogeneous solution of phenol in water is allowed to cool at a prescribed rate from a temperature above that at which phase separation occurs. It may precisely be defined as follows: when a homogeneous solution of phenol and water is allowed to cool at a prescribed rate with stirring, the solution will show a slight cloudiness or turbidity as the cloud point is approached. On further cooling, the cloudiness will increase rapidly and the thermometer bulb, which is centrally located in the test tube, will suddenly become invisible. The temperature at which the thermometer bulb becomes invisible is taken as the cloud point.

D 4790, D16

cloud water—See **cloud**.

D 1356, D22

cloudy—qualitative expression of turbidity.

D 4790, D16

cloudy ice—ice that is translucent or relatively opaque due to the content of air or for other reasons, but which is essentially sound and nonpervious.

D 7099, D18

clout nail—bright, regular-stock-steel, $\frac{3}{4}$ by 0.072 to 1 $\frac{1}{2}$ by 0.092-in. nails with large flat 0.225 to 0.262-in. head and long side point or duckbill point.

F 547, F16

clusec—an obsolete unit of flow rate equal to 10-2 lusecs.

E 1316, E07

cluster controller, *n*—a device in an IBM Model 3274, 3276, or equivalent that controls the flow of information in a local area network.

F 1457, F05

cluster sampling, *n*—when the primary sampling unit comprises a bundle of elementary units or a group of subunits, the term cluster sampling may be applied.

E 456, E11

cluster sampling, *n*—when the primary sampling unit comprises a bundle of elementary units or a group of subunits, the term cluster sampling may be applied.

E 1402, E11

cmc (*l:c*) color difference, *n*—color difference calculated by use of the formula developed by the Colour Measurement Committee of the Society of Dyers and Colourists of Great Britain.

E 284, E12

coadsorption—the adsorption of two or more components on an adsorbent, each affecting the adsorbability of the other.

D 2652, D28

coagent, *n*—a compounding ingredient used in small amounts to increase the crosslinking efficiency of certain non-sulfur vulcanizing systems, or to modify the properties given by such systems.

D 1566, D11

coagulant—chemical added in water and wastewater applications to cause destabilization of suspended particles and subsequent formation of flocs that adsorb, entrap, or otherwise bring together suspended matter that is so fine, it is defined as colloidal. Compounds of iron and aluminum are generally used to form flocs to allow removal of turbidity, bacteria, color, and other finely divided matter from water and waste water.

D 6161, D19

coagulant dipping (latex), *n*—a dipping process in which the product form is first immersed in a coagulant solution, withdrawn, dried, and then immersed in the latex.

D 1566, D11

coagulate, *v*—to cause to become viscous or thickened into a coherent mass.

D 4175, D02

coagulated pentane insolubles, *n*—in *used oil analysis*, separated matter that results when a coagulant is added to a solution of used oil in pentane.

D 4175, D02

coagulated toluene insolubles, *n*—in *used oil analysis*, coagulated and separated matter not soluble in pentane or toluene.

D 4175, D02

coagulation—the agglomeration of colloidal or finely divided suspended matter caused by the addition to the liquid of an appropriate chemical coagulant, by biological processes, or by other means (see also **agglomeration**).

D 4410, D19

coagulation (rubber latex), *n*—irreversible agglomeration of particles originally dispersed in a rubber latex.

D 1566, D11

coagulum—an agglomerate of particles.

D 2825, D21

coagulum (latex), *n*—an undesirable, irreversible, agglomeration of rubber particles retained on a 180- μ m mesh screen.

D 1566, D11

coal, *n*—a brown to black combustible sedimentary rock (in the geological sense) composed principally of consolidated and chemically altered plant remains.

lithotype, *n*—any of the constituents of banded coal: vitrain, fusain, clarain, durain, or attrital coal or a specific mixture of two or more of these.

banded coal, *n*—coal that is visibly heterogeneous in composition, being composed of layers of vitrain and attrital coal, and, commonly, fusain.

attrital coal, *n*—the ground mass or matrix of banded coal in which vitrain and, commonly, fusain layers as well, are embedded or enclosed.

fusain, *n*—coal layers composed of chips and other fragments in which the original form of plant tissue structure is preserved; commonly has fibrous texture with a very dull luster.

vitrain, *n*—shiny black bands, thicker than 0.5 mm, of subbituminous and higher rank banded coal.

nonbanded coal, *n*—consistently fine-granular coal essentially devoid of megascopic layers.

cannel coal, *n*—nonbanded coal in which the liptinite is predominantly sporinite.

boghead coal, *n*—nonbanded coal in which the liptinite (the waxy component) is predominantly alginite.

impure coal, *n*—coal having 25 weight % or more, but less than 50 weight %, of ash on the dry basis.

bone coal, *n*—impure coal that contains much clay or other fine-grained detrital mineral matter.

mineralized coal, *n*—impure coal that is heavily impregnated with mineral matter, either dispersed or discretely localized along cleat joints or other fissures. Pyritic or calcareous mineralized coal is most common.

D 121, D05

coal ash, *n*—a collective term referring to any solid materials or residues (such as fly ash, bottom ash or boiler slag) produced primarily from the combustion of coal.

E 2201, E50

coal combustion products (CCPs), *n*—fly ash, bottom ash, boiler

- slag, fluidized-bed combustion (FBC) ash, or flue gas desulfurization (FGD) material produced primarily from the combustion of coal or the cleaning of the stack gases. **E 2201, E50**
- coalescence, n**—a process by which the particles of a dispersion combine into one body. **D 1356, D22**
- coalescence**—growth of grains at the expense of the remainder by absorption or the growth of a phase or particle at the expense of the remainder by absorption or by reprecipitation. **E 7, E04**
- coalescence, n**—the merging of two or more liquid particles to form a single liquid particle. **E 1620, E29**
- coalescence, n**—the puddling or pooling of adjacent ink drops on the substrate before they can be dried or absorbed resulting in nonuniformity of color density. **F 1857, F05**
- coalescing**—the separation of mixtures of immiscible fluids (such as oil and water) based on different specific gravities and surface tensions. Coalescence occurs whenever two or more droplets collide and remain in contact and then become larger by passing through a coalescer. The enlarged drops then separate out of solution more rapidly. **D 6161, D19**
- coal mine waste, n**—the coal processing waste and underground development waste. **E 2201, E50**
- coal processing waste, n**—the earth materials which are separated and wasted from the coal during cleaning, concentrating, or other processing or preparation of coal. **E 2201, E50**
- coal refuse, n**—waste products of coal mining, cleaning, and coal preparation operation (for example, culm, gob, etc.) containing coal, matrix material, clay, and other organic and inorganic material. This does not include overburden from surface mines. **E 2201, E50**
- coal seam, n**—the stratum, layer, or bed of coal that lies between two other rock layers whose compositions differ significantly from that of coal. **D 121, D05**
- coal tar, n**—a dark brown to black cementitious material produced by the destructive distillation of bituminous coal. **D 8, D04**
- coal tar**—a dark brown to black cementitious material produced by the destructive distillation of coal. **D 1079, D08**
- coal-tar felt**—a felt that has been saturated with refined coal tar. **D 1079, D08**
- coal-tar pitch**—a dark brown to black, solid cementitious material obtained as residue in the partial evaporation or distillation of coal tar. **D 1079, D08**
- coal tar roof cement, n**—a trowelable mixture of processed coal tar base, solvents, mineral fillers or fibers, or both. See Specification D 4022. **D 1079, D08**
- coal washability, n**—the determination of the theoretical limits for the removal of mineral impurities from coal by beneficiation processes that rely on specific gravity separations.
- coarse coal, n*—that portion of a coal sample being subjected to a washability study that is larger than a specific predetermined particle size, generally between 2.36 mm (No. 8 USA Standard Sieve Series) and 9.5 mm (3/8 in.) round in diameter. **D 121, D05**
- coarse aggregate, n**—(1) aggregate predominantly retained on the 4.75-mm (No. 4) sieve; or (2) that portion of an aggregate retained on the 4.75-mm (No. 4) sieve. **D 8, D04**
- coarse end, n**—a larger than normal diameter warp end. (Compare **fine end**.) **D 123, D13**
- coarse end, n**—a larger than normal diameter warp end. (*Syn.* heavy end) (Compare **fine end**)
coarse filling—See **coarse pick**. **D 3990, D13**
- coarse grain*—See **grain**. **D 9, D07**
- coarse grain practice, n**—a steelmaking practice for other than **stainless steel** that is intended to produce a **killed steel** in which aluminum, niobium (columbium), titanium, and vanadium are **residual elements**. **A 941, A01**
- coarse grains**—grains either larger than normal for the particular wrought metal or alloy, or grains of such a size that a surface roughening, popularly known as “orange peel” or “alligator skin,” is produced. **E 7, E04**
- coarse material**—material coarser than a No. 200 (75- μ m) U.S. standard sieve. **D 5681, D34**
- coarse pick, n**—*in woven fabrics*, one or more picks of larger diameter than the normal filling yarn in the fabric. **D 123, D13**
- coarse pick, n**—*in woven fabrics*, one or more picks of larger diameter than the normal filling yarn in the fabric. (*Syn.* thick filling) **D 3990, D13**
- coarse rough fiber**—fibers of flesh surfaces of leather or splits which are frayed, separated, and present a shaggy appearance. **D 1517, D31**
- coarse sprays*—distribution of droplets with $D_{v,5} > 1200 \mu\text{m}$. **E 1102, E35**
- coat, n**—a layer of plaster applied in a single operation. **C 11, C11**
- coat, n**—an outer garment which covers at least the upper half of the body, has sleeves and a front opening, and is usually worn over another garment, such as a shirt or dress. **D 123, D13**
- coat, n**—an outer garment which covers at least the upper half of the body, has sleeves and a front opening, and is usually worn over another garment, such as a shirt or dress. **D 7022, D13**
- coated**—covered fully or partially with natural resin or conversion coating to provide ease of driving, increased holding power, or corrosion resistance, or a combination of these. **F 547, F16**
- coated fabric, n**—a flexible material composed of a fabric and any adherent polymeric material applied to one or both surfaces. (See also **laminated fabric**) **D 123, D13**
- coated fabric, n**—a flexible product composed of a textile fabric and an adherent polymeric material applied to one or both surfaces. **D 1566, D11**
- coated fabric, n**—a flexible material composed of a fabric and any adherent polymeric material applied to one or both surfaces. (See also **laminated fabric**.) **D 4850, D13**
- coated fastener**—a fastener with appropriate material applied to its surface to increase the fastener-withdrawal resistance. **F 592, F16**
- coated finish, n**—the surface feature resulting when mineral particles are applied to the column in the extrusion process to impart color, texture, opacity, or other characteristics. **C 43, C15**
- coated paper, n**—paper which has been coated on one or both sides with a minimum coat weight of 2.5 lb/3300-ft² (3.7 g/m²) of coating material per side. see **coating**. **D 1968, D06**
- coated paper**—paper which has one or both surfaces covered with a substance to produce certain desired properties for use in specific electrophotographic processes. **F 335, F05**
- coated paper copying**—a form of direct electrophotographic copying. **F 335, F05**
- coated sheet (or felt)**—(1) an asphalt felt that has been coated on both sides with harder, more viscous asphalt;
(2) a glass fiber felt that has been simultaneously impregnated and coated with asphalt on both sides. **D 1079, D08**
- coated wire**—wire comprised of a given metal covered with a relatively thin application of a different metal. The coating process is normally electroplating or dip coating. **B 354, B01**
- coating, n**—a liquid or semiliquid that dries or cures to form a protective finish, suitable for application to thermal insulation or other surfaces in thickness of 30 mils (0.76 mm) or less, per coat. **C 168, C16**
- coating*—see **ceramic coating** and **ceramic-metal coating**. **C 286, B08**
- coating, n**—a liquid, liquefiable or mastic composition that is converted to a solid protective, decorative, or functional adherent film after application as a thin layer. **D 16, D01**
- coating, n**—*of paper*, the layer of pigment and adhesive applied to the surface of paper or paperboard to create a new surface. **D 1968, D06**
- coating, n**—liquid, liquefiable, or mastic composition that is converted to a solid protective, or decorative, or functional adherent film after application as a thin layer. **E 631, E06**

coating, n

coating, n—a liquid, liquefiable, or mastic composition that, after application as a thin layer, is converted to a solid protective, or decorative, or functional adherent film. **E 631, E06**

coating, n—a liquid or semiliquid, including but not limited to paint, varnish, or shellac, that dries or cures to form a protective or decorative finish after being applied as a thin layer. **E 1605, E06**

coating, n—a layer of any substance intentionally applied to a surface to modify its functional or decorative characteristics. **F 1646, F13**

coating applicator—*inprotective coatings*, an organization or individual responsible for applying a protective or decorative coating. **D 4538, D33**

coating cycle—specific time and temperature to achieve desired depth of diffusion. **B 374, B08**

coating, diffusion—an alloy coating produced by applying heat to one or more coatings deposited on a metal substrate. **B 374, B08**

coating pick, n—the removal of coating particles from the sheet surface that occurs when the tack of the ink exceeds the surface strength of the substrate. **D 6488, D01**

coating powder, n—a heat-fusible, finely-divided solid resinous material used to form electrical insulating coatings. **D 1711, D09**

coating slub, n—*for coated inflatable restraint fabrics*, an irregularly shaped lump of coating material on the surface of the coated layer resembling a yarn slub. **D 6799, D13**

coating streak, n—*for coated inflatable restraint fabrics*, minor variation in the color or opacity of the coated layer. **D 6799, D13**

coating system—*in protective coatings*, a protective film consisting of one or more coats, applied in a predetermined order by prescribed methods. **D 4538, D33**

coating transfer, n—*for coated inflatable restraint fabrics*, the presence of coating material on the uncoated side, covering one or more yarns. **D 6799, D13**

coating weight—the wet or dry weight of coating material applied to a paper or other substrate expressed as grams per square metre or pounds per specified ream. **F 335, F05**

coating work—*in protective coatings*, an all-inclusive term to define all operations required to accomplish a complete coating job; construed to include materials, equipment, labor, preparation of surfaces, control of ambient conditions, application of coating systems, and inspection. **D 4538, D33**

coaxial thermocouple—a thermocouple consisting of a thermoelement in wire form within a thermoelement in tube form with the wire being electrically insulated from the tube except at the measuring junction. **E 344, E20**

cobble (cobblestone)—a rock fragment, usually rounded or semirounded, with an average dimension between 3 and 12 in. (75 and 305 mm). **D 653, D18**

cobble size (fluvial sediment)—64 to 256 mm in diameter. **D 4410, D19**

cobwebbing—*in protective coatings*, the formation of fine filaments (cobwebs) or partly dried coating, during spray application. **D 4538, D33**

cobwebbing, n—a filmy buildup of dried ink or coating on the doctor blade, ends of the impression roll, or printing cylinder. **D 6488, D01**

cockle—hard, firm nodules appearing on the necks and bellies of sheepskins. **D 1517, D31**

cockle, n—*of paper*, a defective, puckered condition of a paper sheet as a result of non-uniform hygro-expansion which can be related to any non-uniformity in the sheet, including mass distribution and drying stresses. **D 1968, D06**

cockle finish, n—*of paper*, an intentional rough, puckered surface, typically obtained by rewetting and drying of a paper sheet without physical restraint. **D 1968, D06**

cockles, n—*in yarns*, irregular, thick, uneven lumps. **D 123, D13**

cockles, n—*in yarns*, irregular thick, uneven, lumps. **D 3990, D13**

cockles, n—*in yarns*, irregular, thick, uneven lumps. **D 4849, D13**

cocoon, v—*in packaging*, to employ strippable, usually plastic, sometimes multi-layered films to encapsulate an item. **D 996, D10**

co-curing, n—curing a composite laminate and simultaneously bonding it to the sandwich core. **C 274, D30**

cocuring—the act of curing a composite laminate and simultaneously bonding it to some other hard detail during the same cure cycle (for example, curing a skin laminate and bonding it to honeycomb core simultaneously). **E 631, E06**

cocuring—the act of curing a composite laminate and simultaneously bonding it to some other hard detail during the same cure cycle (for example, curing a skin laminate and bonding it to honeycomb core simultaneously). **E 1749, E06**

co-current flow—flow pattern through a membrane in which the fluids on the upstream and downstream sides of the membrane move parallel to the membrane surface and in the same directions. **D 6161, D19**

COD—chemical oxygen demand—the amount of oxygen required under specified test conditions for the oxidation of water borne organic and inorganic matter. **D 6161, D19**

code, v—to assign numbers, letters, words, or symbols as identifying marks to **containers**, packaged materials, or articles to convey information concerning the qualities of the container or its contents, date, place of manufacture, or other significant identification. (Compare **marking**.) **D 996, D10**

code—(1) a system of symbols, letters or numbers, used to convey a message requiring brevity; (2) a set of rules established by a legal or quasi-legal body. **F 412, F17**

code, classification—a code that identifies a plastic material by its properties in accordance with the pertinent ASTM specification. **F 412, F17**

code density, n—the number of characters that can appear per unit of length, usually expressed as characters per inch (cpi). **F 1294, F05**

code, n (in the Law)—a collection of laws (regulations, ordinances, or statutory requirements) adopted by governmental (legislative) authority. **E 631, E06**

code, manufacturer's—a code that provides manufacturing identity for a piping product. **F 412, F17**

code medium, n—the material used to construct a machine-readable code; such materials may be retroreflective, luminescent, magnetic, opaque, transponder or conductive. **F 1294, F05**

code of accounts, n—a hierarchical, company-specific system for cost accounting, control, and management. **E 833, E06**

Code of Federal Regulations (CFR)—basic component of the *Federal Register* publication system. The CFR is a codification of the regulations of the various Federal agencies. **E 631, E06**

Code of Federal Regulations (CFR)—basic component of the *Federal Register* publication system. The CFR is a codification of the regulations of the various Federal agencies. **E 1605, E06**

code set, n—the specific assignment of data characters to symbol characters. **F 1294, F05**

code, thermoplastic pipe materials designation—ciphers and letters for the designation of stress-rated thermoplastic compound, which consists of two or three letters to indicate the abbreviation as listed in Terminology D 1600, for the type of thermoplastic resin—followed by four arabic numerals—two to describe the short-term properties, in accordance with the ASTM standard being referenced, and two to designate the hydrostatic design stress when tested in water at 73°F (23°C) in units of 100 psi, with any decimal figures dropped. **F 412, F17**

code word, n—*inference to bar codes*, an arrangement of bars and spaces used to communicate one or more data characters. **F 1294, F05**

co-dispensing valve—an arrangement whereby two components of a product are separated inside the container and mixed at the time of use, when ejected through dual channels into the valve. **D 3064, D10**

coefficient of absolute viscosity—see **coefficient of viscosity**.

D 653, D18

coefficient of active earth pressure—see **coefficient of earth pressure**.

D 653, D18

coefficient of compressibility—the change in volume per unit volume of a substance per unit increase in effective compressive stress, under isothermal conditions.

D 7099, D18

coefficient of compressibility (coefficient of compression), α_v (L^2F^{-1})—the secant slope, for a given pressure increment, of the pressure-void ratio curve. Where a stress-strain curve is used, the slope of this curve is equal to $\alpha_v/(1+e)$.

D 653, D18

coefficient of consolidation, c_v (L^2T^{-1})—a coefficient utilized in the theory of consolidation, containing the physical constants of a soil affecting its rate of volume change.

$$c_v = k(1+e)/\alpha_v\gamma_w$$

where:

k = coefficient of permeability, LT^{-1} ,

e = void ratio, D,

α_v = coefficient of compressibility, L^2F^{-1} , and

γ_w = unit weight of water, FL^{-3} .

D 653, D18

coefficient of earth pressure, K (D)—the principal stress ratio at a point in a soil mass.

coefficient of earth pressure, active, K_A (D)—the minimum ratio of: (1) the minor principal stress, to (2) the major principal stress. This is applicable where the soil has yielded sufficiently to develop a lower limiting value of the minor principal stress.

coefficient of earth pressure, at rest, K_O (D)—the ratio of: (1) the minor principal stress, to (2) the major principal stress. This is applicable where the soil mass is in its natural state without having been permitted to yield or without having been compressed.

coefficient of earth pressure, passive, K_P (D)—the maximum ratio of: (1) the major principal stress, to (2) the minor principal stress. This is applicable where the soil has been compressed sufficiently to develop an upper limiting value of the major principal stress.

D 653, D18

coefficient of expansion—see **coefficient of linear thermal expansion**.

E 1142, E37

coefficient of friction—the ratio of the parallel component of force required to overcome or have a tendency to overcome the resistance to relative motion of two surfaces in physical contact one with another, but otherwise unconstrained, to the normal component of the force—usually the force as a result of gravity—applied through the object which tends to cause the friction.

C 242, C21

coefficient of friction, n —the ratio of the tangential force that is needed to maintain uniform relative motion between two contacting surfaces to the perpendicular force holding them in contact.

D 123, D13

coefficient of friction, n —the ratio of the tangential force that is needed to maintain uniform relative motion between two contacting surfaces to the perpendicular force holding them in contact.

D 4849, D13

coefficient of friction—the ratio of the tangential force that is needed to start or maintain uniform relative motion between two contacting surfaces to the perpendicular force holding them in contact. (See DCOF and SCOF in for clarification.)

F 141, F06

coefficient of friction (coefficient of friction between solid bodies), f (D)—the ratio between the maximum value of shear stress that resists slippage between two solid bodies with respect to each other, and the normal stress across the contact surfaces. The tangent of the angle of friction is ϕ_s .

D 653, D18

coefficient-of-friction (COF or μ), n —a dimensionless number: the ratio of two forces acting at the interface of two contacting solid bodies. The force used in the numerator is parallel to the surfaces

and the force used in the denominator is perpendicular (normal) to the surfaces. See also *dynamiccoefficient of friction*.

coefficient of friction, f —a constant proportionality factor, μ , relating normal stress and the corresponding critical shear stress at which sliding starts between two surfaces:
 $T = \mu \cdot \sigma$. (ISRM)

D 653, D18

coefficient of friction, μ or f , n —in tribology, the dimensionless ratio of the friction force (F) between two bodies to the normal force (N) pressing these two bodies together.

$$\mu \text{ or } f = (F/N)$$

D 4175, D02

coefficient of friction μ or f , n —in tribology, the dimensionless ratio of the friction force (F_f) between two bodies to the normal force (F_n) pressing these bodies together.

$$\mu = (F_f/F_n)$$

D 4175, D02

coefficient of friction μ or f , n —in tribology, the dimensionless ratio of the friction force (F) between two bodies to the normal force (N) pressing these bodies together. (See also **static coefficient of friction** and **kinetic coefficient of friction**.)

$$\mu = (F/N)$$

G 40, G02

coefficient of image removal—the change in reflectance of the printed pattern divided by one hundred. (F 362)

F 221, F05

coefficient of internal friction, μ (D)—the tangent of the angle of internal friction (angle of shear resistance) (see **internal friction**).

D 653, D18

coefficient of kinetic or sliding friction, n —of paper, the ratio of the force required to sustain the uniform relative movement of the surfaces, to the normal force.

D 1968, D06

coefficient of length variation, n —a measure of fiber length distribution.

D 123, D13

coefficient of length variation, n —a measure of fiber length distribution.

D 7139, D13

coefficient of linear thermal expansion, α_l —change in length, relative to the length of the specimen, accompanying a unit change of temperature, at a specified temperature.

E 1142, E37

coefficient of line retroreflection, R_M , n —of a reflecting stripe, the ratio of the coefficient of luminous intensity (R_l) of a retroreflecting stripe to its length (l), expressed in candelas per lux per metre ($cd \cdot lx^{-1} \cdot m^{-1}$). $R_M = (R_l/l)$.

E 284, E12

coefficient of luminous intensity R_l , n —of a retroreflector, ratio of the luminous intensity (I) of the retroreflector in the direction of observation to the illuminance (E_{\perp}) at the retroreflector on a plane perpendicular to the direction of the incident light, expressed in candelas per lux ($cd \cdot lx^{-1}$). $R_l = (I/E_{\perp})$.

E 284, E12

coefficient of permeability (permeability), k (LT^{-1})—the rate of discharge of water under laminar flow conditions through a unit cross-sectional area of a porous medium under a unit hydraulic gradient and standard temperature conditions (usually 20°C).

D 653, D18

coefficient of retroreflected luminance, R_L , n —ratio of the luminance, L , of a projected surface to the normal illuminance, E_{\perp} , at the surface on a plane normal to the incident light, expressed in candelas per square metre per lux ($cd \cdot m^{-2} \cdot lx^{-1}$). $R_L = (L/E_{\perp})$.

E 284, E12

coefficient of retroreflection, R_A , n —of a plane reflecting surface, the ratio of the coefficient of luminous intensity (R_l) of a plane retroreflecting surface to its area (A), expressed in candelas per lux per square metre ($cd \cdot lx^{-1} \cdot m^{-2}$). $R_A = (R_l/A)$.

E 284, E12

coefficient of scatter—the rate of increase of reflectance with thickness at infinitesimal thickness of porcelain enamel over an ideally black backing.

C 286, B08

coefficient of shear resistance—see **coefficient of internal friction**, μ (D). D 653, D18

coefficient of static or starting friction, n —of paper, the ratio of the force resisting initial motion of the surfaces, to the normal force. D 1968, D06

coefficient of subgrade reaction (modulus of subgrade reaction), k , k_s (FL^{-3})—ratio of: (1) load per unit area of horizontal surface of a mass of soil, to (2) corresponding settlement of the surface. It is determined as the slope of the secant, drawn between the point corresponding to zero settlement and the point of 0.05-in. (1.3-mm) settlement, of a load-settlement curve obtained from a plate load test on a soil using a 30-in. (762-mm) or greater diameter loading plate. It is used in the design of concrete pavements by the Westergaard method. D 653, D18

coefficient of thermal expansion—change in unit of length (or volume) accompanying a unit change of temperature, at a specified temperature. E 7, E04

coefficient of transmissibility—the rate of flow of water in gallons per day through a vertical strip of the aquifer 1 ft (0.3 m) wide, under a unit hydraulic gradient. D 653, D18

coefficient of uniformity, C_u (D)—the ratio D_{60}/D_{10} , where D_{60} is the particle diameter corresponding to 60 % finer on the cumulative particle-size distribution curve, and D_{10} is the particle diameter corresponding to 10 % finer on the cumulative particle-size distribution curve. D 653, D18

coefficient of variation—the ratio (decimal fraction) of the standard deviation of the maximum principal tensile stress (MPTS) at failure to the ABS. E 631, E06

coefficient of variation, v —ratio of the standard deviation of the failure load to the mean failure load. E 631, E06

coefficient of variation—a measure of relative precision calculated as the standard deviation of a series of values divided by their average. It is often multiplied by 100 and expressed as a percentage. E 1547, E15

coefficient of variation, CV, n —a measure of the dispersion of observed values equal to the standard deviation for the values divided by the average of the values; may be expressed as a percentage of the average (CV %). D 123, D13

coefficient of variation unevenness, n —in textiles, the standard deviation of the linear densities over which unevenness is measured expressed as a percentage of the average linear density for the total length within which unevenness is measured. (See also **unevenness** and **mean deviation unevenness**.) D 123, D13

coefficient of variation unevenness, n —in textiles, the standard deviation of the linear densities over which unevenness is measured expressed as a percentage of the average linear density for the total length within which unevenness is measured. (See also **unevenness** and **mean deviation unevenness**.) D 4849, D13

coefficient of viscosity—the ratio between an infinitesimally small increase in stress and the corresponding increase in strain rate. E 1142, E37

coefficient of viscosity (coefficient of absolute viscosity), η (FTL^{-2})—the shearing force per unit area required to maintain a unit difference in velocity between two parallel layers of a fluid a unit distance apart. D 653, D18

coefficient of volume compressibility (modulus of volume change), m_v (L^2F^{-1})—the compression of a soil layer per unit of original thickness due to a given unit increase in pressure. It is numerically equal to the coefficient of compressibility divided by one plus the original void ratio, or $a_v/(1+e)$. D 653, D18

coefficient of volume thermal expansion α_v —for a solid or liquid, the change in volume, relative to the volume of the specimen, accompanying a change of temperature at a specified temperature. E 1142, E37

coefficient of variation—the standard deviation divided by the value of the parameter measured. E 2161, E37

coercive field strength, H_c —the (dc) magnetic field strength required to restore the magnetic induction to zero after the material has been symmetrically cyclically magnetized. A 340, A06

coercive field strength, intrinsic, H_{ci} —the (dc) magnetic field strength required to restore the intrinsic magnetic induction to zero after the material has been symmetrically cyclically magnetized. A 340, A06

coercive force—the magnetizing force at which the magnetic flux density is equal to zero. The corresponding field intensity value is indicative of the ease of difficulty or demagnetization. E 1316, E07

coercivity, H_{cs} —the maximum value of coercive field strength that can be attained when the magnetic material is symmetrically cyclically magnetized to saturation induction, B_s . A 340, A06

coextrusion—in flexible barrier materials, (1) a process whereby two or more plastic streams are forced simultaneously through one or more shaping orifices to become one continuously-formed multi-layered structure. (2) Also, the product resulting from such a process. F 17, F02

coextrusion—a process whereby two or more heated or unheated plastic material streams forced through one or more shaping orifice(s) become one continuously formed piece. F 412, F17

coextrusion—See Terminology F 17. F 1327, F02

COF—coefficient of friction. F 141, F06

COF—coefficient of friction. F 1646, F13

co-fab, n —fabrication process where close-outs and inserts are bonded into the panel the same time the facings are bonded to the core. C 274, D30

cogeneration, n —the simultaneous production of electrical or mechanical energy (power) and useful thermal energy from a single energy stream, such as oil, coal, natural or liquefied gas, biomass, or solar. E 2114, E06

cognizant engineering organization—the company, government agency or other authority responsible for the design, or end use, of the material or component for which nondestructive testing is required. E 1316, E07

cohered—fastened together in strip form, usually with adhesive. (See **collated**.) F 547, F16

cohered—assembled in strip, coil, or other predetermined form as defined in Terminology F 547. F 592, F16

coherence—a property of a beam of electromagnetic radiation in which the phase relationship between any two points across the beam or in time remains essentially constant (see **coherence-length**). E 1316, E07

coherence length—the path difference between the object beam and the reference beam at which interference fringes reduce in contrast by a factor of $\sqrt{2}/2$ (0.707) from the point of maximum contrast. The coherence length is related to the width of the spectral line emitted from the laser: $L_c = c/\Delta\nu$, where c is the speed of light and $\Delta\nu$ is the bandwidth of the spectral emission line. E 1316, E07

coherent precipitate—a precipitated particle of a second phase, the lattice of which still maintains registry with the matrix lattice. Because the lattice spacings are usually different, strains usually exist at the interface. E 7, E04

coherent scattering—a kind of X-ray electron scattering in which the phase of the scattered beam has a definite (not random) relation to the phase of the incident beam. Also called unmodified scattering. E 7, E04

coherent unit system—system in which relations between units contain as numerical factor only the number “one” or “unity,” because all derived units have a unity relationship to the constituent base and supplementary units. E 631, E06

cohesion—the mutual attraction by which elements of a substance are held together. C 904, C03

cohesion—shear resistance at zero normal stress (an equivalent term in rock mechanics is intrinsic shear strength). (ISRM) D 653, D18

cohesion, n —the state in which the constituents of a mass of material are held together by chemical and physical forces. D 907, D14

cohesion, n —for asbestos, lateral force resisting separation of adjacent fibrous elements. D 2946, C17

cohesion, c (FL^{-2})—the portion of the shear strength of a soil

- indicated by the term c , in Coulomb's equation, $s = c + p \tan \phi$.
See intrinsic shear strength.
- apparent cohesion*—cohesion in granular soils due to capillary forces. **D 653, D18**
- cohesion failure, n*—rupture of an adhesive bond, such that the separation appears to be within the adhesive. (Compare *adhesive failure*.) **D 907, D14**
- cohesion failure; cohesive failure, n**—rupture of a bonded assembly in which the separation appears visually to be in the adhesive or the adherend. **D 907, D14**
- cohesionless soil**—a soil that when unconfined has little or no strength when air-dried and that has little or no cohesion when submerged. **D 653, D18**
- cohesive blocking, n*—see **blocking**. **D 907, D14**
- cohesive failure, n**—*in building construction*, failure characterized by rupture within the sealant, adhesive, or coating. **C 717, C24**
- cohesive failure (bonded assembly), n**—a rupture occurring entirely within any single uniform layer of the assembly. **D 1566, D11**
- cohesive force, n**—*in a textile strand*, the force required to overcome fiber cohesion as the strand is being reduced in linear density. **D 123, D13**
- cohesive force, n**—*in a textile strand*, the force required to overcome fiber cohesion as the strand is being reduced in linear density. **D 4849, D13**
- cohesive sediments**—that material whose resistance to initial movement or erosion depends upon the strength of the bond between particles. **D 4410, D19**
- cohesive soil**—a soil that when unconfined has considerable strength when air-dried and that has significant cohesion when submerged. **D 653, D18**
- coil**—a length of the product wound into a series of connected turns. The unqualified term "coil" as applied to tube usually refers to a bunched coil. **B 846, B05**
- coil, absolute*—see **absolute coil**. **E 1316, E07**
- coil, bunched**—a coil in which the turns are bunched and held together such that the cross section of the bunched turns is approximately circular. **B 846, B05**
- coil, double layer flat**—a coil in which the product is spirally wound into two connected disk-like layers such that one layer is on top of the other. (Sometimes called "double layer pancake coil" or "double layer spirally wound coil.") **B 846, B05**
- coiled**—assembled in coil form. **F 592, F16**
- coiled sheet, n**—sheet in coils with slit edges. **B 899, B02**
- coil-fed tool**—tool utilizing a coil of collated fasteners or a coil or wire. **F 592, F16**
- coil, helical**—See **coil, level or traverse wound**. **B 846, B05**
- coil, level or traverse wound**—a coil in which the turns are wound into layers parallel to the axis of the coil such that successive turns in a given layer are next to one another. (Sometimes called a "helical coil.") **B 846, B05**
- coil, level or traverse wound on a reel or spool**—a coil in which the turns are positioned into layers on a reel or spool parallel to the axis of the reel or spool such that successive turns in a given layer are next to one another. **B 846, B05**
- coil loop, n**—one complete rotation (360°) of barbed tape. **F 1379, F14**
- coil method**—a method of magnetization in which part, or whole, of the component is encircled by a current-carrying coil. **E 1316, E07**
- coil, reference*—see **reference coil**. **E 1316, E07**
- coil rotation, n**—the spiraling effect that occurs as the concertina coils are deployed. **F 1379, F14**
- coil, single layer flat**—a coil in which the product is spirally wound into a single disk-like layer. (Sometimes called "pancake coil" or "single layer spirally wound coil.") **B 846, B05**
- coil size**—the dimension of a coil, for example, length or diameter. **E 1316, E07**
- coil spacing**—in electromagnetic testing, the axial distance between two encircling coils of a differential system. **E 1316, E07**
- coil, stagger wound**—a coil in which the turns are positioned into layers approximately parallel to the axis of the coil, but not necessarily with the fixed regularity of a level or traverse wound coil. **B 846, B05**
- coil technique**—a technique of magnetization in which all, or a portion, of the part is encircled by a current-carrying coil. **E 1316, E07**
- coil, test**—in electromagnetic testing, the section of the probe or coil assembly that excites or detects, or both, the electromagnetic field in the material under test. **E 1316, E07**
- coin, v**—to repress a sintered compact to obtain a definite surface configuration. Synonymous with **emboss** (not to be confused with **restrike** or **size**). **B 243, B09**
- coincidence, n**—more than one cell transversing the aperture at the same time. **F 2312, F04**
- coincidence sum peak**—a peak in the observed photon spectrum produced at an energy corresponding to the sum of the energies of two or more gamma- or x-rays from a single nuclear event when the emitted photons interact with the detector within the resolving time of the detector. **E 170, E10**
- coke, n**—a carbonaceous solid produced from coal, petroleum, or other materials by thermal decomposition with passage through a plastic state. **C 709, D02**
- coke**—a carbonaceous solid produced from coal, petroleum, or other materials by thermal decomposition with passage through a plastic state.
- beehive coke, n*—coke manufactured in beehive, rectangular, or similar forms of ovens in a horizontal bed, where heat for the coking process is secured by combustion within the oven chamber.
- by-product coke, n*—coke manufactured with attendant recovery of by-products, in ovens that are heated externally.
- coke breeze, n*—the fine screenings from crushed coke or from coke as taken from the ovens, of a size varied in local practice but usually passing a 12.7-mm (½-in.) or 19.0-mm (¾-in.) screen opening.
- dry coke, n*—a laboratory term applied to coke that has been dried to constant weight in accordance with definite prescribed methods. **D 121, D05**
- coke, n**—a carbonaceous solid produced from coal, petroleum, or other materials by thermal decomposition with passage through a plastic state. **D 4175, D02**
- coke-oven tar, n**—coal tar produced in by-product coke ovens in the manufacture of coke from bituminous coal. **D 8, D04**
- coke-oven tar*—See **coal tar**. **D 1079, D08**
- coke pore, n**—*as used in Test Method D 5061*, a microscopically distinguishable void that is a structural element of coke. **D 121, D05**
- coke reactivity, n**—*as used in Test Method D 5061*, a measure of the mass loss when coke, held at a designated temperature, is contacted with gaseous carbon dioxide over a specific time interval. **D 121, D05**
- coke wall, n**—*as used in Test Method D 5061*, a predominantly carbonaceous layer that encloses a coke pore and which is a structural element and essence of coke. **D 121, D05**
- COL**—See **character outline limit**. **F 149, F05**
- Colburn sheet process**—{archaic} manufacture of sheet glass by bending the vertically drawn sheet over a roll which establishes the definition of draw. **C 162, C14**
- cold-applied**—capable of being applied without heating as contrasted to hot-applied; cold-applied products are furnished in a liquid state, whereas hot-applied products are furnished as solids that must be heated to liquefy them. **C 717, C24**
- cold-cathode gun**—an electron gun in which electrons produced in a gas discharge are accelerated through a small aperture in the anode. **E 7, E04**

cold-cathode ionization gage—see **ionization vacuum gage**.

E 1316, E07

cold checks, n—defect on calendered sheeting consisting of surface roughness.

D 1566, D11

cold-drawing—reducing the cross section by pulling through a die or dies, at a temperature lower than the recrystallization temperature.

B 354, B01

cold filling—the pressurizing of a container by cooling the propellant (and sometimes the product) below its boiling point and transferring it into the container before the valve is put in place. The operation is usually carried out at atmospheric pressure (that is, high pressure equipment is not needed).

D 3064, D10

cold flow—See **creep**.

D 883, D20

cold flow—see **creep**.

D 907, D14

cold flow—See **creep**.

F 412, F17

cold flow—see preferred term **creep**.

F 1251, F04

cold flow (unvulcanized rubber), n—slow deformation, under gravitational force, at or below room temperature.

D 1566, D11

cold forming—process of forming material below the recrystallization temperature by forcing or pressing metal into various dies.

F 1789, F16

cold heading quality material—material that has dimensional, chemical, and residual limits such that it will successfully form a given fastener geometry when machine-applied pressure produces a metal flow that results in the desired geometry. Additionally, subsequent treatment as necessary to achieve given mechanical properties results in a fastener with freedom from internal or external imperfections that would impair its intended use.

F 1789, F16

cold heading wire—wire produced by specially controlled manufacturing practices to provide satisfactory quality for heading, forging, and roll threading.

F 1789, F16

cold isostatic pressing, n—the pressing of a powder, compact, or sintered object by subjecting it, at ambient temperature, to nominally equal pressure from every direction.

B 243, B09

cold joint, n—a plane of weakness in concrete caused by an interruption or delay in the placing operation, which permits the first batch to start setting before the next batch is placed, resulting in little or no bond between the two batches.

C 717, C24

cold joint—See **joint**.

E 631, E06

cold joint, n—boundary between later-applied and previously-applied coatings, plaster, mortar, or concrete.

E 631, E06

cold joint, n—the visible junction in a finish coat.

E 2110, E06

cold junction—See **reference junction**.

E 7, E04

cold junction correction—See **reference junction correction**.

E 7, E04

cold-laps—sheath surface defects where the sheath surface has been galled and torn by a drawing die and the torn surfaces smoothed by a subsequent diameter reduction.

E 344, E20

cold molding—a special process of compression molding in which the molding is formed at room temperature and subsequently baked at elevated temperatures.

D 883, D20

cold molding—a special process of compression molding in which the molding is formed at room temperature and subsequently baked at elevated temperatures. (D20)

F 412, F17

cold pressing, n—the forming of a compact at room temperature.

B 243, B09

cold pressing, n—a bonding operation in which an assembly is subjected to pressure without the application of heat.

D 907, D14

cold-process roofing—a continuous, semiflexible membrane consisting of plies of felts, mats, or fabrics laminated on a roof with alternate layers of roof cement and surfaced with a cold-applied coating.

D 1079, D08

cold-rolled steel—a low-carbon, cold-reduced and annealed sheet steel.

C 286, B08

cold-setting adhesive, n—an adhesive that sets without the application of heat.

D 907, D14

cold setting adhesive—See **adhesive, cold setting**.

E 631, E06

cold setting adhesive—See **adhesive, cold setting**.

E 1749, E06

cold sticking, n—of piston rings, a condition in which the ring is free in its groove while the engine is running but stuck when the piston is cold, normally indicated by the absence of varnish or other deposits on the outer face of the ring and of signs of blowby on the piston skirt.

D 4175, D02

cold-stuck piston ring, n—in internal combustion engines, a piston ring that is stuck when the piston and ring are at room temperature, but inspection shows that it was free during engine operation.

D 4175, D02

cold top melter—an all electric melting furnace in which a thermally insulating layer of batch is maintained on top of the molten glass.

C 162, C14

cold treatment, n—exposing a steel object to temperatures below room temperature for the purpose of obtaining desired conditions or properties, such as dimensional or structural stability.

A 941, A01

cold welding, n—cohesion between two surfaces of metal, generally under the influence of externally applied pressure, at room temperature.

B 243, B09

cold work—controlled mechanical operations for changing the form or cross section of a product and for producing a strain-hardened product at temperatures below the recrystallization temperature.

B 846, B05

cold worked structure—a microstructure resulting from plastic deformation of a metal or alloy below its recrystallization temperature.

E 7, E04

cold working, n—mechanical deformation of a metal at temperatures below its recrystallization temperature.

A 941, A01

cold zone—the volume in the fryer below the heating element or heat exchanger surface designed to remain cooler than the cook zone. See **fryer**.

F 1827, F26

coliform bacteria—a particular group of bacteria primarily found in human and animal intestines and wastes.

D 6161, D19

collaborative test, n—an interlaboratory study of a test method wherein the participants analyze or make measurements on subsamples of the same test material.

D 1356, D22

collagen—the principal fibrous protein in the corium or derma layer of a hide or skin.

D 1517, D31

collagen, n—Type I collagen is a member of a family of structural proteins found in animals.

F 2312, F04

collapse—the flattening of single cells or rows of cells during the drying or pressure treatment of wood, characterized by a caved-in or corrugated appearance.

D 9, D07

collapse, n—inadvertent densification of cellular material during manufacture resulting from breakdown of cell structure.

D 883, D20

collapse, n—(1) inadvertent densification of cellular material during manufacture resulting from breakdown of cell structure; (2) the buckling of the inner liner of composite piping; (3) the buckling or flattening of a plastic rehabilitation liner; (4) the buckling or crushing of a plastic pipe from external forces, such as earth loads or external hydrostatic load.

F 412, F17

collapse scar—that part of a peatland where the whole, or part, of a peat plateau has thawed and collapsed to the level of the surrounding land. Collapses scars are not depressions but are marked by vegetation different from the peatland that was not underlain by permafrost.

D 7099, D18

collapsible tube—See **tube**.

D 996, D10

collar—in grouting, the surface opening of a borehole.

D 653, D18

collar, n—Synonym for **escutcheon**.

E 631, E06

collar—See **railing systems**.

E 631, E06

collar, n—Synonym for **escutcheon**.

E 1481, E06

collar head—intermediate flat head with shanks protruding in both directions of nail axis.

F 547, F16

collar leather—a subdivision of harness leather, made from very light cattlehides in full thickness, or of cattlehide splits, and used for covering horse collars.

D 1517, D31

collar nail—See **collar head, gudgeon, projection head**. F 547, F16

collated—fastened next to each other in strip form. (See **cohered**.)
F 547, F16

collated—assembled in strip or other predetermined form. F 592, F16

collecting surface, *n*—in the rotor of an open-end spinning machine, that portion of the internal surface of the rotor, often in the form of a groove, in which the fibers are condensed for assembly into yarn.
D 123, D13

collecting surface, *n*—in the rotor of an open-end spinning machine, that portion of the internal surface of the rotor, often in the form of a groove, in which the fibers are condensed for assembly into yarn.
D 3888, D13

collection angle—See **angle**. E 673, E42

collection efficiency—See **efficiency**. D 1356, D22

collection efficiency, *n*—in impingement erosion and particulate flows, the cross-sectional area of undisturbed fluid containing particles that will all ultimately impinge on a given solid surface, divided by the projected area of the solid surface, where these two areas are perpendicular to the direction of relative motion between the solid surface and the particles in the undisturbed fluid.
G 40, G02

collection medium, *n*—a liquid or gas that does not affect the measured permeation and in which the test chemical is freely soluble or adsorbed to a saturation concentration greater than 0.5 weight or volume percent.
F 1494, F23

collector, *n*—a reagent used in froth flotation to promote contact and adhesion between particles and air bubbles. D 121, D05

collector, *n*—a device for removing and retaining contaminants from air or other gases. D 1356, D22

collector, *n*—optical components, such as the cornea and lens of the eye, which guide radiant flux from a specimen being observed or measured to a sensor. E 284, E12

collector, concentrating—a solar collector that uses reflectors, lenses, or other optical elements to redirect and concentrate the solar irradiance on the collector aperture onto an absorber of which the surface area is smaller than the collector aperture area.
E 772, E44

collector cover (glazings)—see **cover plate, collector**. E 772, E44

collector efficiency—see **efficiency, collector**. E 772, E44

collector, evacuated tube—a solar collector made from transparent tubing (usually glass) with an evacuated space between the tube and the absorber. The absorber may consist of an inner tube or another shape, with means for removal of thermal energy and may be specially coated.
E 772, E44

collector, flat plate—a nonconcentrating solar collector in which the absorbing surface is essentially planar.
E 772, E44

collector, line-focus—a concentrating solar collector that concentrates the solar flux in one dimension only.
E 772, E44

collector, point focus—a concentrating collector that focuses the solar flux to a point.
E 772, E44

collector, solar thermal—a device designed to absorb solar irradiance and to transfer the thermal energy to a fluid passing through it.
E 772, E44

collector subsystem—that portion of the solar system which includes the solar collectors and related piping or ducts.
E 772, E44

collector, tracking—a solar collector that moves so as to follow the apparent motion of the sun during the day, rotating about one axis or two orthogonal axes.
E 772, E44

collector, trickle—a flat plate solar collector in which unpressurized liquid flows or “trickles” over the absorber.
E 772, E44

collimate—to render fibers parallel.
E 631, E06

collimate—to render fibers parallel.
E 1749, E06

collimation—the operation of controlling a beam of radiation so that its rays are as nearly parallel as possible.
E 7, E04

collimation—the operation of controlling a beam of radiation so that if the light source were a point, the light rays would become parallel. The total bundle of rays diverge as the source size increases.
E 175, E41

collimator—a device of radiation absorbent material intended for defining the direction and angular divergence of the radiation beam.
E 1316, E07

collimator—a device for controlling the size and direction of the ultrasonic beam.
E 1316, E07

collision cascade—a sequential energy transfer between atoms in a solid as a result of bombardment by an energetic species.
E 673, E42

collodion replica—See **replica**. E 7, E04

colloid—a substance of very fine particle size, typically between 0.1 and 0.001 μm in diameter suspended in liquid or dispersed in gas. A system of at least two phases, including a continuous liquid plus solid, liquid or gaseous particles so small that they remain in dispersion for a practicable time.
D 6161, D19

colloidal grout—in grouting, a grout in which the dispersed solid particles remain in suspension (colloids).
D 653, D18

colloidal mixer—in grouting, a mixer designed to produce colloidal grout.
D 653, D18

colloidal particle—an electrically-charged particle, generally smaller in size than 200 μm , dispersed in a second continuous phase.
B 374, B08

colloidal particle, *n*—a dispersed particle with a linear dimension of 5 to 100 nm.
C 1145, C28

colloidal particles—particles that are so small that the surface activity has an appreciable influence on the properties of the aggregate.
D 653, D18

colloids (fluvial sediment)—smaller than 0.00024 mm in diameter.
D 4410, D19

colluvial deposits—that material accumulated along valley margins by mass movements from the adjacent hillsides.
D 4410, D19

colony forming unit (CFU)—unit used in the measure of total bacterial count (TBC).
D 6161, D19

colophony, *n*—a term denoting medium and high grades of rosin.
D 804, D01

colophony, *n*—see **rosin**. D 907, D14

color—a quality of visible phenomena of insulating fluids, the numerical value for which is derived by comparing this quality using transmitted light with that of a series of numbered reference standards.
D 2864, D27

color—that is, the presence of dissolved matter that absorbs the light emitted by *P. phosphoreum* (that is, wavelength of $490 \pm 100 \text{ nm}$).
D 5681, D34

color, *n*—(1) of an object, aspect of object appearance distinct from form, shape, size, position, or gloss that depends upon the spectral composition of the incident light, the spectral reflectance or transmittance of the object, and the spectral response of the observer, as well as the illuminating and viewing geometry.

(2) *perceived*, attribute of visual perception that can be described by color names such as white, gray, black, yellow, brown, vivid red, deep reddish purple, or by combinations of such names.

(3) *colorimetric*, characteristics of a color stimulus denoted by a colorimetric specification with three values, such as tristimulus values.
E 284, E12

Colorado steer—a side-branded steerhide, not necessarily from Colorado.
D 1517, D31

color anodizing—in anodizing aluminum, formation of a colored coating on aluminum where the colored compound, pigment, or dye is incorporated after the coating has been formed. B 374, B08

colorant, *n*—dye, pigment, or other agent used to impart a color to a material.
E 284, E12

colorant—a material used to alter the color of a formulation.
E 609, E35

colorant—a material used to alter the color of the tank mix.
E 1519, E35

color atlas, *n*—a collection of color samples arranged according to a color order system.
E 284, E12

color bleeding, *n*—the loss of color from a dyed fabric when

color bleeding, *n*

immersed in water, drycleaning solvent, or similar liquid medium, with consequent coloring of the liquid medium. (Compare **color staining, crocking**.) **D 123, D13**

color bleeding, *n*—the loss of color from a dyed fabric when immersed in water, dry-cleaning solvent, or similar liquid medium, with consequent coloring of the liquid medium. (Compare **color staining**.) **D 3990, D13**

color bleed resistance—the freedom from intermixing of the inks on multiple-colored ribbons. **F 221, F05**

color blindness, *n*—total or partial inability to differentiate certain hues. **E 253, E18**

color constancy, *n*—the general tendency of the colors of an object to remain constant when the color of the illumination is changed. **E 284, E12**

color contrast, *n*—in *textiles*, a general term for a visible color difference between two adjacent areas. **D 123, D13**

color contrast, *n*—in *textiles*, a general term for a visible color difference between two adjacent areas. **D 4850, D13**

color difference—(1) the magnitude and character of the difference between two colors, described by such terms as redder, bluer, lighter, darker, grayer, or cleaner. (2) the magnitude and direction of the difference between a sample and a standard, computed from tristimulus values, or chromaticity coordinates and luminance factor, by means of a specified set of color difference equations. **C 242, C21**

color difference, *n*—(1) *perceived*, the magnitude and character of the difference between two colors described by such terms as redder, bluer, lighter, darker, grayer, or cleaner.

(2) *computed*, the magnitude and direction of the difference between two psychophysical color stimuli and their components computed from tristimulus values, or chromaticity coordinates and luminance factor, by means of a specified set of color-difference equations. **E 284, E12**

color-difference units, *n*—units of size of the color differences calculated according to various equations. Such color differences *cannot* be accurately converted between different equations by the use of average factors. **E 284, E12**

colored—See **anodized, blued, enameled, lacquered, painted**.

F 547, F16

colored fiber, *n*—in *wool top*, any fiber the color or shade of which differs from the normal color or shade of the fiber mass of the sample. **D 123, D13**

colored fiber, *n*—in *wool top*, any fiber the color or shade of which differs from the normal color or shade of the fiber mass of the sample. **D 4845, D13**

color frit—a frit containing a colorant in order to produce a strong color in the porcelain enamel. **C 286, B08**

colorfastness, *n*—the resistance of a material to change in any of its color characteristics, to transfer its colorant(s) to adjacent materials, or both, as the result of exposure of the material to any real or simulated environment that might be encountered during processing, storage, use or testing of the material. **D 123, D13**

colorfastness, *n*—the resistance of a material to change in any of its color characteristics, to transfer its colorant(s) to adjacent materials, or both, as the result of exposure of the material to any real or simulated environment that might be encountered during processing, storage, use or testing of the material. **D 4849, D13**

color film—a photographic film consisting of several emulsion layers, where the individual layers selectively record various wavelengths of light. **E 7, E04**

color former—see **leuco dye**.

F 1623, F05

colorfulness, *n*—see **chromaticness**.

E 284, E12

color grading, *n*—the act of identifying a specimen by a color grade or color score that is specific to the color and the material graded.

D 123, D13

color grading, *n*—the act of identifying a specimen by a color grade or color score that is specific to the color and the material graded.

D 7139, D13

color grading, *n*—the act of identifying a specimen by a color grade or color score, which is specific to the color and the material graded. **E 284, E12**

colorimeter, *n*—an instrument used for color measurement based on optical comparison with standard colors. **D 1356, D22**

colorimeter, *n*—see **tristimulus colorimeter, visual colorimeter**. **E 284, E12**

colorimetric purity, *p_c*—the fraction of spectrally pure light in an additive mixture with reference achromatic (white) light to produce a color that matches that of the color stimulus considered. (As a reference achromatic light, the CIE recommends an equal energy source for self-luminous bodies and illuminant D_{65} (daylight) for nonself-luminous bodies.) **E 284, E12**

colorimetric spectrometer, *n*—spectrometer that is capable of producing spectral reflectance or transmittance data and colorimetric data (such as tristimulus values and derived coordinates) derived from the spectral data. See **spectrocolorimeter**. **E 284, E12**

colorimetry, *n*—the science of color measurement. **E 284, E12**

colorimetry—an analytical technique that is similar to spectrophotometry except that ultraviolet-visible light of a single, narrow wavelength range is passed through a sample cell containing dissolved analyte, and the absorption measured. **E 631, E06**

coloring—(1) the production of desired colors on metal surfaces by appropriate chemical or electrochemical action.

(2) light buffing of metal surfaces for the purpose of producing a high luster. Called "color buffing." **B 374, B08**

color lamp, *n*—*in color determination of cotton with a Color Meter*, a lamp with a specific energy output function used in conjunction with special tristimulus filters to obtain a desired response function. **D 123, D13**

color lamp, *n*—*in color determination of cotton with a Color Meter*, a lamp with a specific energy output function used in conjunction with special tristimulus filters to obtain a desired response function. **D 7139, D13**

color match, *n*—(1) condition existing when colors match within a specified or agreed tolerance. Sometimes called *commercial color match*.

(2) condition existing when colors are indistinguishable; a normal observer is usually implied. Sometimes called an *exact color match*. **E 284, E12**

color matching, *n*—procedure for providing, by selection, formulation, adjustment, or other means, a trial color that is indistinguishable from, or within specified tolerances of, a specified standard color under specified conditions. **E 284, E12**

color-matching functions, *n*—the amounts, in any trichromatic system, of the three reference color stimuli needed to match by an additive mixture monochromatic components of an equal energy spectrum. **E 284, E12**

color measurement, *n*—process of deriving, by visual or instrumental means, a set of three numbers that describe the attributes of a color, in the form of a color notation or a colorimetric specification. **E 284, E12**

color meter, *n*—an instrument which measures the fiber sample color as presented in the viewing window, in terms of the tristimulus values Y and Z and transmits these values to the IC/TC for further processing. **D 123, D13**

color meter, *n*—an instrument which measures the fiber sample color as presented in the viewing window, in terms of the tristimulus values Y and Z and transmits these values to the IC/TC for further processing. **D 7139, D13**

color mixture, *n*—see **additive color mixture, additive color stimulus mixture, or subtractive color mixture**. **E 284, E12**

color notation, *n*—the symbols used in a systematic way to designate colors. **E 284, E12**

color of an object, *n*—the aspect of the appearance of an object dependent upon the spectral composition of the incident light, the spectral reflectance or transmittance of the object, and the spectral response of the observer.

- hue, *n***—The attribute of color perception by means of which a color is judged to be red, orange, yellow, green, blue, purple, or intermediate between adjacent pairs of these, considered in a close ring, red and purple being an adjacent pair. (White, gray and black colors possess no hue).
- lightness, *n***—(1) The attribute by which a perceived color is judged to be equivalent to a member of a series of grays ranging from black to white. (2) The attribute of color perception by which a non-self-luminous body is judged to reflect more or less light.
- saturation**—attribute of a visual sensation that permits a judgment to be made of the proportion of pure chromatic color in the total sensation. **D 16, D01**
- color (of an object), *n***—the appearance of an object dependent upon the spectral composition of radiant and incident light, the spectral reflectance or transmittance of the object, and the psychological response of the observer. The experience may be described in terms of three attributes: hue, brightness, and chroma. (For consensus technical definition see **color** in Terminology E 284 as defined by Committee E12.)
- hue**—attribute of color related to the wavelength of electromagnetic energy and experienced as “red,” “green,” “blue,” and other elements of the visible spectrum.
- brightness**—aspect of visual perception whereby an area appears to emit more or less light.
- chroma**—experienced as color purity, attribute of color used to indicate the degree of departure of the color from a gray of the same brightness. **E 253, E18**
- color order system, *n***—a rational method or plan of ordering and specifying all producible object or display colors, or all within a limited domain, by means of a set of physical standards selected and displayed so as to represent adequately the whole set of such colors under consideration. **E 284, E12**
- color oxide**—a material used to impart color to a porcelain enamel. **C 286, B08**
- color perception, *n***—subjective impression of color, as modified by the conditions of observation and by mental interpretation of the stimulus object. **E 284, E12**
- color play, *n***—the predictable sequence of colors exhibited by a liquid crystal formulation as it passes through its active temperature range. For example, as temperature increases, a formulation exhibits successive tan, red, green, and blue colors. **E 344, E20**
- color preference, *n***—preference, within a specific application, for one color over other related colors. **E 284, E12**
- color rendering, *n***—effect of a light source on the color appearances of objects compared to their color appearances under a reference light source. (See also **CIE color rendering index**.) **E 284, E12**
- color reversion**—a process common to almost all bleached cellulose pulps in which the color darkens to a greater or lesser extent on standing. **D 1695, D01**
- color scale, *n***—see **Gardner color scale, petroleum color scale, platinum-cobalt color scale, Saybolt color**. **E 284, E12**
- color solid, *n***—see **color space**. **E 284, E12**
- color space**—a three dimensional arrangement for representing all possible colors; for example, in the color space defined by the color scales *L*, *a*, and *b* used to describe the color of opaque specimens, scale *L* is a measure of lightness, *a* is a measure of redness (plus) or greenness (minus), and *b* is a measure of yellowness (plus) or blueness (minus). **C 242, C21**
- color space, *n***—*specific to this standard*, the daylight color of opaque specimens are represented by points in a space in terms of three color scales: reflectance, R_d , and the chromaticity coordinates for redness or greenness, $\pm a$, and yellowness or blueness, $\pm b$. **D 123, D13**
- color space, *n***—*specific to this standard*, the daylight color of opaque specimens are represented by points in a space in terms of three color scales: reflectance, R_d , and the chromaticity coordinates for redness or greenness, $\pm a$, and yellowness or blueness, $\pm b$. **D 7139, D13**
- color space, *n***—a geometric space, usually of three dimensions, in which colors are arranged systematically. **E 284, E12**
- color specification, *n***—notation or set of three color-scale values used to designate a color in a specified color system. Practical color specifications may include color tolerances as well as target color designation. **E 284, E12**
- color splash**—a splash, smear, or streak of contrasting color evident on the inside or outside surface of the gloves or sleeves that was deposited during the dipping operation and is vulcanized into the material as part of the homogenous compound. **F 819, F18**
- color stability, *n***—*in coated glass textiles*, the ability of the applied coating to resist fading from exposure to sunlight and water. **D 123, D13**
- color stability**—the ability of the applied coating color to resist fading from exposure to sunlight and water. **D 2825, D21**
- color stability, *n***—*in coated glass textiles*, the ability of the applied coating to resist fading from exposure to sunlight and water. **D 7018, D13**
- color staining, *n***—the undesired pickup of color by a fabric: (1) when immersed in water, drycleaning solvent, or similar liquid medium, that contains dyestuffs or coloring material not intended for coloring the fabric, or (2) by direct contact with other dyed material from which color is transferred by bleeding or sublimation. (Compare **crocking** and **color bleeding**.) **D 123, D13**
- color staining, *n***—the undesired pickup of color by a fabric: (1) when immersed in water, dry-cleaning solvent, or similar liquid medium, that contains dyestuffs or coloring material not intended for coloring the fabric, or (2) by direct contact with other dyed material from which color is transferred by bleeding or sublimation. (Compare **crocking, color bleeding**) **D 3990, D13**
- color staining, *n***—the discoloration of a material by transfer of colorant from another material. **E 284, E12**
- color standard**—a plaque or other physical standard of established color value, against which standardization of an instrument is made. **C 242, C21**
- color stimulus, *n***—a radiant flux capable of producing a color perception. **E 284, E12**
- color stimulus function, $\phi(\lambda)$, *n***—description of a color stimulus by the spectral concentration of a radiometric quantity, such as radiance or radiant power, as a function of wavelength. **E 284, E12**
- color temperature**—the temperature of a blackbody in degrees Kelvin (K). In photography, the apparent temperature in K of a luminous source which may be measured by its emission ratio of blue to red light. **E 7, E04**
- color temperature, *n***—*of a source*, the temperature, usually expressed in kelvins, of a full radiator that would emit light of the same chromaticity as the source. (See also **correlated color temperature, distribution temperature**.) **E 284, E12**
- color temperature**—temperature in degrees Kelvin (K) at which a black body must be operated to give a color equal to that of the source in question. **E 1142, E37**
- color tolerance, *n***—the permissible color difference between sample and specified color. **E 284, E12**
- color tolerance set, *n***—a group of colored standards, usually seven painted chips, arranged on a single card, one exhibiting a desired color, and two each exhibiting the limits of the permissible range of color variation in each of the color attributes. **E 284, E12**
- color variation**—*for asbestos-cement products*, property of nonuniform color exhibited before or after weathering. **D 2946, C17**
- column, *n***—a building member, usually structural and vertical, subjected to longitudinal (axial) compression and also to lateral forces such as bending. **E 631, E06**
- columnar structure**—a macro- or microstructure characterized by elongated grains whose long axes are parallel, for example, to solidification direction, electroplated direction, etc. **E 7, E04**
- column, electron microscope**—the assembly of gun, lenses, and specimen, viewing and plate chambers. **E 7, E04**
- coma**—a lens aberration occurring in that part of the image field that

is some distance from the principal axis of the system. It results from different magnification in the various lens zones. Extra-axial object points appear as short comet-like images with the brighter small head toward the center of the field (positive coma) or away from the center (negative coma). **E 175, E41**

combed finish, *n*—the surface texture resulting when faces are altered by more or less parallel scratches or scarfs in manufacture. **C 43, C15**

comber/brusher, *n*—an instrument which prepares the test beard of fibers for length, length uniformity, strength, and elongation measurements by combing the test specimen to remove loose or unclamped fibers and paralleling the individually clamped fibers, and by brushing the clamped fibers to remove fiber crimp and smooth the test beard of cotton. **D 123, D13**

comber/brusher, *n*—an instrument which prepares the test beard of fibers for length, length uniformity, strength, and elongation measurements by combing the test specimen to remove loose or unclamped fibers and paralleling the individually clamped fibers, and by brushing the clamped fibers to remove fiber crimp and smooth the test beard of cotton. **D 7139, D13**

comber leather—a steerhide leather, heavily stuffed and usually boarded, used in textile combing machines. **D 1517, D31**

combination change key—a key used in resetting a key change combination. **F 471, F12**

combination electrode—an electrochemical apparatus that incorporates an ion-selective electrode and a reference electrode in a single assembly thereby avoiding the need for a separate reference electrode. **D 4127, D19**

combination last (or shoe)—designed to provide a proper fit for the individual with thinner than normal instep or heel. Length and width will be of standard measurements, but narrower fitting qualities will prevail through instep, waist, and heel. **F 869, F08**

combination of features, *n*—See **feature**—*of a facility*. **E 631, E06**

combination of features, *n*—*of a facility*, two or more features which, when present together in a facility, affect a level of serviceability of that facility. **E 631, E06**

combination of features, *n*—See **feature**—*of a facility*. **E 1480, E06**

combination of features, *n* (éléments caractéristiques combiné)—*of a facility*, features which, when present together in a facility, affect satisfying a requirement for serviceability. **E 631, E06**

combination oven—equipment that combines the function of hot air convection or super-heated steam heating, or both, to perform steaming, baking, roasting, rethermalizing, and proofing of various food products. See **oven**. **F 1827, F26**

combination oven/steamer—See **combination oven**. **F 1827, F26**

combination product, *n*—as defined in 21 CFR § 3.2(e), the term combination product includes: (1) A product comprised of two or more regulated components, that is, drug/device, biologic/device, drug/biologic, or drug/device/biologic, that are physically, chemically, or otherwise combined or mixed and produced as a single entity; (2) Two or more separate products packaged together in a single package or as a unit and comprised of drug and device products, device and biological products, or biological and drug products; (3) A drug, device, or biological product packaged separately that according to its investigational plan or proposed labeling is intended for use only with an approved individually specified drug, device, or biological product where both are required to achieve the intended use, indication, or effect and where upon approval of the proposed product the labeling of the approved product would need to be changed, for example, to reflect a change in intended use, dosage form, strength, route of administration, or significant change in dose; or (4) Any investigational drug, device, or biological product packaged separately that according to its proposed labeling is for use only with another individually specified investigational drug, device, or biological product where both are required to achieve the intended use, indication, or effect." Furthermore, "many somatic cell products administered to patients will be combinations of a biological

product and a device or of a drug, a biological product, and a device." The term "combination product" may apply to TEMPs. **F 2312, F04**

combination stranded conductor—a conductor constructed with wires of different diameters with such differences occurring either within a single layer or from layer to layer. **B 354, B01**

combination tanned—formerly, tanned with a blend of vegetable extracts. Today, tanned with two or more types of tanning materials, such as chromium compounds and vegetable extracts, or chromium compounds and synthetic tannins. **D 1517, D31**

combination vacuum cleaner, *n*—a canister vacuum cleaner having a motorized nozzle separated from the cleaner housing but connected to it by means of a hose or hose and wand. **F 395, F11**

combined, *adj*—the application of two or more techniques to different samples at the same time. (ICTAC) **E 473, E37**

combined sewer—a pipeline intended to convey sewage and storm water. **C 822, C13**

combined site offset, μ_s , *n*—calculated difference in degrees of measured temperature between a selected reference body site and ear canal temperature and averaged over the population of representative study samples. **E 344, E20**

combined water, *n*—the water chemically held, as water of crystallization, by the calcium sulfate dihydrate or hemihydrate crystal. **C 11, C11**

combing, *n*—*in flax*, the processing of two so as to produce tops or sliver which have the staple length and width suitable for use in the worsted spinning system. **D 123, D13**

combing, *v*—*in flax*, the processing of tow so as to produce tops or silver which have the staple length and width suitable for use in the worsted spinning system. **D 6798, D13**

combing wool, *n*—wool that is strong and strictly of combing length, that is, 2 in. (50 mm) or more. **D 123, D13**

combing wool, *n*—wool that is strong and strictly of combing length, that is, 2 in. (50 mm) or more. **D 4845, D13**

comb-rack—(1) a burning tool shaped like a comb used for supporting ware during firing.

(2) A comb-like tool for supporting ware during the metal pickling operation. **C 286, B08**

combustible, *adj*—capable of undergoing combustion. **E 176, E05**

combustible—that portion of the refuse-derived fuel sample which is consumed upon ignition exclusive of the moisture present in the sample. **E 856, D34**

combustible carbon, *n*—carbon content remaining in the solid products derived from the combustion or reaction of coal, coal by-products, or coke, exclusive of carbonate in any form. **D 121, D05**

combustible gases—flammable gases formed from breakdown (partial or complete) of some insulating materials subjected to electrical or thermal stress, or both. **D 2864, D27**

combustible liquid—a liquid having a flash point at or above 37.8°C (100°F). The flash point of a liquid having a viscosity less than 45 SUS at 37.8°C (100°F) and a flash point below 93.4°C (200°F) shall be determined in accordance with Test Methods D 93. **E 772, E44**

combustibles, *n*—the value obtained by subtracting the dry weight (in percent) of the ash (as determined in Test Method D 3174) from 100 % representing original weight of analyzed sample. **D 121, D05**

combustibles, *n*—the portion of a sample which is consumed by oxidation upon ignition and exclusive of the moisture present in the sample. **D 5681, D34**

combustible textile, *n*—a textile that will ignite and burn or that will give off vapors that will ignite and burn when subjected to external sources of ignition. (See **noncombustible textile**) **D 123, D13**

combustible textile, *n*—a textile that will ignite and burn or that will give off vapors that will ignite and burn when subjected to external

- sources of ignition. (Compare **flammable textile, noncombustible textile**.) **D 4391, D13**
- combustion, n**—a chemical process of oxidation that occurs at a rate fast enough to produce heat and usually light either as glow or flames. **D 123, D13**
- combustion, n**—a chemical process of oxidation that occurs at a rate fast enough to produce heat and usually light either as glow or flames. **D 4391, D13**
- combustion, n**—the chemical reaction of a material through rapid oxidation with the evolution of heat and light. **D 5681, D34**
- combustion, n**—a chemical process of oxidation that occurs at a rate fast enough to produce temperature rise and usually light either as a glow or flame. (See also **glow** and **smoldering**.) **E 176, E05**
- combustion, n**—a chemical process of oxidation that occurs at a rate fast enough to produce heat and usually light either as glow or flames. **F 1494, F23**
- combustion chamber, n**—*in reciprocating internal combustion engines*, the volume bounded by the piston crown and any portion of the cylinder walls extending above the piston crown when in the top dead center position, and the inner surface of the cylinder head including any spark plugs and other inserted components. **D 4175, D02**
- combustion products, n**—effluent produced when a material undergoes combustion (see also **smoke**; see also **combustion**). **E 176, E05**
- combustion products**—airborne effluent from a material undergoing combustion; this may also include pyrolysates. **E 176, E05**
- combustion system downdrafting, n**—the reversal of the ordinary (upward) direction of air flow in a combustion system when vented combustion appliances are not operating. **D 1356, D22**
- combustion system spillage, n**—entry of combustion products into a building, caused by backdrafting, vent blockage, or a leaky heat exchanger. **D 1356, D22**
- combustion unit, n**—any number of devices to produce or release energy for the beneficial purpose of production by burning a fuel to include, but not limited to, units such as industrial power boilers, electrical utility generating boilers, and cement kilns. **D 5681, D34**
- comeback**—the time required for a box furnace to return to temperature after the introduction of a load of ware. **C 286, B08**
- comet, n**—extraneous ink deposited in the shape of a round dot with a trailing tail. **D 6488, D01**
- comforter, n**—a bedcovering assembly, consisting of an insulating filler secured between two layers of fabric, used primarily to reduce heat loss. **D 123, D13**
- comforter, n**—a bedcovering assembly, consisting of an insulating filler secured between two layers of fabric, used primarily to reduce heat loss. **D 7023, D13**
- Comite Consultatif International Telegraphique et Telephonique (Consultive Committee for International Telephone and Telegraph), n**—a committee established under the United Nations to recommend worldwide communication usage standards. (See **CCITT**.) **F 1457, F05**
- command, n**—a byte or sequence of bytes from the host computer which invokes options available with the laser printer. **F 1457, F05**
- commentary, n**—the fourth part of a performance statement, consisting of an informative narrative explaining aspects of the performance statement. **E 2151, E06**
- commercial allowance, n**—an arbitrary value equal to the commercial moisture regain plus a specified allowance for finish, used with the mass of scoured, oven-dried yarn, to compute (1) yarn linear density, (2) the commercial or legal mass of a shipment or delivery of any specific textile material (see also **commercial moistureregain**) or (3) the mass of a specific component in the analysis of fiber blends. **D 123, D13**
- commercial allowance, n**—an arbitrary value equal to the commercial moisture regain plus a specified allowance for finish, used with the mass of scoured, oven-dried yarn, to compute (1) yarn linear density, (2) the commercial or legal mass of a shipment or delivery of any specific textile material (see also **commercial moisture regain**) or (3) the mass of a specific component in the analysis of fiber blends. **D 4849, D13**
- commercial allowance (CA), n**—an arbitrary value, equal to the commercial moisture regain, plus a specified allowance for finish, used with the mass of scoured, oven-dried yarn, to compute (1) yarn linear density, (2) the commercial or legal mass of a shipment or delivery of any specific textile material (see also **commercial moistureregain**), or (3) the mass of a specific component in the analysis of fiber blends. **D4920, D13**
- commercial composition, n**—*in wool*, the percentages by weight of wool base, moisture, and other non-wool base components in wool to which a specific commercial designation is applied. **D 123, D13**
- commercial composition, n**—*in wool*, the percentages by weight of wool base, moisture, and other nonwool-base components in wool to which a specific commercial designation is applied. **D 4845, D13**
- commercial designation, n**—*in wool*, a term applied to a lot of wool in a stated form, and having a specified commercial composition. **D 123, D13**
- commercial designation, n**—*in wool*, a term applied to a lot of wool in a stated form, and having a specified commercial composition. **D 4845, D13**
- commercial laundering**—a process by which textile products or specimens may be washed, bleached, rinsed, dried, and pressed typically at higher temperatures, higher pH and longer times than used for home laundering. **D 123, D13**
- commercial laundering, n**—a process by which textile products or specimens may be washed, bleached, rinsed, dried, and pressed typically at higher temperatures, higher pH, and longer times than used for home laundering. **D 3136, D13**
- commercial mass, n**—billed mass as determined by a generally accepted method or as agreed upon between the purchaser and supplier. **D 123, D13**
- commercial mass, n**—billed mass as determined by a generally accepted method or as agreed upon between the purchaser and supplier. **D 4849, D13**
- commercial mass, n**—billed mass as determined by a generally accepted method or as agreed upon between the purchaser and seller. **D4920, D13**
- commercial moisture content, n**—*for wool*, the moisture calculated as a percentage of the weight of the wool, top, noils, yarn, fabric, etc., in the “as-is” condition; that is, containing whatever moisture, oil, grease, or other extraneous matter that may be present. **D 123, D13**
- commercial moisture content, n**—the moisture calculated as a percentage of the weight of the wool, top, noils, yarn, fabric, etc., in the “as-is” condition; that is, containing whatever moisture, oil, grease, or other extraneous matter that may be present. **D 4845, D13**
- commercial moisture content, n**—*in wool*, the moisture calculated as a percentage of the mass of the wool, top, noils, yarn, fabric, etc., in the “as-is” condition; that is, containing whatever moisture, oil, grease, or other extraneous matter that may be present. **D4920, D13**
- commercial moisture regain, n**—a formally adopted arbitrary value, to be used with the oven-dried mass of textile fibers, when calculating the commercial mass of a shipment or delivery. **D 123, D13**
- commercial moisture regain**—see **moisture regain, commercial**. **D 1695, D01**
- commercial moisture regain (CMR), n**—a formally adopted, arbitrary value, to be used with the oven-dried mass of textile fibers, when calculating the commercial mass of a shipment or delivery. **D4920, D13**
- commercial sterility**—*of thermally processed food*, the condition achieved by application of heat, alone or in combination with other appropriate treatments, to render the food free of microorganisms

commercial sterility

- capable of growing in the food at normal nonrefrigerated conditions at which the food is likely to be held during distribution and storage. **F 17, F02**
- commercial tire, n**—truck and industrial tires. **D 5681, D34**
- commercial vacuum cleaner, n**—a vacuum cleaner suitable for the heavy-duty and sometimes continuous cleaning tasks encountered in establishments such as hotels, motels, office buildings, churches, clubs, etc. **F 395, F11**
- commercial weight, n**—billed weight as determined by a generally accepted method or as agreed to by the purchaser and the seller. **D 4845, D13**
- commingling**—mixing of fasteners from different lots that are of the same grade and size in the same container. **F 1789, F16**
- comminuted powder, n**—a powder produced by mechanical attrition of solid metal or powder. **B 243, B09**
- comminution**—the act or process of reduction of particle size with attendant increase in surface area and population of particles, usually but not necessarily by grinding, milling, or pulverizing. **C 242, C21**
- comminution, n**—the act or process of reduction in particle size, usually but not necessarily by grinding or milling. **C 1145, C28**
- comminution, n**—*in sample preparation*, a process that reduces the particle size of a sample. **E 135, E01**
- common area**—room or area that is accessible to all tenants in a building or development (for example, hallway, vestibule, laundry area). **E 631, E06**
- common area, n**—a portion of a building that is generally accessible to all occupants. Such an area may include, but is not limited to, hallways, stairways, laundry and recreational rooms, playgrounds, community centers, garages, and boundary fences. **E 1605, E06**
- common brad**—See **brad**. **F 547, F16**
- common cause**—common cause variation affects all the individual values of the process output being studied. In control chart analysis, it appears as part of the random process variation. **F 1789, F16**
- common cut nail**—normally, wedge-shaped, 1/2 to 6-in. nails of various types sheared from stiff-stock-sheet steel, with sheared-square point end narrower than upset head end. **F 547, F16**
- common nail, common wire nail**—bright, plain-shank, regular-stock-steel, 1/2 by 0.035 to 6 by 0.262-in. nails with flat 1/64 to 1/32-in. head and medium diamond point. Diameter is larger than that for sinkers, coolers, corkers, and box nails of same length. **F 547, F16**
- common ungrounded junction, n**—measuring junctions within the same multi-pair thermocouple that are electrically isolated from the sheath but electrically connected to each other. **E 344, E20**
- communicating pores, n**—see **interconnected porosity**. **B 243, B09**
- communication**—*in grouting*, subsurface movement of grout from an injection hole to another hole or opening. **D 653, D18**
- communication resource**—an entity responsible for implementation of direct medical direction, or entities responsible for response and scene two-way communication, or both (also known as medical control resource). **F 1177, F30**
- comonomer, n**—one of two or more monomer species that polymerize to form a copolymer. **D 1566, D11**
- compact, n**—an object produced by the compression of metal powder, generally while confined in a die, with or without the inclusion of nonmetallic constituents. Synonymous with **briquet**. **B 243, B09**
- compact, n**—the consolidated powder from one can; it may be used to make one or more parts. **B 899, B02**
- compact**—to treat glass in a manner, such as by heat treatment, to approach maximum density. **C 162, C14**
- compacted backfill, n**—*in pipe laying*, backfill material which has been compacted to the density specified by the engineer. **C 1154, C17**
- compacted backfill, n**—*for pipe laying*, backfill material that has been compacted to the density specified by the engineer. **D 2946, C17**

- compacted graphite iron, n**—a cast iron that has been treated in the liquid state so as to cause its graphitic carbon to occur in the compacted graphite shape in the as-cast condition. (See **graphite, compacted and graphite, spheroidal**.) **A 644, A04**
- compactibility, n**—a conceptual term, encompassing the powder characteristics of compressibility, green strength, edge retention, and lamination tendency, that relates to the ability of a powder to be consolidated into a usable green compact. **B 243, B09**
- compactibility**—measure of a boom's storage volume per unit length (m^3/m). **F 818, F20**
- compacting, n**—a process in which a powder held in a die or other container is subjected to an external force in order to densify the powder and produce a compact of prescribed shape and dimensions. **B 243, B09**
- compacting**—See **debulking**. **E 631, E06**
- compacting**—See **debulking**. **E 1749, E06**
- compacting tool set, n**—an assembly of tooling items in which powder is pressed. **B 243, B09**
- compaction**—mechanical or hydraulic consolidation of backfill to achieve stability. **C 896, C04**
- compaction**—the densification of a soil by means of mechanical manipulation. **D 653, D18**
- compaction**—in crossflow filtration, the result of applied pressure and temperature compressing a polymeric membrane which may result in a decline in flux. **D 6161, D19**
- compaction, n**—the densification of a soil or coal combustion product by means of mechanical manipulation; reduction in bulk volume of solid waste by rolling and tamping. **E 2201, E50**
- compaction curve (Proctor curve) (moisture-density curve)**—the curve showing the relationship between the dry unit weight (density) and the water content of a soil for a given compactive effort. **D 653, D18**
- compaction ratio, n**—the measurement of the relationship of volume displacement of a package before and after simulated landfill conditions as determined in standardized tests. **D 996, D10**
- compaction, soil**—act of packing soil with mechanical force to increase its density. **F 412, F17**
- compaction test (moisture-density test)**—a laboratory compacting procedure whereby a soil at a known water content is placed in a specified manner into a mold of given dimensions, subjected to a compactive effort of controlled magnitude, and the resulting unit weight determined. The procedure is repeated for various water contents sufficient to establish a relation between water content and unit weight. **D 653, D18**
- compact stranded conductor**—a unidirectional or unilay or conventional concentric conductor, constructed with a central core surrounded by one or more layers of helically laid wires and formed into final shape by rolling, drawing, or other means; and manufactured to a specified nominal diameter, approximately 8 to 10 % below the nominal diameter of a conventional non-compact conductor of the same cross-sectional area. **B 354, B01**
- comparative measurements**—in electromagnetic testing, measurements made in which the unbalance in the system is measured using comparator coils in contrast to differential and absolute measurements. (See also **comparator coils**.) **E 1316, E07**
- comparative readout**—in electromagnetic testing, the signal output of comparator coils. (See also **comparator coils**.) **E 1316, E07**
- comparative system**—a system that uses coil assemblies and associated electronics to detect any electric or magnetic condition, or both, that is not common to the test specimen and the standard (see **comparator coils**). (E 566) **E 1316, E07**
- comparator coils**—in electromagnetic testing, two or more coils electrically connected in series opposition but arranged so that there is no mutual induction (coupling) between them such that any electric or magnetic condition, or both, that is not common to the test specimen and the standard, will produce an unbalance in the system and thereby yield an indication. **E 1316, E07**

comparison question, *n*—type of question, the physiological responses from which are compared to those generated by the relevant questions. **E 2035, E52**

comparison sample, *n*—(fire debris) 1) a sample of material collected from a fire scene which is, to the best of the investigator's knowledge, identical in every respect to a sample suspected of containing ignitable substance, but which does not contain ignitable substance. 2) a sample of suspected ignitable substance submitted for the purpose of comparing with any ignitable substance separated from a debris sample. (see **control sample**) **E 1732, E30**

comparison standard—a standard micrograph or a series of micrographs, usually taken at 75 or 100 diameters, or a suitable equivalent built into the eyepiece and used to determine grain size by direct comparison with the image. **E 7, E04**

compatibility, *n*—*in building construction*, the capability of two or more materials to be placed in contact or close proximity with one another and each material maintaining its usual physical or chemical properties, or both. **C 717, C24**

compatibility—the ability of various components or an aerosol formulation to be used together without undesirable physical or chemical results. **D 3064, D10**

compatibility, *adj*—the ability of materials to exist in contact without specified (usually hazardous) consequences under a defined scenario. **E 1445, E27**

compatibility agent—a surface-active agent that allows simultaneous application of liquid fertilizer and agrichemical, or two or more agrichemical formulations, as a uniform tank mix, or improves the homogeneity of the mixture and the uniformity of the application. **E 1519, E35**

compatible—nonstaining to substrate and sealant and nondetrimental to sealant performance. **C 717, C24**

compatible—(1) a condition wherein components of a plastic piping system or different specific plastic materials, or both, can be joined together for satisfactory joints. (2) in relation to elastomeric seal joints, a condition wherein the elastomer does not adversely affect the pertinent properties of the plastic pipe or fittings, or both, when the sealing gasket is in intimate contact with the plastic for a prolonged period. **F 412, F17**

compatible—not injurious to or changing the physical or electrical characteristics of the blankets or affecting their application, use, or acceptability. **F 819, F18**

compatible cartridge—any all-in-one cartridge that can be used in a particular printer or copier, whether new, recycled or remanufactured. **F 335, F05**

compatible materials, *n*—*in building construction*, compounds or substances that can exist in close proximity to one another without detrimental effects on either. **C 717, C24**

compensating extension wires, *n*—those extension wires fabricated from materials basically different in composition from the thermocouple. **E 344, E20**

compensating eyepiece—one designed for use with objectives such as apochromats, the lateral chromatic aberration of which is undercorrected. **E 7, E04**

compensating eyepieces—those designed for use with objectives such as apochromats in order to correct chromatic aberration. **E 175, E41**

compensating lead wires—wires leading from a thermocouple to the voltage-measuring instrument. These wires must be of such compositions that they will generate an *emf* equivalent to the *emf* generated by the reference junction of the couple. **E 7, E04**

compensating thermocouple, *n*—a thermocouple for the purpose of generating an electrical signal representing long-term changes in the stack metal temperatures wherein a fraction of the signal generated is subtracted from the signal developed by the stack-gas thermocouples. **E 176, E05**

compensation line, *n*—a line of plot on log-log paper where the coordinates are scar diameter in millimetres and applied load in

kilograms-force (or newtons) obtained under dynamic conditions. **D 4175, D02**

compensation scar diameter, *n*—the average diameter, in millimetres, of the wear scar on the stationary balls caused by the rotating ball under an applied load in the presence of a lubricant, but without causing either seizure or welding. **D 4175, D02**

competence, *n*—demonstrated ability to apply knowledge and skills. **E 1605, E06**

complementary color percepts, *n*—(1) pairs of color percepts, one of which is induced by the other through simultaneous contrast; (2) pairs of color percepts, one of which is the negative after-image of the other. **E 284, E12**

complementary colors, *n*—color stimuli that produce a specified achromatic stimulus when they are suitably mixed in an additive manner. **E 284, E12**

complementary color stimuli, *n*—pairs of color stimuli that, by additive mixture produce an achromatic stimulus. **E 284, E12**

complementary wavelength, *n*—the wavelength of a spectrally pure light that when added to the light reflected or transmitted by the specimen will produce a combination that color matches a reference achromatic (white) light. **E 284, E12**

complete immersion thermometer, *n*—a liquid-in-glass thermometer designed to indicate temperatures correctly when the entire thermometer is exposed to the temperature being measured. (Compare **total immersion thermometer** and **partial immersion thermometer**.) **E 344, E20**

completely alloyed powder, *n*—see **pre-alloyed powder**. **B 243, B09**

completely mixed (perfectly mixed) flow—flow through a membrane module in which fluids on both the upstream and downstream sides of the membrane are individually well-mixed. **D 6161, D19**

completely randomized design, *n*—a design in which the treatments are assigned at random to the full set of experimental units. **E 456, E11**

completely randomized design, *n*—a design in which the treatments are assigned at random to the full set of experimental units. **E 1325, E11**

completely randomized factorial design, *n*—a factorial experiment (including all replications) run in a completely randomized design. **E 456, E11**

completely randomized factorial design, *n*—a factorial experiment (including all replications) run in a completely randomized design. **E 1325, E11**

complex, *adj*—*as a modifier of dynamic force*, descriptive of the total force; denoted by the asterisk (*) as a superscript symbol (F^*); F^* can be resolved into elastic and damping components using the phase of displacement as reference. **D 1566, D11**

complexing agent—a compound that will combine with metallic ions to form complex ions. See **complex ion**. **B 374, B08**

complexing agent—see **sequestering agent**. **D 459, D12**

complex ion—an ion composed of two or more ions or radicals, both of which are capable of independent existence, for example, cuprocyanide ($\text{Cu}(\text{CN})_3^-$). **B 374, B08**

complex machine stitch pattern, *n*—*in home sewing*, a machine stitch pattern formed when two or more simple machine stitch patterns are combined in one repeating unit. (Compare **simple machine stitch pattern**.) **D 5646, D13**

complex modulus, E^* , G^* , or K^* —ratio of the stress to strain where each is a factor that may be represented by a complex number as follows: $E^* = E' + iE''$, $G^* = G' + iG''$, and $K^* = K' + iK''$.

where:

E^* = complex modulus, measured in tension or flexure,

E' = storage modulus, measured in tension or flexure,

E'' = loss modulus, measured in tension or flexure,

G^* = complex modulus, measured in shear,

G' = storage modulus, measured in shear,

G'' = loss modulus, measured in shear,

complex modulus, E^* , G^* , or K^*

K^* = complex modulus, measured in compression,
 K' = storage modulus, measured in compression
 K'' = loss modulus, measured in compression, and
 $i = \sqrt{-1}$, measured in compression.

The complex modulus may be measured in tension or flexure, (E^*), compression, (K^*), or in shear, (G^*), (D 4092, D20).

E 1142, E37

complex modulus, E^* or G^* —the ratio of the stress to strain where each is a vector that may be represented by a complex number.

$$E^* = E' + iE''$$

$$G^* = G' + iG''$$

$$K^* = K' + iK''$$

where:

E^* = complex modulus, measured in tension or flexure,
 E' = storage modulus, measured in tension or flexure,
 E'' = loss modulus, measured in tension or flexure,

G^* = complex modulus, measured in shear,
 G' = storage modulus, measured in shear,
 G'' = loss modulus, measured in shear,

K^* = complex modulus, measured in compression,
 K' = storage modulus, measured in compression
 K'' = loss modulus, measured in compression, and
 $i = \sqrt{-1}$, measured in compression.

D 4092, D20

complexometric titration—a titration in which the titrant and sample ion form a complex. Many classic complexometric titrations can conveniently be followed by electrode. The success of the titration depends on the lower limit of detection of the electrode, the strength of the complex, and the possible presence of ions that compete for the complexing agent or which interfere with the electrode. Examples of complexometric titrations are the determination of calcium with EDTA, and acid-base titrations.

D 4127, D19

complex radiation, n —radiation composed of a number of monochromatic radiations.

E 349, E21

complex seam, n —a seam made in two or more steps. (Ant. plain seam.)

D 123, D13

complex seam, n —in home sewing, a seam made in two or more steps. (Ant. plain seam.)

D 4965, D13

complex shear compliance, J^* —the reciprocal of complex shear modulus.

$$J^* = \frac{1}{G^*}$$

D 4092, D20

complex shear compliance, J^* —reciprocal of complex shear modulus, where $J^* = 1/G^*$, (D 4092, D20).

E 1142, E37

complex silicate inclusions—a general term describing silicate inclusions containing visible constituents besides the silicate matrix. An example would be corundum or spinel crystals occurring in a silicate matrix in steel.

E 7, E04

complex tensile compliance, D^* —the reciprocal of complex tensile modulus.

$$D^* = \frac{1}{E^*}$$

D 4092, D20

complex tensile compliance, D^* —reciprocal of complex tensile modulus, where $D^* = 1/E^*$, (D 4092, D20).

E 1142, E37

complex viscosity, η^* —the complex modulus divided by the imposed frequency in rad/s.

E 1142, E37

compliance, C (Pa^{-1})—the quotient of strain and stress.

$$C = \frac{c}{\sigma} = \frac{1}{M}$$

D is the tensile compliance; J is the shear compliance; B is the bulk compliance; O is the longitudinal compression compliance.

D 4092, D20

compliance indicator, n —a specified string of three characters indicating that the message which follows conforms to the requirements of a particular standard.

F 1294, F05

compliance, J —the strain divided by the corresponding stress.

E 1142, E37

compliance (LF^{-1}), n —the ratio of displacement increment to force increment.

E 1823, E08

component, n —as used with textile fiber polymers, a polymer with distinguishable properties.

D 123, D13

component, n —as used with textile fiber polymers, a polymer with distinguishable properties.

D 4466, D13

component—one of the independently variable substances by means of which the composition of each phase of a system of heterogeneous equilibrium may be described completely; usually an element, or a compound that remains undissociated throughout the range of temperature and pressure concerned.

E 7, E04

component—See **building component**.

E 631, E06

component—See **building component**.

E 1480, E06

component, n —a building element using industrial products that are manufactured as independent units capable of being joined with other elements.

E 1605, E06

component, n —any single element used in an assembly.

F 1582, F04

component (of the waste)—each of those different and distinguishable materials that comprise the waste.

E 1605, E06

component of variance, n —a part of a total variance identified with a specified source of variability.

D 123, D13

component of variance, n —a part of a total variance identified with a specified source of variability.

E 456, E11

component replacement (building)—an abatement method in which painted components with leaded paint are removed with minimal disturbance of the paint, and replaced with new components.

E 1605, E06

components, n —for pile yarn floor covering, the individual yarn or fabric elements into which a pile yarn floor covering can be separated.

D 123, D13

components, n —for pile yarn floor covering, the individual yarn or fabric elements into which a pile yarn floor covering can be dissected.

D 123, D13

components, n —for pile yarn floor covering, the individual yarn or fabric elements into which a pile yarn floor covering can be separated.

D 5684, D13

components pattern—process of identifying specific building components containing LBP at a hazardous level within a building or group of buildings.

E 631, E06

composite, n —a solid product consisting of two or more distinct phases, including a binding material (matrix) and a particulate or fibrous material.

D 883, D20

composite:

composite material—a substance consisting of two or more materials, insoluble in one another, which are combined to form a useful engineering material possessing certain properties not possessed by the constituents.

discontinuous fiber-reinforced composite—any composite material consisting of a matrix reinforced by discontinuous fibers. The fibers may be whiskers or chopped fibers.

fabric-reinforced composite—any composite material consisting of a matrix reinforced by fabric (woven, knitted, or braided assemblages of fibers).

fiber-reinforced composite—any composite material consisting of a matrix reinforced by continuous or discontinuous fibers.

filamentary composite—a composite material reinforced with continuous fibers.

unidirectional fiber-reinforced composite—any fiber-reinforced composite with all fibers aligned in a single direction.

D 3878, D30

- composite**, *n*—a combination of materials, which generally are recognized as distinct entities, for example, coated or laminated materials. **E 176, E05**
- composite**, *n*—*as applied to loadbearing elements*, an interaction between structural components which is to be taken into account in the evaluation of load capacity. **E 176, E05**
- composite**, *n*—*as related to a pipe or duct insulation*, see **duct insulation system** or **pipe insulation system**. **E 176, E05**
- composite coating**—a coating consisting of deposits incorporating particles of another material. See also **dispersion coating**. **B 374, B08**
- composite compact**, *n*—a metal powder compact consisting of two or more adhering layers, rings, or other shapes of different metals or alloys with each material retaining its original identity. **B 243, B09**
- composite conductor**—a conductor consisting of two or more types of wire, each type of wire being plain, clad, or coated; stranded together to operate mechanically and electrically as a single conductor. **B 354, B01**
- composite design**, *n*—a design developed specifically for fitting second order response surfaces to study curvature, constructed by adding further selected treatments to those obtained from a 2ⁿ factorial (or its fraction). **E 456, E11**
- composite design**, *n*—a design developed specifically for fitting second order response surfaces to study curvature, constructed by adding further selected treatments to those obtained from a 2ⁿ factorial (or its fraction). **E 1325, E11**
- composite, filamentary**—a major form of advanced composites in which the fiber constituent consists of continuous filaments. **E 631, E06**
- composite, filamentary**—a major form of advanced composites in which the fiber constituent consists of continuous filaments. **E 1749, E06**
- composite item**—an object in the waste composed of multiple waste components or dissimilar materials, such as disposable diapers, bi-metal beverage containers, electrical conductors composed of metallic wire encased in plastic insulation, etc. **D 5681, D34**
- composite material**, *n*—structured combination of two or more discrete materials. **E 176, E05**
- composite material**—a material consisting of any combination of high-strength, high-modulus fibers, whiskers, or particles in a homogenous matrix. **E 631, E06**
- composite material**—a material consisting of any combination of high-strength, high-modulus fibers, whiskers, or particles in a homogeneous matrix. **E 1749, E06**
- composite membrane**—a membrane having two or more layers with different physical or chemical properties. Membrane manufactured by forming a thin desalinating barrier layer on a porous carrier membrane. **D 6161, D19**
- composite pipe**—pipe consisting of two or more different materials arranged with specific functional purpose to serve as pipe. **F 412, F17**
- composite plate**—an electrodeposit consisting of two or more layers of metal deposited successively. **B 374, B08**
- composite powder**, *n*—a powder in which each particle consists of two or more distinct constituents. **B 243, B09**
- composite sample**, *n*—a combination of two or more samples. **D 1129, D19**
- composite sample**—a portion of leather, which may be the scraps from the cuttings of physical test specimens, that has been taken from each of the sample units constituting the sample. The leather is composited as specified for the purpose of testing a lot for chemical properties. **D 1517, D31**
- composite sample**, *n*—*for asbestos*, a set of unit samples of asbestos fiber (drawn systematically or at random) taken from a lot, comprising not less than two and not more than 200 bags, for use in the laboratory as a test sample, that is, as a source of test specimens. **D 2946, C17**
- composite sample**—a thoroughly mixed gross sample. **D 4175, D02**
- composite sample**—a sample formed by combining two or more individual samples or representative portions of the samples. **D 4410, D19**
- composite sample**, *n*—a combination of two or more samples. **D 5681, D34**
- composite tube**—See **tube**. **D 996, D10**
- composite viewing**—the viewing of two or more superimposed radiographs from a multiple film exposure. **E 1316, E07**
- composite wedge**—a wedge, containing both soil and ice, that shows evidence of both primary and secondary filling. **D 7099, D18**
- composition**—the quantity of each of the components of a mixture; usually expressed in terms of the weight percentage, or the atomic percentage of each of the components in the mixture. **E 7, E04**
- composition**—quantity of the components of a mixture; usually expressed in terms of the weight percentage, or the atomic percentage of each of the components in the mixture, (E 7, E04), **E 1142, E37**
- composition**—materials composed of granulated fillers, such as cork, leather, fibers, minerals, in a resinous matrix, usually an elastomer. Compressed and molded into sheet materials, compositions are used for insoles, heel bases, etc. **F 869, F08**
- compositional depth profile**—the chemical composition and the atomic concentration measured as a function of distance from the surface. **E 673, E42**
- compositional inhomogeneity, (CI)**, *n*—*as used in fractography*, a volume-distributed flaw that is a microstructural irregularity related to the nonuniform distribution of an additive, a different crystalline or glass phase or in a multiphase material, the nonuniform distribution of a second phase. **C 1145, C28**
- compost**—the product of composting. **D 883, D20**
- compost**, *n*—the stable humus material that is produced from a composting process. **E 2114, E06**
- compostable**, *adj*—capable of undergoing biological decomposition in a compost site as part of an available program, such that the material (that is, feedstock) is not visually distinguishable and breaks down to carbon dioxide, water, inorganic compounds, and biomass, at a rate consistent with known compostable materials. **D 996, D10**
- compostable plastic**—a plastic that undergoes biological degradation during composting to yield carbon dioxide, water, inorganic compounds, and biomass at a rate consistent with other known compostable materials and leaves no visually distinguishable or toxic residues. **D 883, D20**
- composting**, *v*—the controlled biological decomposition of organic material in the presence of air to form a humus. **E 2114, E06**
- compound**, *n*—an intimate mixture of all the ingredients necessary for a finished material or product. **C 717, C24**
- compound**, *n*—an intimate admixture of (a) polymer(s) with all the materials necessary for the finished product. **D 883, D20**
- compound**, *n*—an intimate admixture of a polymer(s) with all the materials necessary for the finished article. **D 1566, D11**
- compound**, *n*—a mixture of blended chemicals tailored to meet the needs of the specific components of the tire. **D 5681, D34**
- compound**, *n*—a mixture of a polymer with other ingredients such as fillers, stabilizers, catalysts, processing aids, lubricants, modifiers, pigments, or curing agents. **F 412, F17**
- compound**—a mixture of a polymer with other ingredients such as fillers, stabilizers, catalysts, processing aids, lubricants, modifiers, pigments, or curing agents. (F 412, F17) **F 869, F08**
- compound compact**, *n*—a metal powder compact consisting of mixed metals, the particles of which are joined by pressing or sintering or both, with each metal particle retaining substantially its original composition. **B 243, B09**
- compounding ingredient**, *n*—See **compounding material**, the preferred term. **D 1566, D11**
- compounding material**, *n*—a substance used as part of a rubber mix. **D 1566, D11**

compound, standard, n

compound, standard, n—a control or reference compound prepared according to a prescribed formula and mixing procedure.

D 1566, D11

compound term, n—a term that contains more than one word in the natural spoken word order.

E 1992, E02

compreg—synthetic resin-treated, compressed wood with reduced swelling and shrinking characteristics and increased density and strength properties.

D 1038, D07

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), n—also known as “Superfund,” CERCLA prescribes actions and regulatory requirements for reducing risks to human health and the environment resulting from releases or threatened releases of hazardous substances into the environment.

E 833, E06

Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS)—the list of sites compiled by EPA that EPA has investigated or is currently investigating for potential hazardous substance contamination for possible inclusion on the National Priorities List.

D 5681, D34

compressed air sprayer—a spraying apparatus that uses air pressure to move liquid from a container through an atomizing device.

E 1102, E35

compressed natural gas (CNG)—natural gas that is typically pressurized to 3600 psi. CNG is primarily used as a vehicular fuel.

D 4150, D03

compressed oil absorption number (COAN), n—See **oil absorption number of compressed sample**, the preferred term.

D 3053, D24

compressed stranded conductor—a unidirectional or unilay or conventional concentric conductor manufactured to a specified nominal diameter 3 % less than the calculated diameter of non-compressed conductor of the same construction and cross-sectional area.

B 354, B01

compressed thickness (t, (L), mm), n—thickness under a specified stress applied normal to the material.

D 4439, D35

compressibility, n—the capacity of a metal powder to be densified under a uniaxially applied pressure in a closed die.

B 243, B09

compressibility—property of a soil or rock pertaining to its susceptibility to decrease in volume when subjected to load.

D 653, D18

compressibility—the property of a material that permits it to decrease in volume when subjected to an increase in pressure.

D 4150, D03

compressibility factor (z)—a factor calculated by taking the ratio of the actual volume of a given mass of gas at a specified temperature and pressure to its volume calculated from the ideal gas law at the same conditions.

D 4150, D03

compressible-washer-type direct tension indicator—direct tension indicator having the capability of indicating the achievement of a required minimum bolt tension by the degree of its plastic deformation.

F 1789, F16

compression, n—the act, process, or result of compacting, condensing, or concentrating.

D 4848, D13

compressional wave—see **longitudinal wave**.

E 1316, E07

compression coupling—See **compression joint**.

C 896, C04

compression curve—see **pressure-void ratio curve**.

D 653, D18

compression deflection—the amount of deformation of material when being compressed.

F 869, F08

compression disk—a disk of compressible material placed between the ends of adjacent pipe for the purpose of distributing the jacking force.

C 896, C04

compression failure—deformation of the wood fibers resulting from excessive compression along the grain either in direct end compression or in bending. It may develop in standing trees due to bending by wind or snow or to internal longitudinal stresses developed in growth, or it may result from stresses imposed after the tree is cut. In surfaced lumber, compression failures appear as fine wrinkles across the face of the piece.

D 9, D07

compression fitting joint—see **joint, compression fitting**.

F 412, F17

compression gasket, n—a gasket designed to be used under compression.

C 717, C24

compression gasket joint—see **joint, compression gasket**. **F 412, F17**
compression glazing, n—see **compression glazing system**.

C 717, C24

compression glazing, v—in *building construction*, the act of installing components into a compression glazing system.

C 717, C24

compression glazing system, n—in *building construction*, gasket(s) or a combination of sealant(s) and gasket(s) used to provide weather-tightness by way of continuous pressure on the components in the joint.

C 717, C24

compression index, C_c (D)—the slope of the linear portion of the pressure-void ratio curve on a semi-log plot.

D 653, D18

compression joint—a joint designed so that a sealing action is obtained by compressing elastomeric components.

C 896, C04

compression load—load which tends to compress or shorten the member. The value for compressive strength may depend upon the degree of distortion.

F 1789, F16

compression mold—a mold which is open when the material is introduced and which shapes the material by heat and by the pressure of closing.

F 869, F08

compression molded button, n—a button or button blank which is produced by compression molding.

D 123, D13

compression molded button, n—a button or button blank which is produced by compression molding, thermoset-molding compounds such as urea-formaldehyde, melamine-formaldehyde, styrene-modified polyester, or any combination thereof. This method using styrene modified polyester resin, and having in its formulation pearlescent pigments which are oriented in the molding process, form a button or button blank which resembles natural shell.

D 5497, D13

compression molding, n—the method of molding a material already in a confined cavity by applying pressure and usually heat.

D 123, D13

compression molding—the method of molding a material already in a confined cavity by applying pressure and usually heat.

D 883, D20

compression molding, n—molding process in which the material is placed directly in the mold cavity and compressed to shape by closure of the mold.

D 1566, D11

compression molding, n—the method of molding a material already in a confined cavity by applying pressure and usually heat.

D 5497, D13

compression molding—the method of molding a material in a confined cavity by applying pressure and usually heat. (D20)

F 412, F17

compression molding, n—a process for molding a material in a confined cavity by applying pressure and usually heat.

F 1251, F04

compression parallel to grain—compression, endwise (parallel to the grain). The imposition of a compressive stress that acts in a direction parallel to the grain of the wood, as in a column.

D 9, D07

compression perpendicular to grain—compression, sidewise (perpendicular to the grain). The imposition of a compressive stress that acts in a direction approximately perpendicular to the grain of the wood.

D 9, D07

compression ratio, n—the ratio of the volume of the loose powder to the volume of the compact made from it. Synonymous with **fill ratio**.

B 243, B09

compression ratio, n—the ratio of the volume of the combustion chamber including the precombustion chamber with the piston at bottom dead center to the comparable volume with the piston at top dead center.

D 4175, D02

compression recovery, n—the degree to which a material returns to its original dimension(s) after removal of a compressive force.

D 4848, D13

compression resistance, n—the ability of a material to oppose deformation under a compressive force.

D 4848, D13

compression seal, *n*—a seal which is attained by a compressive force on the sealing material. C 717, C24

compression set, *n*—the residual deformation of a material after removal of the compressive stress. D 1566, D11

compression test—a test made on a concrete specimen to determine the compressive strength. C 822, C13

compression wave (irrotational)—wave in which element of medium changes volume without rotation. D 653, D18

compression wood—abnormal wood formed typically on the lower side of branches and inclined trunks of softwood trees. Compression wood is identified by its relatively wide annual rings, usually eccentric, relatively large amount of latewood, sometimes more than 50 % of the width of the annual rings in which it occurs, and its lack of demarcation between earlywood and latewood in the same annual rings. Compression wood shrinks excessively lengthwise, as compared with normal wood. D 9, D07

compressive force, *n*—the perpendicular force applied to surface(s) of a material in compaction. D 4848, D13

compressive strength, *n*—the maximum load sustained by a standard specimen of a material when subjected to a crushing force. C 11, C11

compressive strength, *n*—a property of solid material that indicates its ability to withstand a uniaxial compressive load. C 709, D02

compressive strength—the maximum resistance of a concrete specimen to axial compressive loading; or the specified resistance used in design calculations. C 822, C13

compressive strength—the maximum stress that a specimen or material will support when subjected to a crushing force applied at a specified rate. C 904, C03

compressive strength, *n*—the maximum compressive load which a specimen will support divided by the cross-sectional area of the specimen. C 1180, C12

compressive strength, *n*—a property of solid material that indicates its ability to withstand a uniaxial compressive load. D 4175, D02

compressive strength—the load per unit area at which an unconfined cylindrical specimen of soil or rock will fail in a simple compression test. Commonly the failure load is the maximum that the specimen can withstand in the test. D 7099, D18

compressive strength—See **strength, compressive.** E 631, E06

compressive strength—See **strength, compressive.** E 1749, E06

compressive strength [FL⁻²], *n*—the maximum compressive stress which a material is capable of sustaining. Compressive strength is calculated from the maximum force during a compression test and the original cross-sectional area of the specimen. E 6, E28

compressive strength (unconfined or uniaxial compressive strength), *p_c, q_w, C_o* (FL⁻²)—the load per unit area at which an unconfined cylindrical specimen of soil or rock will fail in a simple compression test. Commonly the failure load is the maximum that the specimen can withstand in the test. D 653, D18

compressive stress—normal stress tending to shorten the body in the direction in which it acts. (ISRM) D 653, D18

compressive stress [FL⁻²], *n*—normal stress due to forces directed toward the plane on which they act. E 6, E28

compressometer, *n*—a specialized extensometer used for sensing negative or compressive strain. E 6, E28

Compton edge (*E_c*)—the maximum energy value of electrons of the Compton scattering continuum. The energy value of the Compton edge is

$$E_c = E_\gamma - \frac{E_\gamma}{1 + \frac{2E_\gamma}{0.511}}$$

which corresponds to 180° scattering of the primary photon of energy *E_γ* (MeV). For a 1 MeV photon, the Compton edge is about 0.8 MeV. E 170, E10

Compton scattering—X-ray scattering by atoms in which the scattered beam has, relative to the incident beam, a longer wavelength

and a random phase relationship. Also called incoherent or modified scattering. E 7, E04

Compton scattering—elastic scattering of a photon by an atomic electron, under the condition of conservation of momentum, that is, the vector sum of the momenta of the outgoing electron and photon is equal to the momentum of the incident photon. The scattered photon energy, *E'γ*, is given by

$$E'_\gamma = \frac{E_\gamma E_\gamma (1 - \cos\theta)}{1 + 0.511}$$

where *E_γ* is the incident photon energy in MeV and θ is the angle between the direction of the primary and scattered photon. The electron energy, *E_e*, is equal to *E_γ* - *E'γ*. E 170, E10

compton scatter radiation—the scattered X-ray or gamma ray which results from the inelastic scattering of an incident X-ray or gamma ray on an electron. Since the ejected electron has short range in most materials, it is not considered part of the scattered radiation. E 1316, E07

computed radiology (photo stimulated luminescence method)—a two-step radiological imaging process; first, a storage phosphor imaging plate is exposed to penetrating radiation; second, the luminescence from the plate's photostimulable luminescent phosphor is detected, digitized, and presented via hard copy or a CRT. E 1316, E07

computer system, *n*—a group of hardware components and associated software designed and assembled to perform a specific function or group of functions. E 2363, E55

Conbur test—See **package testing.** D 996, D10

concatenation, *n*—the linking or chaining together of either separate items of data in a bar code symbol, or of the data contained in two or more separate bar code symbols (also referred to as "message append"). F 1294, F05

concave surface—a local concave curvature in the flat surfaces of pultruded plastic parts as measured transversely to their length. D 3918, D20

concealed membrane waterproofing, *n*—also referred to as **structural slab waterproofing**; (1) for below grade: refers to a form of waterproofing where the membrane is applied to the mud mat and later covered with a topping, usually concrete, to act as a wearing layer or course, and (2) for elevated structural concrete deck: applied over the structural surface and covered/concealed by other components such as a topping slab, pavers, ballast, pavement, and plantings. D 1079, D08

concentrate, *n*—the froth product recovered in coal froth flotation. D 121, D05

concentrate—the product mix to which the propellant is added. D 3064, D10

concentrate—the stream exiting a crossflow membrane device which has increased concentration of solutes and particles over the feed stream; portion of the feed stream which does not pass through the membrane. The stream in which dissolved solids or particulates, or both, are concentrated in a membrane separation process. D 6161, D19

concentrate recycle—a technique for improving recovery in which a fraction of the concentrate is recycled through the membrane system. D 6161, D19

concentrate (reverse osmosis), *n*—the residual portion of an aqueous solution applied to a membrane. D 1129, D19

concentrating collector—see **collector, concentrating.** E 772, E44

concentration, *n*—the quantity of a substance contained in a total unit quantity of sample.

*mass concentration, *n**—concentration expressed in terms of mass of substance per unit volume of gas or liquid.

*ppb(v), *n**—a unit of measure of the concentration of gases in air expressed as parts of the gas per billion (10⁹) parts of the air-gas mixture, both by volume.

concentration, *n*

ppm(v), *n*—a unit of measure of the concentration of gases in air expressed as parts of the gas per million parts of the air-gas mixture, both by volume.

vapor concentration, *n*—concentration expressed in terms of gaseous volume of substance per unit volume of air or other gas usually expressed in percent or parts per million by volume. See also **absolute humidity**.

volume concentration, *n*—concentration expressed in terms of gaseous volume of substance per unit volume of air or other gas usually expressed in percent or parts per million.

D 1356, D22

concentration—the actual amount of a substance in a given volume of solution. When measuring ionic concentrations by electrode, a distinction is made between the concentration of the free, unbound ion, and total concentration that includes ions bound to complexing agents.

D 4127, D19

concentration, *n*—quantity of substance in a unit quantity of sample.

E 631, E06

concentration—amount of the active ingredient contained in the chemical formulation expressed as a percent or mass per relevant unit basis.

E 1102, E35

concentration, *n*—quantity of substance in a unit quantity of sample.

E 1605, E06

concentration—see **number density**.

E 1620, E29

concentration, *c*—the quantity of the substance contained in a unit quantity of sample.

E 131, E13

concentration cell—an electrolytic cell, the emf of which is caused by a difference in concentration of some component in the electrolyte. (This difference leads to the formation of discrete cathode and anode regions.)

G 15, G01

concentration factor, CF—the ratio of the concentration of a component in the retentate (concentrate, brine) to the concentration of the same component in the feed

$$CF = \frac{C_B (\text{brinewater concentration})}{C_F (\text{feedwater concentration})}$$

$$= \frac{1}{1 - \text{conversion}} \quad (\text{approximation})$$

D 6161, D19

concentration factor, *n* (D)—a parameter used in modifying the Boussinesq equations to describe various distributions of vertical stress.

D 653, D18

concentration of sediment (by mass)—the ratio of the mass of dry sediment in a water-sediment mixture to the mass of the mixture.

D 4410, D19

concentration polarization—that part of the total polarization that is caused by changes in the activity of the potential-determining components of the electrolyte.

B 374, B08

concentration polarization—the increase of the solute concentration over the bulk feed solution which occurs in a thin boundary layer at the feed side of the membrane surface, resulting from the removal of the solvent. Concentration profile that has a higher level of solute nearest to the upstream membrane surface compared with the more-or-less mixed bulk fluid far from the membrane surface.

D 6161, D19

concentration ratio—in leak testing, the ratio of the number of atoms (molecules) of a given constituent of a (gas) mixture to the total number of atoms (molecules) in the mixture. For ideal gases the concentration ratio has the same value as the volume fraction or the partial pressure of the constituent.

E 1316, E07

concentration ratio, geometric—the ratio of the collector aperture area to the absorber area.

E 772, E44

concentration standard—a standardizing solution whose value is reported in terms of total concentration of the ion of interest. If the electrode is calibrated using pure-concentration standards and measurements made on untreated samples, results must be corrected for the sample ionic strength. More commonly, a reagent is

added to all standards and samples before measurement in order to fix the ionic strength, thus avoiding the need for correction.

D 4127, D19

concentration-time curve, *n*—a plot of the concentration of a gaseous toxicant as a function of time.

E 176, E05

concentration (volume)—the ratio of the volume of dry sediment to the volume of the water-sediment mixture.

D 4410, D19

concentrator—an optical device (lenses or mirrors) that, as part of a solar collector, receives the unconcentrated solar irradiance and redirects (concentrates) it to a smaller area (the receiver).

E 772, E44

concentricity, *n*—the ratio, expressed in percent, of the minimum wall thickness to the maximum wall thickness.

D 1711, D09

concentric-lay conductor—conductor constructed with a central core surrounded by one or more layers of helically laid wires. Several types are as follows:

compact round conductor—see **compact stranded conductor**.

conventional concentric conductor—conductor constructed with a round central core surrounded by one or more layers of helically laid round wires. The direction of lay is reversed in successive layers, and generally with an increase in length of lay for successive layers.

equilay conductor—conductor constructed with a central core surrounded by more than one layer of helically laid wires, all layers having a common length of lay, direction of lay being reversed in successive layers.

parallel core conductor—conductor constructed with a central core of parallel-laid wires surrounded by one layer of helically laid wires.

rope-lay conductor—conductor constructed of a bunch-stranded or a concentric-stranded member or members, as a central core, around which are laid one or more helical layers of such members.

unidirectional conductor—conductor constructed with a central core surrounded by more than one layer of helically laid wires, all layers having a common direction of lay, with increase in length of lay for each successive layer.

unilay conductor—conductor constructed with a central core surrounded by more than one layer of helically laid wires. All layers having a common direction of lay and essentially similar length of lay, which is a multiple of the outer diameter of the finished conductor, for each successive layer. The lay length of the inner layers shall not vary by more than $\pm 10\%$ of the lay length of the outer layer.

concentric-lay conductor, *n*—a conductor composed of a central core surrounded by one or more layers of helically laid strands.

D 1711, D09

conceptual model—a simplified representation of the hydrogeologic setting and the response of the flow system to stress.

D 653, D18

conceptual site model, *n*—a mental or physical representation of the physical system and the iterative characterization of the physical and chemical processes and conditions that affect the transport of contaminants from sources through environmental media to receptors or potential receptors.

D 5681, D34

concertina, *n*—a pattern formed by attaching adjacent loops of helical coils to one another at specified points on the circumference, resulting in an accordion-like configuration.

F 1379, F14

concertina spacing, *n*—distance between adjacent concertina attachments in a concertina configuration, as measured down the length of the extended coil (also called *concertinaattachment spacing*).

F 1379, F14

concrete, *n*—a composite material that consists essentially of a binding medium within which are embedded particles or fragments of aggregate; in hydraulic-cement concrete, the binder is formed from a mixture of hydraulic cement and water.

C 125, C09

concrete—a homogeneous mixture of portland cement, fine aggregate, coarse aggregate, and water. The mixture may also contain admixtures, or other cementitious materials, or both.

C 822, C13

concrete, *n*—a hard, strong material made by mixing a cementing

- material (commonly portland cement) and a mineral aggregate (as washed sand and gravel or broken rock) with sufficient water to cause the cement to set and bind the entire mass. **F 141, F06**
- concrete breakout failure**—anchor failure mode characterized by concrete cone failure or concrete edge failure. **E 2265, E06**
- concrete brick, *n***—a concrete masonry unit made from portland cement, water, and suitable aggregates, with or without the inclusion of other materials. See Specification C 55. **C 1209, C15**
- concrete nail, concrete stub nail**—hardened-steel, ½ by 0.135 to 3 ½ by 0.207-in. nails with flat countersunk ⅝ to ½-in. head and medium diamond point. **F 547, F16**
- concrete, refractory, *n***—a hardened castable. **C 71, C08**
- concretion, *n***—*ina geological sense*, a mass of mineral matter found in rock of a composition different from its own and produced by deposition from aqueous solution in the rock. **D 121, D05**
- condensate, *n***—liquid or solid matter formed by condensation from the vapor phase. **D 1356, D22**
- condensate**—a mixture of condensed steam and cooling water, exiting cooking equipment and if applicable, directed to the floor drain. **F 1827, F26**
- condensation, *n***—a chemical reaction in which two or more molecules combine with the separation of water or some other simple substance. (See also **polymerization**.) **D 907, D14**
- condensation**—the conversion of water vapor or other gas to liquid as the temperature drops or atmospheric pressures rises. (See also **dew point**.) **D 1079, D08**
- condensation, *n***—the process of converting a material in the gaseous phase to a liquid or solid state by decreasing temperature or by increasing pressure, or both. **D 1356, D22**
- condensation polymer**—a polymer made by condensation polymerization. **D 883, D20**
- condensation polymer, *n***—polymerization in which during an acid/base reaction a small molecule is often split out. **F 1251, F04**
- condensation polymerization**—polymerization in which monomers are linked together with the splitting off of water or other simple molecules. **D 883, D20**
- condensation sampling**—See **sampling**. **D 1356, D22**
- condensed system**—a pure substance, or mixture, at a pressure and temperature such that the vapor phase does not exist. **E 7, E04**
- condenser**—a term applied to lenses or mirrors designed to collect, control, and concentrate radiation in an illumination system. **E 7, E04**
- condenser, Abbe**—originally a two-lens substage condenser combination designed by Ernst Abbe. It lacks chromatic correction though designed for a minimum of spherical aberration and has only a very low-angle aplanatic cone. It may be rated with a numerical aperture as high as 1.3. **E 175, E41**
- condenser aperture**—See **aperture**. **E 7, E04**
- condenser, darkfield**—a condenser forming a hollow cone of light with its apex (or focal point) in the plane of the specimen. When used with an objective having a numerical aperture lower than the minimum numerical aperture of the hollow cone, only light deviated by the specimen enters the objective. Objects are seen as bright images against a dark background. **E 175, E41**
- condenser, darkfield, bispheric**—a darkfield condenser consisting of a convex spherical reflector mounted concentric with a larger concave reflector. The rays are formed into a diverging cone by the convex reflector. The annular concave reflector then forms a hollow converging cone which is focused on the subject. See **condenser, darkfield**. **E 175, E41**
- condenser, darkfield, paraboloid**—a darkfield condenser consisting of a reflecting surface in the form of a segment of a paraboloid of revolution. Parallel rays entering the condenser around the periphery of the central stop are reflected from the curved surfaces and converge at the focus of the paraboloid. See **condenser, darkfield**. **E 175, E41**
- condenser lens**—a device used to focus radiation in or near the plane of the object. **E 7, E04**
- condenser or condenser lens**—a term applied to lenses or mirrors designed to collect, control, and concentrate radiation in an illumination system. **E 175, E41**
- condenser, variable-focus**—essentially an Abbe condenser in which the upper lens element is fixed and the lower movable. The lower lens may be used to focus the illumination between the elements so that it emerges from the stationary lens as a large diameter parallel bundle. The field of low-power objectives may thus be filled without removing the top element. At the opposite extreme it can be adjusted to have a numerical aperture as high as 1.3. **E 175, E41**
- condensoid, *n***—the particles of a dispersion formed by condensation. **constant flow high-volume sampler**—See **sampler**. **D 1356, D22**
- condition, *v***—to bring a material to moisture equilibrium with a specified atmosphere. **D 123, D13**
- condition, *v***—to bring a material to moisture equilibrium with a specified atmosphere. **D4920, D13**
- condition code**—a symbol that signifies the physical operating condition of property. **E 2135, E53**
- conditioned ash, *n***—ash that has been moistened with water during the load out process at the temporary storage silo at the power plant to allow for its handling, transport, and placement without causing fugitive dusting. **E 2201, E50**
- conditioning**—the conversion of a surface to a suitable state for successful treatment in succeeding steps. **B 374, B08**
- conditioning, *v***—the storage of a specimen under specified temperature, humidity, etc., for a specified time prior to testing. **D 1079, D08**
- conditioning, *n***—*for sampling*, the process by which the fiber is put into a consistent state to be tested. **D 2946, C17**
- conditioning**—the exposure of a material to the influence of a prescribed atmosphere for a stipulated period of time or until a stipulated relation is reached between material and atmosphere. **E 41, G03**
- conditioning agent**—an additive to water suspensions that imparts specific properties such as: proper wetting, particle dispersion, corrosion resistance, biological resistance, or foam inhibition. **E 1316, E07**
- conditioning agents, *n***—all chemicals that enhance the performance of the collectors or frothers. Conditioning agents change the characteristics of the surface of the minerals or the environment. There are many subgroups according to their function: activators, depressants, emulsifiers, dispersants, flocculants, chelating agents, froth depressants, pH modifiers, etc. **D 121, D05**
- conditioning (environmental), *n***—the storage of a rubber, under specified conditions (time, temperature, humidity) prior to testing. **D 1566, D11**
- conditioning heat treatment, *n***—a preliminary **heat treatment** used to prepare a steel object for a desired reaction to a subsequent **heat treatment**. **A 941, A01**
- conditioning (mechanical), *n***—the prescribed program of deformation of a specimen prior to testing. **D 1566, D11**
- conditioning time, *n***—see **joint conditioning time**. (See also **curing time** and **setting time**.) **D 907, D14**
- condition, standard**—the condition reached by a specimen when it is in temperature and moisture equilibrium with a standard atmosphere. **E 41, G03**
- condominium, *n***—an **apartment building**, group of townhouses, or single dwellings in which each **dwelling unit** is individually owned and each owner holds an interest in common areas. Also commonly used to denote an individual unit. **E 631, E06**
- condominium**—See **building**. **E 631, E06**
- conductance**—the capacity of a medium, usually expressed in mhos, for transmitting electric current. The reciprocal of resistance. **B 374, B08**
- conductance**—the ratio of the current carried through a material to

conductance

the difference in potential applied across the material. It is the reciprocal of *resistance*. The unit is: (ohm)⁻¹ or siemens.

D 2864, D27

conductance—in leak testing, the ratio of the throughput (under steady state, conservative conditions) of a gas flowing through a conduit or an orifice to the difference in the partial pressures of the gas at the two ends of the conduit or on the two sides of the orifice, expressed in volume units per unit time, such as cubic metres per second.

E 1316, E07

conductance, apparent dc—the dc conductance measured at the end of a specific electrification time. The “apparent dc conductance” is the reciprocal of the “apparent dc resistance.” The unit is: (ohm)⁻¹ or siemens.

D 2864, D27

conductance, dc—the ratio of the total current (in amperes) passing through a material to the dc voltage (in volts) applied between two electrodes that are in contact with, or immersed in a specimen. The “dc conductance” is the reciprocal of the “dc resistance.” The unit is: (ohm)⁻¹ or siemens.

D 2864, D27

conductance, film, n—the time rate of heat flow from a unit area of a surface to its surroundings, induced by a unit temperature difference between the surface and the environment. C 168, C16

conductance, insulation, n—the ratio of the total volume and surface current between two electrodes (on or in a specimen) to the dc voltage applied to the two electrodes.

D 1711, D09

conductance (specific)—a measure of the ability of the water to conduct an electric current at 77°F (25°C). It is related to the total concentration of ionizable solids in the water. It is inversely proportional to electrical resistance.

D 653, D18

conductance, surface, n—the ratio of the current between two electrodes (on the surface of a specimen) to the dc voltage applied to the electrodes.

D 1711, D09

conductance, thermal—the thermal transmission in unit time through unit area of a particular body or assembly having defined surfaces, when unit average temperature difference is established between the surfaces. $C = W/m^2 \cdot K$ ($C = \text{Btu}/h \cdot \text{ft}^2 \cdot ^\circ\text{F}$).

D 1079, D08

conductance, thermal, C, n—the time rate of steady state heat flow through a unit area of a material or construction induced by a unit temperature difference between the body surfaces.

$$C = q/\Delta T$$

A conductance (C) associated with a material shall be specified as a material C . A conductance (C) associated with a system or construction of materials shall be specified as a system C . (C in SI units: $W/m^2 \cdot K$.) (C in inch-pound units: $(\text{Btu}/h)/\text{ft}^2/\text{F} = \text{Btu}/h \text{ ft}^2/\text{F}$)

C 168, C16

conductance, volume, n—the ratio of the current in the volume of a specimen between two electrodes (on or in the specimen) to the dc voltage applied to the two electrodes.

D 1711, D09

conducting material (conductor), n—a material within which an electric current is produced by application of a voltage between points on, or within, the material.

D 1711, D09

conducting salt—a salt added to the solution in order to increase its conductivity.

B 374, B08

conductive base stock—paper stock intended as a substrate for electrostatic coating with surface or volume conductivity over a range of relative humidities controlled by special treatment.

F 335, F05

conductive ceramic tile—tile made from special body compositions or by methods that result in specific properties of electrical conductivity while retaining other normal physical properties of ceramic tile.

C 242, C21

conductivity—specific conductance—the current transferred across unit area per unit potential gradient. In the metric system, $K = \text{amperes per square centimetre divided by volts per centimetre}$. The reciprocal of resistivity.

B 374, B08

conductivity—the ratio of the current density carried through a

specimen to the potential gradient paralleling the current. This is numerically equal to the conductance between opposite faces of a unit cube of liquid. It is the reciprocal of **resistivity**.

D 2864, D27
conductivity—the property of a substance's (in this case, water and dissolved ions) ability to transmit electricity. The inverse of resistivity. Measured by a conductivity meter, and described in microsiemens/cm or micromhos/cm, $\mu\text{S}/\text{cm}$.

D 6161, D19

conductivity—the intrinsic property of a particular material to carry electric current; it is commonly expressed in percent IACS (International Annealed Copper Standard) or MS/m (MegaSiemens/metre).

E 1316, E07

conductivity, apparent dc volume—the “dc volume conductivity” measured at the end of a specified electrification time. It is the reciprocal of the apparent dc volume resistivity. The unit most commonly used is: (ohm-centimetre)⁻¹ or siemens per centimetre. The SI unit is (ohm-metre)⁻¹.

D 2864, D27

conductivity, dc—the ratio of the current density passing through a specimen at a given instant of time and under prescribed conditions, to the dc potential gradient paralleling the current. It is the reciprocal of the dc resistivity. In common practice the “dc conductivity” is numerically equal to the “dc conductance” between opposite faces of a centimetre cube of liquid. The unit is: (ohm-centimetre)⁻¹ or siemens per centimetre. The SI unit is: (ohm-metre)⁻¹.

D 2864, D27

conductivity, dc volume—the property of a material that permits the flow of electricity through its volume. It is numerically equal to the ratio of the steady-state current density to the steady direct voltage gradient parallel with the current in the material. The dc volume conductivity is the reciprocal of the dc volume resistivity. The unit commonly used is: (ohm-centimetre)⁻¹ or siemens per centimetre. The SI unit is (ohm-metre)⁻¹.

D 2864, D27

conductivity, electrical (volume), σ —the ratio of the current density ($A \cdot \text{cm}^{-2}$) through a specimen to the potential gradient (V/cm) in the same direction as the current.

E 1142, E37

conductivity, surface, n—the surface conductance multiplied by that ratio of specimen surface dimensions (distance between electrodes divided by the width of electrodes defining the current path) which transforms the measured conductance to that obtained if the electrodes had formed the opposite sides of a square.

D 1711, D09

conductivity, thermal—the thermal transmission, by conduction only, in unit time through unit area between two isothermal surfaces of an infinite slab of a homogeneous material of unit thickness, in a direction perpendicular to the surface, when unit temperature difference is established between the surfaces. $k = W/m \cdot K$ ($k = \text{Btu} \cdot \text{in.}/h \cdot \text{ft}^2 \cdot ^\circ\text{F}$).

D 1079, D08

conductivity, thermal, λ or k, n —the time rate of steady state heat flow through a unit area of a homogeneous material induced by a unit temperature gradient in a direction perpendicular to that unit area. (λ or k in SI units: $(W/m^2)/(K/m) = W/m \cdot K$.) (λ or k in inch-pound units: $(\text{Btu}/h)/\text{ft}^2/(F/\text{ft}) = \text{Btu}/h \text{ ft}^2/(F/\text{in.}) = \text{Btu} \text{ in.}/h \text{ ft}^2 \text{ F}$.) (See discussion under **apparent thermal conductivity**.)

C 168, C16

conductivity, volume, n—the volume conductance multiplied by that ratio of specimen volume dimensions (distance between electrodes divided by the cross-sectional area of the electrodes) which transforms the measured conductance to that conductance obtained if the electrodes had formed the opposite sides of a unit cube.

D 1711, D09

conductor—a wire or combination of wires not insulated from one another, suitable for carrying an electric current.

B 354, B01

conductor, n—a wire, or combination of wires not insulated from each other, suitable for carrying electric current.

D 1711, D09

conductor—a substance or body that allows a flow of electric current to pass continuously along it or through it when a sufficient voltage is applied across any two points.

D 5077, D10

conductor core—the center strand or member about which one or more layers of wires or members are laid helically to form a concentric-lay.

B 354, B01

conductor resistance—the measured electrical resistance through a circuit loop between two test points. **F 2112, F01**

conduit—a pipe for conveying fluid. **C 896, C04**

conduit, n—pipe used to protect wires for electric-power or communication systems, for both underground and exposed situations. **C 1154, C17**

conduit, n—for *asbestos-cement*, asbestos-cement pipe used to protect wires for electric-power or communication systems, for both underground and exposed situations. **D 2946, C17**

conduit—a solid or flexible tube, pipe, or channel through which insulated electrical wires are run or through which water or some other fluid flows. **E 631, E06**

conduit—a solid or flexible tube, pipe, or channel through which insulated electrical wires are run or through which water or some other fluid flows. **E 1749, E06**

conduit—a tubular raceway for carrying electric wires, cables, or other conductors. **F 412, F17**

conduit nail—bright or copper-plated, regular-stock-steel or hardened-steel, 1¼ to 3½ by 0.161-in. nails with annularly threaded shank; bent, curved hook head, and medium needle point. Different types of head designed for fastening ½, ¾, or 1-in. conduit, tubing, pipe, cable, etc. **F 547, F16**

cone, n—in *textiles*, (1) a yarn holder or bobbin of conical shape used as a core for a yarn package of conical form, also called a cone core. (2) the yarn package obtained when yarn is wound upon a cone core. **D 123, D13**

cone, n—in *textiles*, (1) a yarn holder or bobbin of conical shape used as a core for a yarn package of conical form, also called a cone core. (2) the yarn package obtained when yarn is wound upon a cone core. **D 4849, D13**

cone atomizer—an atomizer that produces a conical spray pattern. **E 1620, E29**

cone head—head consisting of truncated cone with large diameter usually nearest shank of nail. **F 547, F16**

cone of impression, n—a rise of the potentiometric surface in the approximate shape of a cone that develops around an injection well. **D 653, D18**

cone pattern, n—a diverging spray pattern that is nominally symmetric about the nozzle axis and whose apex is located at or near the nozzle discharge orifice. **E 1620, E29**

cone penetration—See **penetration**. **D 1079, D08**

cone proof load—inch series—a calculated value derived from the formula

$$CPL = (1 - 0.30D) \times f \times A_s$$

where:

CPL = cone proof load (lbs),

D = nominal diameter of nut (in.),

f = specified proof stress of nut (psi), and

A_s = tensile stress area of nut (in.²).

To meet the requirements of the cone proof load test, the nut shall support its specified cone proof load without stripping or rupture. **F 1789, F16**

cone proof load—metric series—a calculated value derived from the formula

$$CPL = (1 - 0.012D)f \times A_s \times 0.001$$

where:

CPL = cone proof load (kN),

D = nominal diameter of nut (mm),

f = specified proof stress of nut (MPa), and

A_s = tensile stress area of nut (mm²).

To meet the requirements of the cone proof load test, the nut shall support its specified cone proof load without stripping or rupture. **F 1789, F16**

cone proof load test—test performed using a conical washer and threaded mandrel to determine the influence of surface discontinuities (that is, forging cracks or seams) on the load-carrying capability of hardened steel nuts. The test includes a simultaneous dilation and stripping action of the nut. **F 1789, F16**

cone-screen test—a method for testing fineness of enamel with a cone-shaped sieve. (see also **screen test**) **C 286, B08**

cone spray nozzle—see **cone atomizer**. **E 1620, E29**

confidence bound, n—see **confidence limit**. **E 456, E11**

confidence coefficient, n—the value, C , of the probability associated with a confidence interval or statistical coverage interval. It is often expressed as a percentage. **E 456, E11**

confidence interval, n—an interval estimate of a population parameter computed so that the statement “the population parameter lies in this interval” will be true, on the average, in a stated proportion of the times such statements are made. **D 123, D13**

confidence interval, n—an interval used to bound the value of a population parameter with a specified degree of confidence (this is an interval that has different values for different samples). **D 5681, D34**

confidence interval, n—a numerical range used to bound the value of a population parameter with a specified degree of confidence (that the interval would include the true parameter value). **D 5681, D34**

confidence interval—an interval estimate of a population parameter computed so that the statement “the population parameter included in this interval” will be true, on the average, in a stated proportion of the times such computations are made based on different samples from the population. **E 1823, E08**

confidence level, n—the probability, or expected percent of the times, that the selected percent ($P\%$) of the actual population lies within the tolerance interval calculated from the data sample. **A 644, A04**

confidence level, n—the stated proportion of times the confidence interval is expected to include the population parameter. **D 123, D13**

confidence level, n—the probability, usually expressed as a percent, that a *confidence interval* is expected to contain the parameter of interest (see discussion of *confidence interval*). **D 5681, D34**

confidence level, n—the probability, usually expressed as a percent, that a confidence interval will contain the parameter of interest. **D 5681, D34**

confidence level, n—see **confidence coefficient**. **E 456, E11**

confidence level (or coefficient)—the stated proportion of the times the confidence interval is expected to include the population parameter. **E 1823, E08**

confidence limit, n—each of the limits, T_1 and T_2 , of the two sided confidence interval, or the limit T of the one sided confidence interval. **E 456, E11**

confidence limits, n—the two statistics that define the ends of a confidence interval. **D 123, D13**

confidence limits—the limits on either side of the mean value of a group of observations which will, in a stated fraction or percent of the cases include the expected value. Thus the 95 % confidence limits are the values between which the population mean will be situated in 95 out of 100 cases. **D 4790, D16**

confidence limits, n—the limits on either side of the mean value of a group of observations which will, in a stated fraction or percent of the cases, include the expected value. Thus the 95 % confidence limits are the values between which the population mean will be situated in 95 out of 100 cases. **D 5681, D34**

confidence limits—the two statistics that define a confidence interval. **E 1823, E08**

configuration, n—the state of the various interface and printing options that are set for the host and printer. **F 1457, F05**

confining bed—a hydrogeologic unit of less permeable material bounding one or more aquifers. **D 653, D18**

confining unit—a term that is synonymous with “aquiclude,” “aquitard,” and “aquifuge”: defined as a body of relatively low

confining unit

permeable material stratigraphically adjacent to one or more aquifers. **D 653, D18**

conformance—ability of a boom to maintain freeboard and draft when subjected to a given set of environmental conditions. **F 818, F20**

conformity—fulfillment by a product, process or service of specified requirements, (ISO Guide 2). **E 1187, E36**

conformity, *n*—fulfillment of a requirement. **E 1605, E06**

conformity surveillance—evaluation for conformity to determine the continuing conformity with specified requirements, (ISO Guide 2). **E 1187, E36**

conformity testing—evaluation for conformity by means of testing, (EN 45020). **E 1187, E36**

confounded factorial design, *n*—a factorial experiment in which only a fraction of the treatment combinations are run in each block and where the selection of the treatment combinations assigned to each block is arranged so that one or more prescribed effects is(are) confounded with the block effect(s), while the other effects remain free from confounding. **E 456, E11**

confounded factorial design, *n*—a factorial experiment in which only a fraction of the treatment combinations are run in each block and where the selection of the treatment combinations assigned to each block is arranged so that one or more prescribed effects is(are) confounded with the block effect(s), while the other effects remain free from confounding.

NOTE—All factor level combinations are included in the experiment.

E 1325, E11

confounding, *n*—combining indistinguishably the main effect of a factor or a differential effect between factors (interactions) with the effect of other factor(s), block factor(s) or interaction(s).

E 456, E11

confounding, *n*—combining indistinguishably the main effect of a factor or a differential effect between factors (interactions) with the effect of other factor(s), block factor(s) or interaction(s).

NOTE—Confounding is a useful technique that permits the effective use of specified blocks in some experiment designs. This is accomplished by deliberately preselecting certain effects or differential effects as being of little interest, and arranging the design so that they are confounded with block effects or other preselected principal factor or differential effects, while keeping the other more important effects free from such complications. Sometimes, however, confounding results from inadvertent changes to a design during the running of an experiment or from incomplete planning of the design, and it serves to diminish, or even to invalidate, the effectiveness of an experiment.

E 1325, E11

congealing point, *n*—that temperature at which molten petroleum wax ceases to flow, when allowed to cool under prescribed conditions. **D 4175, D02**

congealing point, *n*—of petroleum wax, that temperature at which molten petroleum wax, when allowed to cool under prescribed conditions, ceases to flow. **D 4175, D02**

conglomeric cryogenic fabric—a distinct soil micromorphology resulting from the effects of freezing and thawing, in which coarser soil particles form compound arrangements. **D 7099, D18**

congruent phases—those states of matter of unique composition that co-exist at equilibrium at a single point in temperature and pressure; for example, the two coexisting phases of a two-phase equilibrium (E 7, E04). **E 1142, E37**

congruent transformation—an isothermal, or isobaric, phase change in which both of the phases concerned have the same composition throughout the process; the order of a system becomes unary at a composition of congruency. **E 7, E04**

congruent transformation—an isothermal, or isobaric, phase change in which both of the phases concerned have the same composition throughout the process; the order of a system becomes unary at a composition of congruency, (E 7, E04). **E 1142, E37**

conical, ω —over a solid angle larger than an infinitesimal element of solid angle and less than a hemisphere. The geometry of the solid

angle must be described in the text. For incident beams it is assumed that the radiance is constant over the entire solid angle.

(See **Radiometric properties and quantities**) **E 772, E44**

conical head—See **countersunk head**. **F 547, F16**

conical washer—washer that has a crown height that flattens under load and is partially recovered following load removal. **F 1789, F16**

conifer—a tree belonging to the order *Coniferae*, usually evergreen, with cones and needle-shaped or scalelike leaves, and producing wood known commercially as “softwood.” **D 9, D07**

conjugate joints (faults)—two sets of joints (faults) that formed under the same stress conditions (usually shear pairs). (ISRM) **D 653, D18**

conjugate phases—those states of matter of unique composition which coexist at equilibrium at a single point in temperature and pressure; for example, the two coexisting phases of a two-phase equilibrium. **E 7, E04**

conjugate planes—two planes of an optical system such that one is the image of the other. **E 7, E04**

connate water, *n*—water entrapped in the voids of a sedimentary or extrusive igneous rock at the time of its deposition or emplacement. **D 653, D18**

connected porosity—See **connected porosity** under **porosity**. **C 242, C21**

connecting ring, *n*—in zippers, a device shaped like the letter “D” used to secure a pull, having more than one component in its design, to the bail of the slider. **D 123, D13**

connecting ring, *n*—a device shaped like the letter “D” used to secure a pull, having more than one component in its design, to the bail of the slider. **D 2050, D13**

connecting stroke, *n*—a line joining two adjacent characters. **E 2195, E30**

connecting wire error, *n*—the error caused by uncompensated connecting wire resistance. (Although the connecting wire is part of the measurement circuit, most of it is not at the temperature that is being determined. Thermometers are available in two-, three-, and four-wire configurations. There is no satisfactory way to compensate for the wire resistance in the measurement with a two-wire thermometer although the wire resistance can be compensated for in three and four-wire thermometers.) **E 344, E20**

connecting wires, *n*—the wires that run from the element through the cable end closure and external to the sheath. **E 344, E20**

connection—device or method used to fasten together two or more components of a structural system using mechanical means, welding, adhesives, or a combination of them. **E 631, E06**

connection, *n*—structural junction of two or more wood members, components, or assemblies, designed to be connected with mechanical fasteners, adhesives, welds, or a combination thereof, to transmit structural forces safely. Colloquially, the term *joint* is used in place of the term *connection*. **E 631, E06**

connection—attachment of load-bearing element to concrete or masonry base materials using anchors. **E 2265, E06**

connection head, *n*—a housing enclosing a terminal block for an electrical temperature-sensing device and usually provided with threaded openings for attachment to a protecting tube and for attachment of conduit. **E 344, E20**

connection point, *n*—any point on the wheel or metal loading plate where the resistance measuring instrument’s leads are connected. **F 538, F09**

connector, *n*—within the restrictions of this terminology, abbreviation for **metal connector plate**. **E 631, E06**

connector hole—opening in metal connector plate, resulting from punching integral tooth from, or nail hole in, connector plate during its fabrication. Also called *slot* when opening is not round. **E 631, E06**

connector pair, *n*—an assembly consisting of a plug and a jack, each having both positive and negative inserts, that will connect two

- parts of an electrical circuit and provide a means of physically disconnecting the two parts without the use of tools. **E 344**, E20
- consensus**, *n*—substantial agreement achieved through a **consensus process**, but not necessarily unanimity. **E 631**, E06
- consensus**—general agreement, characterized by the absence of substantial issues by any important part of the concerned interests and by a process that involves seeking to take into account the views of all parties concerned and to reconcile any conflicting arguments, (ISO Guide 2). **E 1187**, E36
- consensus process**, *n*—a formal procedure for reaching **consensus** that includes the elements of due process. **E 631**, E06
- consensus standard**—widely available standard developed by ASTM, ASME, SAE, ISO, or any other standards-setting organization which has under its structure those parties which include users, producers, and other interested persons. **F 1789**, F16
- conservation**, *n*—the examination, preservation, and restoration of cultural objects with minimal sacrifice of their aesthetic and historic integrity. **D 123**, D13
- conservation**, *n*—the profession devoted to the preservation of cultural property for the future. Conservation activities include examination, documentation, treatment, and preventive care, supported by research and education. **D 5038**, D13
- conservation**—See **preservation**. **E 631**, E06
- conservator**, *n*—a person whose activity involves the science, technology, and documentation associated with the conservation of cultural objects. **D 123**, D13
- conservator**, *n*—a professional whose primary occupation is the practice of conservation and who, through specialized education, knowledge, training, and experience, formulates and implements all the activities of conservation in accordance with an ethical code such as the AIC Code of Ethics and Guidelines for Practice. **D 5038**, D13
- consistency**, *n*—a property of a material determined by the complete flow force relation. **C 11**, C11
- consistency**, *n*—the degree of mobility of a refractory castable as determined by Practices C 860. **C 71**, C08
- consistency**, *n*—of fresh concrete, mortar, or grout, the relative mobility or ability to flow. **C 125**, C09
- consistency**—the properties of a slip that control its draining, flowing, and spraying behavior. **C 286**, B08
- consistency**—the relative ease with which a soil can be deformed. **D 653**, D18
- consistency**—in grouting, the relative mobility or ability of freshly mixed mortar or grout to flow; the usual measurements are slump for stiff mixtures and flow for more fluid grouts. **D 653**, D18
- consistency**, *n*—that property of a liquid adhesive by virtue of which it tends to resist deformation. (See also **viscosity** and **viscosity coefficient**.) **D 907**, D14
- consistency**, *n*—of lubricating grease, the degree of resistance to movement under stress. **D 4175**, D02
- consistency index**—see **relative consistency**. **D 653**, D18
- consistency (normal)**, *n*—the number of millilitres of water per 100 g of gypsum plaster or gypsum concrete required to produce a mortar or a slurry of specified fluidity. **C 11**, C11
- consistent with**—there are times when this expression is perfectly appropriate, such as when “evidence consistent with disguise is present” or “evidence consistent with a simulation or tracing is present, but “the known writing is consistent with the questioned writing” has no intelligible meaning. **E 1658**, E30
- console**, *n*—an instrument package that contains one or more instruments used to monitor depth, bottom time, surface intervals, air pressure, compass direction, decompression status, or some combination thereof. **F 1549**, F32
- consolidated**—the characteristic of being cemented or compacted, or both, and not separated easily into smaller particles. **D 5681**, D34
- consolidated-drained test (slow test)**—a soil test in which essentially complete consolidation under the confining pressure is followed by additional axial (or shearing) stress applied in such a manner that even a fully saturated soil of low permeability can adapt itself completely (fully consolidate) to the changes in stress due to the additional axial (or shearing) stress. **D 653**, D18
- consolidated-undrained test (consolidated quick test)**—a soil test in which essentially complete consolidation under the vertical load (in a direct shear test) or under the confining pressure (in a triaxial test) is followed by a shear at constant water content. **D 653**, D18
- consolidation**—the gradual reduction in volume of backfill matter to achieve stability. **C 896**, C04
- consolidation**—the gradual reduction in volume of a soil mass resulting from an increase in compressive stress
- initial consolidation (initial compression)**—a comparatively sudden reduction in volume of a soil mass under an applied load due principally to expulsion and compression of gas in the soil voids preceding primary consolidation.
- primary consolidation (primary compression) (primary time effect)**—the reduction in volume of a soil mass caused by the application of a sustained load to the mass and due principally to a squeezing out of water from the void spaces of the mass and accompanied by a transfer of the load from the soil water to the soil solids.
- secondary consolidation (secondary compression) (secondary time effect)**—the reduction in volume of a soil mass caused by the application of a sustained load to the mass and due principally to the adjustment of the internal structure of the soil mass after most of the load has been transferred from the soil water to the soil solids. **D 653**, D18
- consolidation**—the act of combining two or more materials to make a single package unit. Common types of consolidation packaging used by HHW programs include: bulking, lab packaging, and composite packaging. **D 5681**, D34
- consolidation**, *n*—the reduction in volume of a fill caused by movement of water out of the fill mass. Consolidation generally occurs due to an increase in the vertical stress on a fill. It is the movement of water rather than the compression of air-filled voids that distinguishes consolidation from compaction. **E 2201**, E50
- consolidation**—reduction in volume of soil as a result of gravitational forces. **F 412**, F17
- consolidation curve**—see **consolidation time curve**. **D 653**, D18
- consolidation grouting**—injection of a fluid grout, usually sand and Portland cement, into a compressible soil mass in order to displace it and form a lenticular grout structure for support. **D 653**, D18
- consolidation ratio**, U_s (**D**)—the ratio of: (1) the amount of consolidation at a given distance from a drainage surface and at a given time, to (2) the total amount of consolidation obtainable at that point under a given stress increment. **D 653**, D18
- consolidation test**—a test in which the specimen is laterally confined in a ring and is compressed between porous plates. **D 653**, D18
- consolidation-time curve (time curve) (consolidation curve) (theoretical time curve)**—a curve that shows the relation between: (1) the degree of consolidation, and (2) the elapsed time after the application of a given increment of load. **D 653**, D18
- consortium (pl. consortia)**, *n*—microbial community comprised of more than one, species that exhibits properties not shown by individual community members. **D 4175**, D02
- conspicuity**, *n*—the characteristics of an object that determine the likelihood that it will come to the attention of an observer. **E 284**, E12
- constant amplitude loading**—in fatigue loading, a loading (straining) in which all of the peak forces (strains) are equal and all of the valley forces (strains) are equal. **E 1823**, E08
- constant dollars**—dollars of uniform purchasing power exclusive to general inflation or deflation. **E 631**, E06
- constant dollars**, *n*—dollars of uniform purchasing power exclusive of general inflation or deflation. **E 833**, E06
- constant energy resolution**—AES, XPS, a mode of operation in which the instrumental resolution is constant over the spectrum. See **fixed analyzer transmission**. **E 673**, E42

constant-head boundary

constant-head boundary—the conceptual representation of a natural feature such as a lake or river that effectively fully penetrates the aquifer and prevents water-level change in the aquifer at that location. **D 653, D18**

constant life diagram—*in fatigue*, a plot (usually on rectangular coordinates) of a family of curves each of which is for a single fatigue life, N , relating stress amplitude, S_a , to mean stress, S_m , or maximum stress, S_{max} , or both, to minimum stress, S_{min} . The constant life fatigue diagram is usually derived from a family of $S-N$ curves each of which represents a different stress ratio (A or R) for a 50 % probability of survival. **E 1823, E08**

constant load—See **load**. **D 996, D10**

constant potential—a method of electrically generating x-rays by placing a constant potential electrical source (voltage and current) across the x-ray tube anode and cathode; the ripple component of the constant potential electrical source is typically less than 2.0 %. **E 1316, E07**

constant-rate-of-extension (CRE) type tensile testing machine, n —*in tensile testing*, an apparatus in which the pulling clamp moves at a uniform rate, and the force-measuring mechanism moves a negligible distance with increasing force, less than 0.13 mm (0.005 in.). **D 4845, D13**

constant-rate-of-extension tensile type testing machine (CRE), n —a testing machine in which the rate of increase of specimen length is uniform with time. **D 5684, D13**

constant-rate-of-extension type tensile testing machine (CRE), n —a testing machine in which the rate of increase of specimen length is uniform with time. **D 123, D13**

constant-rate-of-extension type tensile testing machine (CRE), n —*in tensile testing*, an apparatus in which the pulling clamp moves at a uniform rate, and the force-measuring mechanism moves a negligible distance with increasing force, less than 0.13 mm (0.005 in.). **D 123, D13**

constant-rate-of-extension type tensile testing machine (CRE), n —*in tensile testing*, an apparatus in which the pulling clamp moves at a uniform rate, and the force-measuring mechanism moves a negligible distance with increasing force, less than 0.13 mm (0.005 in.). **D 4849, D13**

constant-rate-of-loading (CRL) type tensile testing machine, n —*in testing tensile*, an apparatus in which the rate of increase of the force is uniform with time after the first 3 s and the specimen is free to elongate, this elongation being dependent on the extension characteristics of the specimen at any applied force. **D 4845, D13**

constant-rate-of-load tensile testing machine (CRL), n —*in tensile testing*, an apparatus in which the rate of increase of the force is uniform with time after the first 3 s and the specimen is free to elongate, this elongation dependent on the extension characteristics of the specimen at any applied force. **D 123, D13**

constant-rate-of-load tensile testing machine (CRL), n —a testing machine in which the rate of increase of the load being applied to the specimen is uniform with time after the first 3 s. **D 4439, D35**

constant-rate-of-load tensile testing machine (CRL), n —*in tensile testing*, an apparatus in which the rate of increase of the force is uniform with time after the first 3 s and the specimen is free to elongate, this elongation dependent on the extension characteristics of the specimen at any applied force. **D 4849, D13**

constant-rate-of-traverse (CRT) type tensile testing machine, n —*in tensile testing*, an apparatus in which the pulling clamp moves at a uniform rate and the force is applied through the other clamp, which moves appreciably to actuate a force-measuring mechanism, producing a rate of increase of force or extension that is usually not constant and is dependent on the extension characteristics of the specimen. **D 4845, D13**

constant-rate-of-traverse tensile testing machine (CR), n —a testing machine in which the pulling clamp moves at a uniform rate and the force is applied through the other clamp which moves appreciably to actuate a force-measuring mechanism, producing a

rate of increase of force or extension that is usually not constant and is dependent upon the extension characteristics of the specimen. **D 4849, D13**

constant-rate-of-traverse tensile testing machine (CRT), n —*in tensile testing*, an apparatus in which the pulling clamp moves at a uniform rate and the force is applied through the other clamp which moves appreciably to actuate a weighing mechanism, so that the rate of increase of force or extension that is usually not constant and is dependent upon the extension characteristics of the specimen. **D 123, D13**

constant-temperature stability (CTS) value, n —the maximum temperature at which a chemical compound or mixture may be held for a 2-h period under the conditions of the test without exhibiting a measurable exothermic reaction. **E 1445, E27**

constant velocity transport, n —a mechanism which feeds the paper through the printer at a steady rate. (See **CVT**.) **F 1457, F05**

constant weight—the condition of a substance in which all volatile components have been vaporized, and repeated exposure to a specified temperature, for any period of time, causes no change in weight. **C 896, C04**

constituent, n —an element, component, or ingredient of the population. **D 5681, D34**

constituent—a phase, or combination of phases, which occurs in a characteristic configuration in an alloy micro-structure. **E 7, E04**

constitutional diagram—graphical representation of the compositions, temperatures, pressures or combinations thereof at which the heterogeneous equilibria of an alloy system occur; also called "phase diagram," or "equilibrium diagram." **E 7, E04**

constitutional diagram—graphical representation of the compositions, temperatures, pressures, or combinations thereof at which the heterogeneous equilibria of a system occur. **E 1142, E37**

constitutive equation—force deformation function for a particular material. (ISRM) **D 653, D18**

constraint, n —any restriction to the deformation of a body. **E 6, E28**

construction—an obstruction in the bore of a clinical thermometer which permits the passage of mercury from the bulb when the bulb is heated, but which restricts its passage back to the bulb when heat is removed. **E 344, E20**

construction resistance—the increase in resistance arising from a change in current density distribution. In electric contacts it is that portion of contact resistance resulting from the convergence of current into the a-spots. **B 542, B02**

construct, n —a complete implant configuration attached to and including the spine, pelvis, ribs or substitute material as intended for surgical use. **F 1582, F04**

construction—details of arrangement or thickness or both, of veneers and other components used in the fabrication of plywood.

all-veneer construction—plywood in which all plies are veneer. Ordinarily no single ply of veneer will exceed $\frac{5}{16}$ in. (7.9 mm) in thickness.

balanced construction—a construction such that the forces induced by uniformly distributed changes in moisture content will not cause warpage.

composite construction—a panel assembly consisting of veneers and other wood-based materials. Normally the non-veneer component is identified in describing the construction.

lumber core construction—plywood in which the center ply or core is of lumber rather than of veneer. Ordinarily cores that are $\frac{3}{8}$ in. (9.5 mm) or greater in thickness will be of lumber.

symmetrical construction—plywood panels in which the plies on one side of the panel center line are essentially equal in thickness, grain direction, properties, and arrangement to those on the other side of the center line. **D 1038, D07**

constructional units, n —*in pile floor covering*, the needles, pitch, rows, shot, etc. into which the warp and filling yarns are commonly grouped. **D 123, D13**

construction contingency—the funds added to estimated and known costs in case of cost overruns during construction. **E 631, E06**

construction contingency, *n*—the funds added to estimated and known costs in case of cost overruns during construction.

E 833, E06

construction documents—materials that convey the physical, aesthetic, technical, performance, and administrative requirements necessary to initiate a contract for construction of the proposed project.

E 631, E06

construction documents, *n*—materials that convey the physical, aesthetic, technical, performance, and administrative requirements necessary to initiate a contract for construction of the proposed project.

E 833, E06

construction joint, *n*—*in building construction*, a formed or assembled joint at a predetermined location where two successive placements (“lifts”) of concrete meet.

C 717, C24

construction joint—See **joints**.

E 631, E06

construction joint—in the construction of members intended to be continuous, a predetermined, intentionally created discontinuity between or within constructions and having the ends of the discontinuous members fastened to each other to provide structural continuity.

E 631, E06

construction methods in permafrost—special procedures of design and construction that are required when engineering works are undertaken in areas of permafrost.

D 7099, D18

constructor, *n*—*in pipe laying*, the party that furnishes the work and materials for placement and installation.

C 1154, C17

constructor, *n*—*for pipe laying*, party that furnishes the work and materials for placement and installation.

D 2946, C17

consumed—the loss of identity of an item by incorporation into a higher assembly or through use and ultimate disappearance as a known item or substance.

E 2135, E53

consumer care, *n*—*of consumer textile products*, cleaning and maintenance procedures as customarily undertaken by the ultimate user.

D 123, D13

consumer care, *n*—*of consumer textile products*, cleaning and maintenance procedures as customarily undertaken by the ultimate user.

D 3136, D13

consumer panel, *n*—a group that is representative of the potential user population and that does not have technical knowledge of the products to be tested.

E 253, E18

consumer’s risk (β), *n*—the probability of accepting a lot when the process average is at the limiting quality level.

D 123, D13

consumer’s risk—the probability that a lot whose percentage defective is equal to the LTPD will be accepted by the plan.

E 456, E11

consumer textile product, *n*—a textile product intended to satisfy human wants and needs.

D 123, D13

consumer textile product, *n*—a textile item intended to satisfy human wants and needs.

D 3136, D13

consumption—(1) the process of incorporating material into an end item or otherwise using it in the performance of a documented business objective. (2) The measurement of actual use of consumable items against planned use.

E 2135, E53

contact, *n*—a) a generic term that applies to a device or part of a device and that has the capability of completing or interrupting the flow of an electrical signal in a circuit. b) may also be used with modifiers such as: electrical contact, arcing contact, noble metal contact, separable contact, etc.

B 542, B02

contact, *adj*—contact area, the part of an electrical device that is actually touching and where the electrical signal is expected to pass. Contact member, one of the electrical path parts that can make or break an electrical path.

B 542, B02

contact adhesive, *n*—adhesive that is applied to both adherends and after a specified open assembly time will instantly develop a bond when a firm but not sustained pressure is applied.

D 907, D14

contact adhesive, *n*—an adhesive that is apparently dry to the touch and that will adhere to itself instantaneously upon contact; also called contact bond adhesive or dry bond adhesive (D 907, D14).

D 996, D10

contact adhesive—see **adhesive**.

D 996, D10

contact adhesive—See **adhesive**, **contact**.

E 631, E06

contact adhesive—See **adhesive**, **contact**.

E 1749, E06

contact angle, *n*—*for paper wettability*, the angle formed by a paper substrate and the tangent to the surface of the liquid drop at the point of contact with the substrate when measured under specified conditions.

D 1968, D06

contact, **arcing**—an electrical contact whose primary mode of wearout occurs on the contacting surfaces as a result of an arc formed between separating or closing contact pairs.

B 542, B02

contact area, *n*—*in an unbonded specimen*, that area in contact with a high-modulus fixture, and through which applied forces pass; may or may not be constant, and if lubricated, may deliberately be allowed to change.

D 1566, D11

contact batch operation—an adsorption process in which an adsorbent is dispersed in a fluid to be treated and then separated when practical equilibrium is attained.

D 2652, D28

contact bond adhesive, *n*—Synonym for **contact adhesive**.

D 907, D14

contact bounce—the unwanted operation of contacts immediately following intentional operation.

B 542, B02

contact bounce—intermittent contact opening and contact closure that may occur after switch operation.

F 2112, F01

contact chatter—the unwanted operation of contacts resulting from external forces operating on them. For example, vibration may cause contacts to open and close or “chatter.”

B 542, B02

contact-closing force—the transient force between contacts during closure. At the first instant of closure this force is zero. It then builds up to a maximum value dependent on the forces and inertia of the contact system and finally stabilizes at the static contact force.

B 542, B02

contact closure—the event at which a specified resistance is achieved on a membrane switch.

F 2112, F01

contact, composite—a contact made of two or more distinct materials or alloys bonded to each other. For example, a contact with a facing of a precious metal bonded to a base-metal backing.

B 542, B02

contact force—the force to close, maintain, or open contacts. See also **insertion force**, **withdrawal force**, and **normal force**.

B 542, B02

contact force—the force at contact closure.

F 2112, F01

contact grouting—see **backpack grouting**.

D 653, D18

contact head—electrode assembly used to clamp and support a part to facilitate passage of electrical current through the part for circular magnetization.

E 1316, E07

contact herbicide—a chemical that kills those plant parts with which it comes into contact.

E 609, E35

contact inserts, *n*—metallic conductor assemblies which, when installed in connector bodies, provide connections between two parts of an electrical circuit. Plug connectors will contain projecting prong contacts, while jack connectors will contain recessed socket or receptacle contacts.

E 344, E20

contact length—the difference between the projected length, L_p , and the sum of $L_t + L_s$ or $L_c = L_p - (L_t + L_s)$.

F 1107, F27

contact length, l_c —the difference between the projected length, L_p and the sum of l_T plus l_s or $l_c = L_p - (l_T + l_s)$.

F 472, F27

contact noise—a varying voltage across a pair of electric contacts due to conditions at their interface.

B 542, B02

contact, non-arcing—mating electrical contact surfaces that do not experience wearout due to arc erosion that is opposite of arcing contacts.

B 542, B02

contact pad—replaceable metal pad, usually of copper braid, placed on electrodes to give good electrical contact, thereby preventing damage, such as arc strikes, to the part under test.

E 1316, E07

contact, pitted—a contact that has numerous discrete hollows in its surface.

B 542, B02

contact plating—deposition of a metal by the use of an internal source of current by immersion of the work in solution in contact with another metal.

B 374, B08

contact potential

contact potential—the potential difference at the junction of two dissimilar substances. **B 374, B08**

contact pressure—the force per unit area of physical contact between two contacts. This term is frequently but improperly used when contact force is meant. The area of physical contact is usually difficult to determine and quite different from the apparent area of contact. **B 542, B02**

contact pressure—an imprecise term denoting the minimum amount of pressure necessary to ensure an essentially void-free area between two mating surfaces. **E 631, E06**

contact pressure—an imprecise term denoting the minimum amount of pressure necessary to ensure an essentially void-free area between two mating surfaces. **E 1749, E06**

contact pressure molding, n—a method of molding or laminating in which the pressure, usually less than 70 kPa (10 psi), is only slightly more than necessary to hold the materials together during the molding operation. **D 883, D20**

contact pressure, p (FL⁻²)—the unit of pressure that acts at the surface of contact between a structure and the underlying soil or rock mass. **D 653, D18**

contact resistance—the resistance to current flow offered by the contact interface, comprising the sum of the constriction resistance plus the film resistance.

NOTE—In a practical measurement, correction must be made for bulk resistance consisting of contact material, lead wires, etc.

B 542, B02

contact resistance, n—the resistance to current flow between two touching bodies, consisting of constriction resistance and film resistance. **B 899, B02**

contact resistance probe, n—an apparatus for determining electrical contact resistance characteristics of a metal surface. **B 899, B02**

contact(s), butting—a type of contacts in which the direction of the motion of the moving contact is perpendicular to the contact faces. The contacts close and open with no appreciable sliding or rolling action. **B 542, B02**

contact scanner, n—a bar code reader that requires physical contact between the code medium and the scanner. **F 1294, F05**

contact, screw—a contact fabricated with an external thread for attachment to a support member or for adjustment. **B 542, B02**

contact, sliding—an electric contact which is expected to do its primary function during sliding. **B 542, B02**

contact, solid—a monolithic contact member. **B 542, B02**

contact, spring—a contact system in which one piece of material is used for both the driving spring and electric contact. **B 542, B02**

contact, static—an electric junction designed for infrequent separation and connection. **B 542, B02**

contact stress—the tensile stress component imposed at a glass surface immediately surrounding the contact area between the glass surface and an object generating a locally applied force. **C 162, C14**

contact surface area—the product of the average width times the contact length expressed quantitatively as follows:

$$A_c = \left[\frac{(b_H + 2b_M + b_V)}{4} \right] [L_c]$$

F 472, F27

contact surface area—the product of the average width times the contact length expressed quantitatively as follows:

$$A_c = \frac{b_h + 2b_m + b_v}{4} (L_c)$$

F 1107, F27

contacts, wiping—contacts that have some sliding motion during opening or closing. **B 542, B02**

contact testing—a technique in which the search unit makes contact directly with the test piece through a thin layer of couplant. **E 1316, E07**

contact thermometer, n—an instrument that is adapted for measur-

ing temperature by means of thermal conductivity by determining temperature at the moment when negligible thermal energy flows between the thermometer and the object of measurement. **E 344, E20**

contact time, n—in an intermittent contact test, the duration during each cycle that the challenge side chamber of the permeation cell is filled with the test chemical. **F 1494, F23**

contact trip—See **bottom trip**. **F 592, F16**

contact wipe—relative tangential motion between contacting surfaces that occurs during the normal course of contact closure. **B 542, B02**

container, n—a receptacle designed to hold a material, or to give integrity to the material. **D 123, D13**

container—a nonspecific term for a receptacle capable of closure (See also: **bag, barrel, basket, box, can, carton, crate, cylinder, drum, envelope, hamper, pail, tube**.)

body, n—in packaging, the principal part of a container, usually the largest part in one piece containing the sides.

bottle, n—a rigid or semirigid container typically of glass or plastic, having a comparatively narrow neck or mouth, and usually no handle (*Webster*).

case, n—a nonspecific term for a shipping container. In domestic commerce, case usually refers to a box made from corrugated or solid fiberboard wood, or metal.

cover, n—in packaging, the top or bottom, or both of a container, usually the part that closes the filling and dispensing opening. It is often called a cap when used with fiberboard containers. (See also **shroud**.)

cylinder, n—a rigid cylindrical metal container designed as a portable vessel for the storage and transportation of compressed gases. Generally equipped with protected valve closure and suitable pressure-relief safety device.

die-cut, adj—(1) a method of preparation in which a part or container has been cut, slotted, and scored or any combination of these by custom-made dies; (2) *n*, a part so made.

expendable container—a container for shipping or storage, or both, intended primarily for a single trip.

face, n—in packaging, any one of the plane surfaces of a container.

fast pack container—a standard size, reusable container with foam cushion inserts.

fiberboard container—a box, package, or drum made of fiberboard. When the term box is used for classification purposes, the structure must comply with all requirements of the carrier rules.

flap, n—one of the closing members of a fiberboard container.

glass container—any glass receptacle capable of holding a seal or closure for retention of contents.

intermodal container—a reusable shipping container manufactured to standard dimensions intended to unitize cargo or freight for shipping by one or more modes of transportation without the need for intermediate handling of the contents.

jar, n—a widemouthed container made typically of glass, plastic, or earthenware.

jug, n—a large, deep, usually glass, plastic, or earthenware container with a narrow mouth and a handle.

manufacturer's joint—that part of a fiberboard container where the ends of the box blank are joined together in the manufacturing process by taping, stitching, or gluing.

modular container—a family of containers designed to be assembled into a unit load.

returnable container—a shipping container of any material designed to be used for more than one shipment.

reusable container—a shipping and storage container designed for reuse without impairment of its protective function.

seam, n (when referring to a fiberboard container)—the lines

- of junction created by any free edge of a container flap or wall where it abuts or overlaps another portion of the **container** (except the **manufacturer's joint**).
- shipping container**—a container that is sufficiently strong to be used in commerce for **packing**, storing, and shipping commodities. (See also **barrel**, **crate**, **drum**.) **D 996**, D10
- container**, *n*—a receptacle designed to hold a material, or to give integrity to the material. **D 4849**, D13
- container**, *n*—a usually portable device in which material is stored, transported, treated, disposed of, or otherwise handled. **E 631**, E06
- containerboard**—any **paperboard** made specifically for the manufacture of **corrugated** and **solid fiberboard shipping containers**. Basis weight is expressed in pounds per 1000 ft² (or grams per square metre). It is customarily shipped in rolls.
- cylinder kraft—containerboard** made from kraft pulp on a cylinder machine.
- Fourdrinier kraft—containerboard** made from kraft pulp on a Fourdrinier machine, basically of single-ply formation, although possibly with supplementary second-ply, with less prominent grain direction. The sheet is formed on a traveling endless-wire screen which may also be vibrated to obtain more random orientation of fibers.
- solid fiberboard**—a solid board made by laminating two or more plies of **containerboard**. **D 996**, D10
- containerization**, *n*—(1) a shipping method in which material (such as merchandise) is packaged together in one **container**. (2) the use of transport **containers** to unitize cargo for transportation, supply, and storage. **D 996**, D10
- containment**, *n*—a physical barrier used to limit the spread of leaded dust and debris from a designated work area. **E 1605**, E06
- containment material**—in a solar energy system, a material that encloses the heat-transfer fluid or is in contact with the heat transfer or heat storage material, or both. **E 772**, E44
- containment mode**—placement of a boom to prevent free movement of a floating substance. **F 818**, F20
- contaminant**—an undesirable substance not normally present in water or soil. **D 653**, D18
- contaminant**, *n*—a material added by human or natural activities which may, in sufficient concentrations, render the atmosphere unacceptable. **D 1356**, D22
- contaminant**, *n*—a general term applicable to various extraneous and undesirable materials in pulp or other papermaking raw materials. **D 1968**, D06
- contaminant**, *n*—any substance potentially hazardous to human health or the environment and present in the environment above background concentration. **D 5681**, D34
- contaminant**—any foreign substance present which will adversely affect performance or quality. **D 6161**, D19
- contaminant**—any foreign substance present on the test surface or in the inspection materials which will adversely affect the performance of liquid penetrant materials. **E 1316**, E07
- contaminant**, *n*—a physical, chemical, biological, or radiological substance or matter that has an adverse effect on air, water, or soil. **E 2114**, E06
- contaminant**, *n*—any substance between and not a part of either of the two surfaces; *contaminant*, *contaminating*, *contamination*. **F 1646**, F13
- contaminant**, *n*—unwanted molecular or particulate matter that could adversely affect or degrade the operation, life, or reliability of the systems or components upon which it resides. **G 126**, G04
- contaminants**, *n*—*for asbestos*, any foreign matter (other than associated minerals and fines) in a sample of asbestos fiber. **D 2946**, C17
- contaminants**—all adventitious substances or microorganisms present in raw materials, bulk drugs, or final products. **E 1705**, E48
- contaminant unit**, *n*—the largest particle size that contains the contaminant of interest. **D 5681**, D34
- contaminate**, *v*—to make unfit for use, either intentionally or unintentionally, by introduction of a contaminant. **G 126**, G04
- contaminated public wells**—public wells used for drinking water that have been designated by a government entity as contaminated by toxic substances (for example, chlorinated solvents), or as having water unsafe to drink without treatment. **D 5681**, D34
- contamination**, *n*—*for coated inflatable restraint fabrics*, the presence of non-coating material in the coated layer. **D 6799**, D13
- contamination**, *n*—the undesired introduction of impurities of a chemical or microbiological nature, or of foreign matter, into or onto a raw material, intermediate, API (active pharmaceutical ingredient), or dosage form during production, sampling, packaging, or repackaging, storage, or transport. **E 2363**, E55
- contamination**—the presence of a substance not intentionally incorporated in a product. **F 412**, F17
- contamination**, *n*—any undesirable solid or liquid material that rests upon a surface or exists between two mating surfaces; *contaminant*, *contaminating*. **F 1646**, F13
- contamination**, *n*—(1) the amount of unwanted molecular or particulate matter in a system; (2) the process or condition of being contaminated. **G 126**, G04
- contemporary permafrost**—(1) newly formed permafrost in an area where surface temperatures have fallen below 0°C (32°F); (2) permafrost that is in thermal equilibrium with the existing mean annual surface or sea-bottom temperature and the geothermal heat flux. **D 7099**, D18
- context effect**, *n*—effect upon the perception of a stimulus arising from its interrelationship with other stimuli in a presentation set. **E 253**, E18
- contingency**, *n*—*in construction design planning and estimating*, an allocation of money that is not planned to be spent and is held for unplanned events. **E 833**, E06
- contingency plan**—document setting out an organized, planned, and coordinated course of action to be followed in case of an emergency, such as a fire or explosion, or a release of hazardous waste or hazardous waste constituents from a treatment, storage, or disposal facility that could threaten human health or the environment. **E 631**, E06
- continuing calibration blank**—a solution containing no analyte which is used to verify blank response and freedom from carryover. **E 1605**, E06
- continuing calibration blank (CCB)**—a standard solution that has no analyte and is used to verify blank response and freedom from carryover. **E 631**, E06
- continuing calibration verification**—a solution (or set of solutions) of known analyte concentration used to verify freedom from excessive instrumental drift; the concentration is to cover the range of a linear calibration curve. **E 1605**, E06
- continuing calibration verification (CCV)**—a standard solution (or set of solutions) used to verify freedom from excessive instrument drift; the concentration is to be near the mid-range of a linear curve. **E 631**, E06
- continuity of coating**—the degree to which a porcelain enamel or ceramic coating is free of defects, such as bare spots, boiling, blisters or copperheads, that could reduce its protective properties. **C 286**, B08
NOTE—See Test Method C 743.
- continuous** (as related to data acquisition), *adj*—conducted at data collection intervals of 5 s or less. **E 176**, E05
- continuous** (as related to data acquisition), *adj*—conducted at data collection intervals of 6 s or less. **E 176**, E05
- continuous bar code**, *n*—a bar code symbology where all spaces within the symbol are parts of characters and no inter-character spaces are present. **F 1294**, F05
- continuous cast drawing stock**—the as-rolled section, normally round, produced by a continuous casting and rolling process. **B 354**, B01
- continuous cleaning (coating)**—a term describing a type of porcelain

continuous cleaning (coating)

enamel designed to provide the continuous removal, at normal use temperatures, of food soils accumulated on the interior surfaces of ovens. **C 286, B08**

continuous coating, n—of metallic coated steel products, the process of uninterrupted passage of long lengths of steel products, usually steel sheet or wire, through the various processing steps such as cleaning, annealing, and coating. **A 902, A05**

continuous-conveyance furnace, n—a heating device through which steel objects are intentionally moved at a constant rate during the thermal processing cycle. **A 941, A01**

continuous deionization—a deionization process that does not require regular interruptions in service to discharge ionic materials collected from the water being processed. **D 6161, D19**

continuous element, n—a configured element formed continuously along a length of monofilament. **D 123, D13**

continuous element, n—a configured element formed continuously along a length of monofilament. (Compare **separate element**.) **D 2050, D13**

continuous element zipper, n—in *zippers*, a zipper consisting of two continuously formed elements, each attached to one of the opposing edges of two tapes, which are engaged and disengaged by the movement of a slider. (Compare **separate element zipper**.) **D 123, D13**

continuous element zipper, n—a zipper consisting of two continuously formed elements, each attached to one of the opposing edges of two tapes, which are engaged and disengaged by the movement of a slider. (Compare **separate element zipper**.) **D 2050, D13**

continuous emission—see **emission, continuous**. **E 1316, E07**

continuous fermentation—nonstop flow of nutrients into a fermenting vessel, with the simultaneous outflow of products, organisms, and by-products. **E 1705, E48**

continuous fiber-reinforced ceramic matrix composite, n—a ceramic matrix composite in which the reinforcing phase(s) consists of continuous filaments, fibers, yarn, braid, or knitted or woven fabrics. **C 1145, C28**

continuous filament—a single glass fiber of sufficiently small diameter to be flexible enough for textile uses and of great or indefinite length. **C 162, C14**

continuous filament yarn, n—a yarn made of filaments that extend substantially throughout the length of the yarn. **D 123, D13**

continuous filament yarn, n—two or more continuous filaments twisted into a single fiber bundle. **D 3878, D30**

continuous filament yarn, n—a yarn made of filaments that extend substantially throughout the length of the yarn. **D 7018, D13**

continuous form, n—a quantity of paper made up of numerous connected individual perforated sheets, folded to form a pack. **D 1968, D06**

continuous furnace—synonymous with **melter**. **C 162, C14**

continuous furnace—a furnace into which ware is fed continuously and through which it progresses during firing. **C 286, B08**

continuous jet, n—See **liquid jet**. **G 40, G02**

continuously reinforced concrete pavement (CRCP), n—Portland cement concrete pavement with sufficient longitudinal steel reinforcement to control transverse crack spacings and openings in lieu of transverse contraction joints for accommodating concrete volume changes and load transfer. **E 867, E17**

continuously reinforced concrete pavement (CRCP), n—Portland cement concrete pavement with sufficient longitudinal steel reinforcement to control transverse crack spacings and openings in lieu of transverse contraction joints for accommodating concrete volume changes and load transfer. **E 1778, E17**

continuous method—with relation to magnetic particle inspection: a method wherein the indicating medium is applied while the magnetizing force is present. **E 1316, E07**

continuous mixer—a mixer into which the ingredients of the mixture are fed without stopping, and from which the mixed product is discharged in a continuous stream. **D 653, D18**

continuous moving bed—an adsorption process characterized by

flow of a fluid through a continuously moving bed of granular adsorbent with continuous withdrawal of spent adsorbent and continuous addition of reprocessed or virgin adsorbent. **D 2652, D28**

continuous partial discharges (continuous corona), n—discharges that recur at rather regular intervals; for example on approximately every cycle of an alternating voltage or at least once per minute for an applied direct voltage. **D 1711, D09**

continuous permafrost—permafrost occurring everywhere beneath the exposed land surface throughout a geographic region, with the exception of widely scattered sites, such as newly-deposited unconsolidated sediments, where the climate has just begun to impose its influence on the ground thermal regime and will cause the formation of continuous permafrost. **D 7099, D18**

continuous permafrost zone—a major subdivision of a permafrost region, in which permafrost occurs everywhere beneath the land surface, with the possible exception of widely scattered sites; both in North American (GPRGIT) and in Russian (Permafrost Map of the USSR) usage: >80 % of area underlain by permafrost. **D 7099, D18**

continuous phase—the phase forming the matrix or background in which other phases may be dispersed as isolated units. **E 7, E04**

continuous sampling—See **sampling**. **D 1356, D22**

continuous sintering, v—presintering, or sintering, in such manner that the objects are advanced through the furnace at a fixed rate by manual or mechanical means. Synonymous with **stoking**. **B 243, B09**

continuous smelter—a type of smelter into which the raw mix is fed continuously and from which the molten product is discharged continuously. **C 286, B08**

continuous spectrum (X-rays)—the polychromatic radiation given off by the target of an X-ray tube, containing all wavelengths above a certain minimum value called the short wave length limit. **E 7, E04**

continuous variate, n—a variate that is a measurement based on a scale that is assumed to be continuous. **D 123, D13**

continuous waste—a drain connecting two or more plumbing fixtures or components of plumbing fixtures to a common trap. **F 412, F17**

continuous wave—a constant flow of ultrasonic waves, as opposed to pulsed. **E 1316, E07**

continuum—the smooth distribution of energy deposited in a gamma detector arising from partial energy absorption from Compton scattering or other processes (for example, Bremsstrahlung). See **Compton scattering**. **E 170, E10**

contract furniture, n—furniture manufactured for use in non-household applications. **D 123, D13**

contract furniture, n—furniture manufactured for use in non-household applications. **D 7023, D13**

contraction—linear strain associated with a decrease in length. (ISRM) **D 653, D18**

contraction chamber, n—an enlargement of the capillary, that will appear below the main scale or between the main scale and the auxiliary scale, which serves to reduce its length or to prevent contraction of the liquid column into the bulb. **E 344, E20**

contract manufacturer, n—a manufacturer who performs some aspect of manufacturing on behalf of another entity. **E 2363, E55**

contractor—see **lead abatement contractor**. **E 631, E06**

contra lateral, adj—located, occurring, or acting on the opposite side of the body. **F 1646, F13**

contrast, n—*visual*, the degree of dissimilarity in appearance of two parts of a field of view seen simultaneously or successively. **E 253, E18**

contrast, n—(1) *objective*, the degree of dissimilarity of a measured quantity such as luminance of two areas, expressed as a number computed by a specified formula.

(2) *subjective*, the degree of dissimilarity in appearance of two parts of a field of view seen simultaneously or successively.

E 284, E12

contrast, *n*—a linear function of the observations for which the sum of the coefficients is zero. E 456, E11

contrast—the difference in visibility (brightness or coloration) between an indication and the background. E 1316, E07

contrast—the difference between the amount of light reflected or transmitted by an object and by the background within the field of view. E 1316, E07

contrast, *n*—a linear function of the observations for which the sum of the coefficients is zero.

NOTE—With observations Y_1, Y_2, \dots, Y_n , the linear function $a_1Y_1 + a_2Y_2 + \dots + a_nY_n$ is a contrast if, and only if $\sum a_i = 0$, where the a_i values are called the contrast coefficients. E 1325, E11

contrast—(1) in optical character recognition, the difference between color or shading of the printed material on a document and the background on which it is printed.

(2) See **print contrast ratio**. F 149, F05

contrast, *n*—the difference in reflectance between dark bars and light spaces of a bar code symbol. F 1294, F05

contrast agent—a material added to a component to enhance details by selective absorption of the incident radiation. E 1316, E07

contrast analysis, *n*—a technique for estimating the parameters of a model and making hypothesis tests on preselected linear combinations of the treatments (contrasts). E 456, E11

contrast analysis, *n*—a technique for estimating the parameters of a model and making hypothesis tests on preselected linear combinations of the treatments (contrasts).

NOTE—Contrast analysis involves a systematic tabulation and analysis format usable for both simple and complex designs. When any set of orthogonal contrasts is used, the procedure, as in the example, is straightforward. When terms are not orthogonal, the orthogonalization process to adjust for the common element in nonorthogonal contrast is also systematic and can be programmed. E 1325, E11

contrast effect, *n*—special case of context effect in which the perceived degree of difference between stimuli is exaggerated as a result of their interrelationship. E 253, E18

contrast enhancement (electron optics)—an improvement in electron image contrast by the use of an objective aperture diaphragm, shadow casting, or other means. E 7, E04

contrast gloss, *n*—see **luster**. E 284, E12

contrast perception—the ability to differentiate various components of the object structure by different intensity levels in the image. E 7, E04

contrast, photographic—the word contrast has been used in many different senses in connection with various photographic characteristics; there are different types of photographic contrast and different methods of measuring it. It is frequently used to designate the magnitude of the density difference resulting from a given exposure difference. (For another use, see **gamma**.) E 7, E04

contrast ratio—the ratio of the reflectance of a coating over black backing to its reflectance over a backing of reflectance of 0.80 (80 percent). C 286, B08

contrast ratio, *n*—ratio of the reflectance of a dry paint film over a black substrate of 5 % or less reflectance, to the reflectance of the same paint, equivalently applied and dried, over a substrate of 80 % reflectance. D 16, D01

contrast ratio, *n*—see the preferred terms **contrast** or **opacity**. E 284, E12

contrast sensitivity—a measure of the minimum percentage change in an object which produces a perceptible density/brightness change in the radiological image. E 1316, E07

contrast stretch—a function that operates on the greyscale values in an image to increase or decrease image contrast. E 1316, E07

control—(evaluation), *n*—an evaluation to check, test, or verify; (authority): the act of guiding, directing, or managing; (stability): a state of process in which the variability is attributable to a constant system of chance causes. E 456, E11

control, *n*—material of established origin that is used to evaluate the performance of a test or comparison. E 1732, E30

control—a standard production-inked ribbon (film or fabric), carbon paper, manifold sets, etc. that has known values in normal use. (F 153) F 221, F05

control, *n*—in weathering, the term control has three current widespread uses:

1. A material which is of similar composition and construction to the test material used for comparison, exposed at the same time.

G 113, G03

control access system—a device, barrier or mechanism that prohibits unauthorized activation of a ride or device control system.

F 747, F24

control analyses, *n*—the determination of specific parameters used as criteria for proper operation of a system. D 1129, D19

control block—a group of devices having a common piping and control system. D 6161, D19

control chart factor, *n*—a factor, usually varying with sample size, to convert specified statistics or parameters into a central line value or control limit appropriate to the control chart. E 456, E11

control chart method, *n*—the method of using control charts to determine whether or not processes are in a stable state.

E 456, E11

control coupon (also witness coupon), *n*—(1) a coupon made from the same material and prepared in exactly the same way as the test coupons which is used to verify the validity of the method or part thereof (G 120, G 131); (2) a coupon made from the same material as the test coupons but in this test method is not coated with the contaminant (G 121). G 126, G04

control echo—reference signal from a constant reflecting surface, such as a back reflection. E 1316, E07

control (expansion-contraction) joint, *n*—a designed separation in the system materials that allows for movement caused by expansion or contraction of the system. The construction of the separation is accomplished by one of the following methods: (1) manufactured devices suitable for this application, or (2) by field fabrication of suitable materials. C 11, C11

control joint, *n*—in building construction, a formed, sawed, tooled, or assembled joint acting to regulate the location and degree of cracking and separation resulting from the dimensional change of different elements of a structure. C 717, C24

control joint—See **joint**. E 631, E06

control joint—in concrete, concrete masonry, stucco, or coating systems; a formed, sawed, or assembled joint acting to regulate the location of cracking, separation, and distress resulting from dimensional or positional change. E 631, E06

controlled blasting—includes all forms of blasting designed to preserve the integrity of the remaining rocks, that is, smooth blasting or pre-splitting. (ISRM) D 653, D18

controlled cooling, *n*—cooling a steel object from an elevated temperature in a predetermined manner to avoid hardening, cracking, or internal damage, or to produce a desired microstructure or mechanical properties. A 941, A01

controlled flow—a characteristic of a resin system with elevated viscosity during cure. E 631, E06

controlled flow—a characteristic of a resin system with elevated viscosity during cure. E 1749, E06

controlled low strength material (CLSM)—flowable low compressive strength cementitious material used in the pipe zone as a bedding material. Also referred to as controlled density fill, flowable fill, slurry, or lean concrete. C 896, C04

controlled low-strength material (CLSM), *n*—a flowable fill conforming to ACI 229 R. E 2201, E50

controlled-pore filter—See **filter**. D 1356, D22

controlled-rate thermal analysis, (CRTA), *n*—a family of techniques that monitors the temperature versus time profile needed to maintain a chosen, fixed rate of change of a property of a substance. (ICTAC)

NOTE—Compared to controlled-temperature experiments, where the reaction rate tends to increase exponentially and the rate can become limited by heat or mass transfer, CRTA experiments are more likely to involve the chemical reaction as the limiting step. This technique can also improve the resolution of multiple reactions. For example, in controlled rate experiments, power to the furnace is controlled to ensure a fixed rate of mass loss (or gain). **E 473, E37**

controlled-strain test—a test in which the load is so applied that a controlled rate of strain results. **D 653, D18**

controlled-stress test—a test in which the stress to which a specimen is subjected is applied at a controlled rate. **D 653, D18**

controlled-temperature program, *n*—the temperature history experienced by a sample during the course of a thermal analysis experiment.

NOTE—In contrast to controlled-rate experiments, power to the furnace is controlled to ensure a fixed rate of temperature change for controlled-temperature experiments. The program may include heating or cooling segments in which the temperature is changed at a fixed rate, isothermal segments in which time becomes the explicit independent variable, or any sequence of these individual segments. If the atmosphere (or vacuum) around the sample is changed by some external action (depending on the independent variable only—temperature or time) during the course of the experiment, that too becomes part of the controlled-temperature program. **E 473, E37**

control limit—limits on a control chart which are used as criteria for signaling the need for action, or for judging whether a set of data does or does not indicate a state of statistical control. **E 456, F1789, F16**

control limits, *n*—predetermined ranges based on the variability of past observations between which the instrument data for a test must fall to be considered valid. **D 123, D13**

control limits, *n*—limits on a control chart that are used as criteria for signaling the need for action or for judging whether a set of data does or does not indicate a state of statistical control. **D 4175, D02**

control limits, *n*—predetermined ranges based on the variability of past observations between which the instrument data for a test must fall to be considered valid. **D 7139, D13**

control limits, *n*—limits on a control chart which are used as criteria for signaling the need for action, or for judging whether a set of data does or does not indicate a state of statistical control. **E 456, E11**

control plan—written description of a system for controlling fasteners and the processes used in their manufacture. Three distinct phases are used in a control plan, including prototype, pre-launch, and production. **F 1789, F16**

control plate—See **solidmetal-coupon control specimen**. **E 631, E06**

control rinse water—water used for equipment washing and rinsing having a known chemistry. **D 653, D18**

control sediment—a sediment that is essentially free of contaminants and is used routinely to assess the acceptability of a test. **E 943, E47**

control specimen—See **solid metal-coupon control specimen**. **E 631, E06**

control tire, *n*—a reference tire, used in a specified manner throughout a test program. **F 538, F09**

control undercover garment, *n*—a garment having a known history, the performance of which in a specific end-use has been established previously, and which is used as a standard of comparison. **D 123, D13**

control well—well by which the aquifer is stressed, for example, by pumping, injection, or change of head. **D 653, D18**

convection—the transport of heat by fluid flow. **E 772, E44**

convection, forced—convection caused by mechanical forces such as fans and injectors. **E 772, E44**

convection, natural—convection within a fluid, due to density differences caused by temperature differences. **E 772, E44**

convection oven, commercial—equipment for cooking food by forc-

ing hot air over surface of the food using a fan in a closed cavity. See **oven**. **F 1827, F26**

convection tube—a closed single-phase heat transfer device that removes heat from the ground whenever conditions are appropriate to drive the internal convection cell. **D 7099, D18**

conventional blanket, *n*—a blanket woven in either a plain or twill weave that is napped on both sides. **D 123, D13**

conventional blanket, *n*—a blanket woven in either a plain or twill weave that is napped on both sides. **D 7023, D13**

conventional sulfur vulcanizing system, *n*—as applied to natural and isoprene rubbers and butadiene-based synthetic rubbers, a vulcanizing system using a relatively high proportion of sulfur in which the combined sulfur exists predominantly in the polysulfidic cross links chain modifications. **D 1566, D11**

conventional true value of a quantity, *n*—value attributed to a particular quantity and accepted, sometimes by convention, as having an uncertainty appropriate for a given purpose.

NOTE—“Conventional true value” is sometimes called “assigned value”, “best value”, “conventional value”, or “reference value”. “Reference value”, in this sense, should not be confused with “reference value” in the sense of an influence quantity affecting a measuring instrument.

NOTE—Frequently, a number of results of measurements of a quantity is used to establish a conventional true value. **E 456, E11**

convergence—generally refers to a shortening of the distance between the floor and roof of an opening, for example, in the bedded sedimentary rocks of the coal measures where the roof sags and the floor heaves. Can also apply to the convergence of the walls toward each other. (ISRM) **D 653, D18**

convergence, *n*—tendency of a stimulus to be perceived as similar to prior stimulus or stimuli. **E 253, E18**

convergence effect, *n*—special case of context effect in which the perceived degree of difference between stimuli is diminished as a result of their interrelationship. **E 253, E18**

conversion coating—a coating produced by chemical or electrochemical treatment of a metallic surface that gives a superficial layer containing a compound of the metal, for example, chromate coatings on zinc and cadmium, oxide coating on steel. **B 374, B08**

conversion efficiency—the ratio of the actual to theoretical fuel ethanol yield per unit mass of the feedstock. **E 1705, E48**

conversion, hardness—the exchange of a hardness number determined by one method for an equivalent hardness number of a different scale. **E 7, E04**

conversion screen—a device that converts the imaged neutron beam to radiation or light that exposes the radiographic film. **E 1316, E07**

conversion treatment—a chemical or electrochemical process producing a superficial layer containing a compound of the metal. **B 374, B08**

conversion (Y)—product water flow rate divided by feed water flow rate. Also called recovery; given as fraction or decimal. See **recovery**. **D 6161, D19**

converted tire, *n*—a scrap tire that has been processed into a usable commodity other than a tire. **D 5681, D34**

convex head—See **umbrella head**. **F 547, F16**

convex surface—a local convex curvature in the flat surfaces of pultruded plastic parts as measured transversely to their length. **D 3918, D20**

conveyor—a mechanism designed to move racked/unracked dishware through the treatment stages and out to the clean end of conveyor type dishwashing machines. **F 1827, F26**

conveyor oven—equipment that carries the food product on a moving conveyor into and through a heated chamber. The chamber may be heated by gas or electric forced convection, radiants, or quartz tubes. Top and bottom heat may be independently controlled. See **oven**. **F 1827, F26**

convolution—the combination of local measurements of drop size

distribution and number density into equivalent line-of-sight values of drop size distribution and optical extinction. **E 1620**, E29

convoy, *n*—*in tiretesting*, two or more vehicles running at the same time, over the same test course, under the same interdependent conditions. **F 538**, F09

cooking area—See **cooking surface**. **F 1827**, F26

cooking cavity—the volume within equipment. **F 1827**, F26

cooking container—a vessel used to hold the food product that is being heated by the equipment. **F 1827**, F26

cooking energy—energy consumed (Btu or kJ) by the equipment as it is used to cook a specified food product to a specified cooked condition under all cooking-load (see **load**) scenarios, $E_{equipment}$. **F 1827**, F26

cooking energy efficiency—quantity of energy imparted to the specified food product, expressed as a percentage of energy consumed by the equipment during the cooking event, η_{cook} .

$$\eta_{cook} = \frac{E_{food}}{E_{appliance}} \times 100$$

where:

η_{cook} = see *cooking energy efficiency*,
 $E_{equipment}$ = energy into the equipment (see *cooking energy*),
 E_{food} = see energy to food, and
 $= E_{sens} + E_{thaw} + E_{evap}$

where:

E_{sens} = quantity of heat added to food product, that causes their temperature to increase from the starting temperature to the average bulk temperature of a “done” food product,
 $= (W_i) (C_p) (T_f - T_i)$

where:

W_i = initial weight of food product, lb (kg), as specified in the applicable standard test method,
 C_p = specific heat of food product, Btu/lb, °F (kJ/kg, °C), as specified in the applicable standard test methods,
 T_f = final cooked temperature of food product, °F (°C), as specified in the applicable standard test method,
 T_i = initial internal temperature of food product, °F (°C), as specified in the applicable standard test method.

where:

E_{thaw} = latent heat (of fusion) added to the food product, that causes the moisture (in the form of ice) contained in the food product to melt when the temperature of the food product reaches 32°F (0°C) (the additional heat required to melt the ice is not reflected by a change in the temperature of the food product), Btu (kJ),
 $= W_{iw} \times H_f$

where:

W_{iw} = initial weight of water in the food product, lb (kg),
 H_f = heat of fusion, Btu/lb (kJ/kg), and
 $= 144$ Btu/lb (36 kJ/kg) at 32°F (0°C).

where:

E_{evap} = latent heat (of vaporization) added to the food product, that causes some of the moisture contained in the food product to evaporate. Similar to the heat fusion, the heat of vaporization cannot be perceived by a change in temperature and must be calculated after determining how much moisture was lost from a “done” food product.

$$= W_{loss} \times H_v$$

where:

W_{loss} = weight loss of water during cooking, lb (kg),
 H_v = heat of vaporization, Btu/lb (kJ/Kg),
 $= 970$ Btu/lb (2256 kJ/kg) at 212°F (100°C), and

where:

$E_{equipment}$ = energy into equipment, Btu (kJ).

F 1827, F26

cooking energy rate—average rate of energy consumption (Btu/h or kJ) during the cooking energy efficiency tests, refers to all loading scenarios, $E_{cook\ rate}$.

$$E_{cook\ rate} = \frac{E_{cook} \times 60}{t_{cook}}$$

where:

E_{cook} = equipment energy consumption, and
 t_{cook} = cook time, min.

F 1827, F26

cooking medium—a substance within equipment that transfers heat to the food product, e.g., oil in a fryer, water in a pasta cooker, or air in an oven. **F 1827**, F26

cooking surface—an area of the equipment that receives a source of heat upon which a food product is cooked (or defrosted), for example, griddle surface, element or burner of a range, or broiler grate. **F 1827**, F26

cooking unit—a heating device located on the equipment that is powered by a single heat source comprised of either a gas burner or an electrical element, that is independently controlled.

F 1827, F26

cook time—time required to cook the specified food product to a specified cooked condition during a cooking energy efficiency (see **cooking energy efficiency**) test. **F 1827**, F26

cook zone—the volume of oil in the fryer in which foods are cooked; typically the entire volume from the heating element(s), or heat exchange surface to the surface of the frying-medium. See **fryer**. **F 1827**, F26

coolant additive package, *n*—the combination of inhibitors added to an engine coolant to mitigate cooling system degradation, corrosion, scaling, and foaming, or to provide other desirable properties. **D 4725**, D15

cooler nail—usually coated, slender, regular-stock-steel, 1 by 0.062 to 2⁷/₈ by 0.120-in. nails with flat 1¹/₆₄ to 1⁵/₆₄-in. head and medium diamond point, with head diameter same as or smaller than that of common wire nail of same length. **F 547**, F16

cool-flame, *n*—a faint, pale blue luminescence or flame occurring below the autoignition temperature (AIT). **E 1445**, E27

cooling, chemical, *n*—sensation of reduced temperature experienced as a result of exposure to certain substances such as menthol or anise. The sensation usually persists after the stimulus is removed. **E 253**, E18

cooling curve—graphical representation of the course of temperature fall of a chemical mixture as a function of time commonly exhibiting more or less abrupt changes of rate at, or near, those temperatures at which phase changes begin; used in finding the temperatures at which phase changes occur. Occasionally, some property or function other than time may be used; for example, thermal expansion. **E 7**, E04

cooling curve—graphical representation of specimen temperature or temperature change as a function of time or decreasing environment temperature. **E 1142**, E37

cooling-down period—{archaic} (1) the time elapsing after a covered pot is opened before the glass is cool enough to work.

(2) period between fining stage and the removal of the glass from the furnace. **C 162**, C14

cooling, physical, *n*—sensation of reduced temperature experienced as a result of exposure to thermally cold substances, such as ice; to substances that evaporate rapidly, such as acetone or alcohol; or to

cooling, physical, *n*

substances that have a negative heat of solution, such as crystalline sorbitol. The duration of the sensation is usually limited to the time of direct contact with the stimulus. **E 253, E18**

cooling rate—See **setting rate**. **C 162, C14**

cooling rate—the average slope of the time-temperature curve taken over a specified time and temperature interval. **E 7, E04**

cooling rate—average slope of the time-temperature curve taken over a specific time and temperature interval as the temperature is decreased. **E 1142, E37**

cooling time, *n*—in molding, the time interval from the start of forward screw movement until the mold starts to open. **D 883, D20**

cooling zone—that part of the continuous furnace in which the ware is allowed to cool after firing. **C 286, B08**

coping—dimension stone used as the top course of a masonry wall, often sloped to shed water. **C 119, C18**

coping—a covering on top of a wall exposed to the weather, usually sloped to carry off water. **D 1079, D08**

copolymer—See **polymer**. **D 883, D20**

copolymer, *n*—see **polymer**. **D 907, D14**

copolymer, *n*—a polymer formed from two different monomers. **D 1566, D11**

copolymer, *n*—a polymer consisting of molecules characterized by the repetition (neglecting ends, branch junctions and other irregularities) of two or more different types of monomeric units. See **polymer**. **F 1251, F04**

copolymerization—See **polymerization**. **D 883, D20**

copolymerization, *n*—see **polymerization**. **D 907, D14**

copolymerization, *n*—the polymerization of two or more different monomers into a single polymer. **D 1566, D11**

copolymerization—see **polymerization** and **copolymer**. **F 1251, F04**

copper common nail—bright, solid-copper, $\frac{5}{8}$ by 0.065 to 6 by 0.284-in. nails with flat head and medium diamond point. **F 547, F16**

copper corrosion—a qualitative indication of reactive impurities in aromatic hydrocarbons. An iridescent, gray, or black discoloration of polished copper strip is considered cause for rejection. **D 4790, D16**

coppered, copper-washed—all surfaces chemically plated with copper, usually by chemical rather than electrolytic process. (See **electroplated**.) **F 547, F16**

copper enamel—a porcelain enamel specifically designed for application to copper. **C 286, B08**

copperhead—a defect occurring in sheet metal ground coat that appears as a small freckle or pimple-like spot, reddish brown in color. **C 286, B08**

copper number—the number of grams of copper in the cuprous oxide reduced from a cupric compound by 100 g of pulp or paper (after deduction of moisture, ash, and sizing materials) treated under specified conditions with an excess of cupric solution. The copper number is an indication of the relative number of reducing groups in the pulp or paper. **D 1695, D01**

copper number—the weight in grams of copper reduced from the cupric to the cuprous state by exposure to 100 g of paper, paperboard, or pulp as determined by a specified method; indicates the relative number of reducing groups in the pulp or paper and is used as a measure of its chemical quality and stability. **D 1968, D06**

copying—the act of producing an image on a document or other receptor media which is a duplication of the image of another document, such as by a photographic, xerographic, or facsimile process or by carbon or carbonless papers. **F 335, F05**

copying—the act of producing an image on a document or other receptor media which is a duplication of the image of another document, such as by a photographic, xerographic or facsimile process or by carbon or carbonless papers. **F 909, F05**

coquina—a limestone composed predominantly of unaltered shells or shell fragments loosely cemented by calcite. **C 119, C18**

cord—a generally attenuated glassy inclusion with properties differing from those of the surrounding glass. **C 162, C14**

cord, *n*—a twisted or formed structure composed of one or more single or plied filaments, strands, or yarns of organic polymer or inorganic materials. **D 123, D13**

cord, *n*—in *zippers*, a strand of multiple yarns for use in forming a bead. **D 123, D13**

cord, *n*—of *glassfiber*, a strand made by combining multiple ends of filament strands, including cabled yarns, primarily for structural application. **D 123, D13**

cord, *n*—a strand of multiple yarns for use in forming a bead. **D 2050, D13**

cord, *n*—a twisted or formed structure composed of one or more single or plied filaments, strands, or yarns of organic polymer or inorganic materials. **D 6477, D13**

cord, *n*—of *glassfiber*, a strand made by combining multiple ends of filament stands, including cabled yarns, primarily for structural application. **D 7018, D13**

cord, *n*—in a *tire*, filament(s) or plied yarns used in making a tire ply. **F 538, F09**

corded selvage—See **loopy selvage**. **D 3990, D13**

cordierite porcelain—See **cordierite porcelain** under **porcelain**. **C 242, C21**

cordierite whiteware—See **cordierite whiteware** under **ceramic whiteware**. **C 242, C21**

cordovan—leather made from the tight, firm portion of horse butts. It has very fine pores and characteristic waxy finish, and is very durable. **D 1517, D31**

cords, *n*—the strands of wire or fabric that form the plies and belts in a tire. **D 5681, D34**

cord twist, *n*—the amount of twist in a cord made from two or more single or plied yarns. **D 123, D13**

cord twist, *n*—the amount of twist in a cord made from two or more single or plied yarns. **D 6477, D13**

corduroy, *n*—a filling cut-pile fabric in which the cut fibers form a surface of wales (rounded cords or ribs) which usually run warpwise. **D 123, D13**

corduroy, *n*—a filling cut-pile fabric in which the cut fibers form a surface of wales (rounded cords or ribs) which usually run warpwise. **D 4850, D13**

corduroy flesh—a rough condition of the flesh side of leather caused by failure to remove the twitching muscles. **D 1517, D31**

core, *n*—in *casehardening*, the interior portion of unaltered composition or microstructure, or both, of a case hardened steel object. **A 941, A01**

core, *n*—in *cladproducts*, the central portion of a multilayer composite metallic material. **A 941, A01**

core—see **conductor core**. **B 354, B01**

core, *n*—a centrally located layer of a sandwich construction, usually low density, which separates and stabilizes the facings and transmits shear between the facings and provides most of the shear rigidity of the construction. **C 274, D30**

core—a cylinder of concrete obtained from concrete by means of a core drill. **C 822, C13**

core, *n*—in *drilling*, a cylindrical section of rock (coal) that is usually 5 to 10 cm in diameter, taken as part of the interval penetrated by a core bit and brought to the surface for geologic examination, representative sampling and laboratory analyses. **D 121, D05**

core, *n*—in *samplingfiber packages*, the portion of wool or other fiber obtained using a sampling tube. **D 123, D13**

core, *n*—a filament or strand that serves as an extended axis about which other elements can be wound. **D 123, D13**

core—a cylindrical sample of hardened grout, concrete, rock, or grouted deposits, usually obtained by means of a core drill. **D 653, D18**

core, *n*—in *packaging*, a cylindrical structure used as a carrier of flexible material that is wound around it. **D 996, D10**

core—(1) *in decorative or hardwood plywood*, the center most ply. It may be of lumber (either edgeglued or closely assembled) or other wood-based panel material, or of one or more thicknesses of veneer.

(2) *in construction plywood*, all plies or layers between the face and back. **D 1038, D07**

core, *n*—*in sampling fiber packages*, the portion of wool or other fiber obtained by using a sampling tube. **D 4845, D13**

core, *n*—a filament or strand that serves as an extended axis about which other elements can be wound. **D 6477, D13**

core—(1) *case hardening*—interior portion of unaltered composition, or microstructure, or both, of a case-hardened steel article.

(2) *clad products*—the central portion of a multilayer composite metallic material. **E 7, E04**

core, *n*—*of an optical fiber*, the center region of an optical waveguide through which radiant energy is transmitted. **E 131, E13**

core—a generally centrally located layer or composite component of a sandwich construction, usually low density, which separates and stabilizes the facings and transmits shear between them and provides most of the shear rigidity of the construction. **E 631, E06**

core—a generally centrally located layer or composite component of a sandwich construction, usually low density, which separates and stabilizes the facings and transmits shear between them and provides most of the shear rigidity of the construction. **E 1749, E06**

core—See **rail**.

F 592, F16

core, *n*—a paper, plastic, or fiber core upon which the thermal product is wound. **F 1623, F05**

core barrels, *n*—two nested tubes above the bit of a core drill, the outer rotating with the bit, the inner receiving and preserving a continuous section or core of the material penetrated. The following two types of inner barrels are commonly used.

split-tube barrel, *n*—a type of inner barrel consisting of two longitudinal halves of pipe bound together by reinforced tape at intervals along the barrel length that allows easy access to a relatively intact core (by cutting the tape). (This is the preferred barrel type for coal exploration, where available.)

solid-tube barrel, *n*—a type of inner barrel consisting of a single solid-walled length of pipe in which removal of the core is accomplished by mechanical or hydraulic pressure at one end of the pipe thus extruding the core onto a core tray. (The core is likely to be less intact than when a split-tube barrel is used.) **D 121, D05**

core block—in cutting rotary veneer, the portion of the bolt remaining after available veneer has been removed. **D 1038, D07**

core compressive modulus—the ratio of the compressive load (below the proportional limit of the core) per unit of original area to the corresponding deformation per unit of original thickness. **E 631, E06**

core compressive modulus—the ratio of the compressive load (below the proportional limit of the core) per unit of original area to the corresponding deformation per unit of original thickness. **E 1749, E06**

cored, annular, conductor—a conductor in which one or more layers of wires are laid helically around a central core of metallic or nonmetallic material. The core is used as a mandrel for the application of subsequent layers of wire to maintain consistent spacing of these members around the conductor axis. **B 354, B01**

cored bar, *n*—a compact of bar shape heated by its own electrical resistance to a temperature high enough to melt its interior. **B 243, B09**

cored braid, *n*—*in rope*, a hollow braid construction, either plain or twill, the center of which is filled with yarns which are not braided. **D 123, D13**

core drilling; diamond drilling—a rotary drilling technique, using diamonds in the cutting bit, that cuts out cylindrical rock samples. (ISRM) **D 653, D18**

cored tile or block, *n*—see **gypsum tile or block**. **C 11, C11**

core, laminated—a magnetic component constructed by stacking suitably thin pieces of magnetic material which are stamped, sheared, or milled from sheet or strip material. Individual pieces usually have an insulating surface coating to minimize eddy current losses in the assembled core. **A 340, A06**

core loss, ac eddy current, incremental, $P_{\Delta e}$ —the power loss caused by eddy currents in a magnetic material that is cyclically magnetized. **A 340, A06**

core loss, ac eddy current, normal, P_e —the power losses as a result of eddy currents in a magnetic material that is symmetrically cyclically magnetized.

NOTE—The voltage is generally assumed to be across the parallel combination of core inductance, L_1 , and core resistance, R_1 .

A 340, A06

core loss, ac, incremental, $P_{c\Delta}$ —the core loss in a magnetic material when the material is subjected simultaneously to a dc biasing magnetizing force and an alternating magnetizing force. **A 340, A06**

core loss, ac, specific, $P_{c(B;f)}$ —the active power (watts) expended per unit mass of magnetic material in which there is a cyclically varying induction of a specified maximum value, B , at a specified frequency, f . **A 340, A06**

core loss, ac, (total), P_c —the active power (watts) expended in a magnetic circuit in which there is a cyclically alternating induction.

NOTE—Measurements of core loss are normally made with sinusoidally alternating induction, or the results are corrected for deviations from the sinusoidal condition. **A 340, A06**

core loss density—the active power (watts) expended in a magnetic core in which there is a cyclically varying induction of a specified maximum value, B , at a specified frequency, f , divided by the effective volume of the core.

NOTE—This parameter is normally used only for non-laminated cores such as ferrite and powdered cores. **A 340, A06**

core loss, residual, P_r —the portion of the core loss power, P_c , which is not attributed to hysteresis or eddy current losses from classical assumptions. **A 340, A06**

core, mated—two or more magnetic core segments assembled with the magnetic flux path perpendicular to the mating surface. **A 340, A06**

core module—See **module**. **E 631, E06**

core module—a **module** containing electrical, plumbing, heating, and related subsystems. **E 631, E06**

core (of an electromagnetic inspection circuit)—that part of the magnetic circuit which is within the electrical winding. **E 1316, E07**

core (of gypsum board), *n*—the hardened material filling the space between the face and back papers consisting substantially of rehydrated gypsum with additives. **C 11, C11**

core plate—a generic term for any insulating material, formed metallurgically or applied externally as a thin surface coating, on sheet or strip stock used in the construction of laminated and tape wound cores. **A 340, A06**

core, powder (dust)—a magnetic core comprised of small particles of electrically insulated metallic ferromagnetic material. These cores are characterized by low hysteresis and eddy current losses. **A 340, A06**

core recovery—ratio of the length of core recovered to the length of hole drilled, usually expressed as a percentage. **D 653, D18**

core rod, *n*—a member of the compacting tool set that forms internal features such as splines, diameters, keyways, or other profiles in a P/M compact. **B 243, B09**

core sample, *n*—that part of a core of rock or coal obtained so as to represent accurately a thickness of a unit penetrating by drilling. **D 121, D05**

core sample—a fragment of a dry paint film removed from the

core sample

substrate with a coring tool which is designed to remove a specified area (that is, a square centimetre) of dry paint film.

E 631, E06

core shear—the shear stress applied to the core material used in sandwich panel construction.

E 631, E06

core shear—the shear stress applied to the core material used in sandwich panel construction.

E 1749, E06

core shear modulus—the ratio of the shear stress to the corresponding shear strain for stresses below the proportional limit in shear of the core.

E 631, E06

core shear modulus—the ratio of the shear stress to the corresponding shear strain for stresses below the proportional limit in shear of the core.

E 1749, E06

core splice adhesive—See **adhesive, core splice**.

E 631, E06

core splice adhesive—See **adhesive, core splice**.

E 1749, E06

core-spun yarn, n—a compound structure in which a filament or strand serves as an axis around which a cover of either loose fiber or a yarn is wound.

D 123, D13

core-spun yarn, n—a compound structure in which a filament or strand serves as an axis around which a cover of either loose fiber or a yarn is wound.

D 4849, D13

core stabilization—a process to rigidize honeycomb core materials to prevent distortion during machining or curing.

E 631, E06

core stabilization—a process to rigidize honeycomb core materials to prevent distortion during machining or curing.

E 1749, E06

core, tape-wound—a magnetic component constructed by the spiral winding of strip material onto a suitable mandrel. The strip material usually has an insulating surface coating which reduces interlaminar eddy current losses in the finished core.

A 340, A06

core temperature, t_c , n—temperature at a *subject's* body site, such as pulmonary artery, distal esophagus, urinary bladder, or tympanic membrane, recognized as indicative of internal body temperature and obtained with a *contact thermometer*.

E 344, E20

core wrap (binder tape), n—paper used to wrap groups of insulated wire into cable configuration prior to sheathing.

D 1711, D09

coring, v—the process of perforating structural clay products, generally performed during extrusion by supporting cores (rods) within the shaping cap of the extruder.

C 43, C15

coring—a variable composition between the center and outside of a unit of structure, (such as a dendrite, grain, carbide particle) resulting from non-equilibrium growth which occurs over a range of temperatures or compositions.

E 7, E04

coring—method of collecting soil or paint samples that ensures that materials at each depth are collected proportionately, usually with a hollow cylindrical extraction device.

E 1605, E06

corner nail—usually coated, slender, regular-stock-steel, 1 by 0.062 to 5/8 by 0.244-in. nails with 5/32 to 1/2-in. sinker head and medium diamond point.

F 547, F16

cork-insulation nail—galvanized, regular-stock-steel, 3 to 9 by 0.148-in. nails with flat 1/2-in. head and medium diamond point.

F 547, F16

cork tile, n—a floor surfacing unit made from natural cork shavings compressed and baked to be thoroughly and uniformly bonded together.

F 141, F06

corner barbed wire arm—a combination post cap and fitting used to hold barbed wire in place on a corner post. May be angled in or out from the fence line to hold three or more strands of barbed wire, or "V" shaped to hold six or more strands of barbed wire.

F 552, F14

cornerbead, n—an accessory for outside corners.

C 11, C11

corner breaks, n—(*JCP only*) a portion of the slab separated by a crack that intersects the adjacent transverse and longitudinal joints, describing approximately a 45° angle with the direction of traffic, where the length of the sides is from 0.3 m (1 ft) to one half the width of the slab.

E 867, E17

corner breaks, n—(*JCP only*) a portion of the slab separated by a crack that intersects the adjacent transverse and longitudinal joints, describing approximately a 45 degree angle with the direction of

traffic where the length of the sides is from 0.3 m (1 ft) to one half the width of the slab.

E 1778, E17

corner effect—the reflection of an ultrasonic beam directed at normal incidence to the line of intersection of two perpendicular planes.

E 1316, E07

cornering force coefficient [nd], n —the ratio of cornering force to the normal force on a tire.

F 538, F09

cornering force [ML^2/T^2], n —of a tire, the horizontal force acting perpendicularly to the instantaneous motion vector of the center of contact for a tire operating at a slip angle.

F 538, F09

cornering stiffness coefficient, n—of a tire, the ratio of tire cornering stiffness to tire normal force.

F 538, F09

cornering stiffness [F/γ], n —of a tire, the negative of the rate of change of tire lateral force with respect to change in tire slip angle, usually evaluated at zero slip angle.

F 538, F09

cornering traction coefficient, n—the ratio of the cornering tractive force vector and normal force.

F 538, F09

cornering traction vector angle, n—the angle between the resultant cornering traction force vector and the X' axis.

F 538, F09

cornering tractive force, (F), n—the vectorial sum of lateral and longitudinal tractive force components.

F 538, F09

corner post—a terminal post, at which the direction of the line of fence changes in two or more directions.

F 552, F14

corner radius on square or rectangular wire—any configuration on the corner between a chamfer and a full radius. The measurement of a corner radius is the distance from the blend point on one surface to the extension of the other surface.

B 846, B05

corner rail clamp—a two-piece clamp with carriage bolts and nuts designed for horizontal rail connections to a 90° corner post.

F 552, F14

corner reinforcement, exterior, n—a preformed section of wire or expanded sheet steel, for the reinforcement of exterior stucco external corners (arrises).

C 11, C11

corner roll—half-round unit of asbestos cement used to trim and flash corners in asbestos-cement corrugated applications.

D 2946, C17

corner rolls, n—half-round units used to trim and flash corners in corrugated application.

C 1154, C17

corn stover—the stalks of the maize plant.

E 1705, E48

corona, n—visible partial discharges in gases adjacent to a conductor.

D 1711, D09

corona—a luminous discharge due to ionization of the air surrounding an electrode, caused by the high electric field strength in the vicinity of the electrode, exceeding a certain critical (that is, threshold) value.

D 2864, D27

corona—gaseous ions, either positively or negatively charged. Usually produced at atmospheric pressure using a high voltage source and either one or more pointed conductors or a thin long conductor (that is, corona wire).

F 335, F05

corona, n—a device used to place a uniform electrical charge on the surface of a xerographic photoreceptor.

F 1457, F05

corona, n—chemical separation of ink dispersant and pigment caused by interaction with substrate which appears as an image with a dark center surrounded by a lighter shadow.

F 1857, F05

corona charging—depositing of an electrical charge on a surface by means of corona.

F 335, F05

corona (discharge)—a self-sustaining discharge characterized by highly asymmetrical electric fields with the result that ionization predominantly occurs near the electrode with the higher potential gradient.

B 542, B02

corona effect—light emitted in the UV range of the electromagnetic spectrum by electronically excited molecules that have reached a singlet state and have not consumed the absorbed energy by other physical process.

D 2864, D27

corona (partial discharge) extinction voltage, CEV—the highest voltage at which partial discharge (or corona) no longer exceeds a specified intensity as the applied voltage is gradually decreased from a value above the corona inception voltage. Where the

applied voltage is alternating the CEV is expressed as $1/\sqrt{2}$ of the peak voltage. **D 2864, D27**

corona (partial discharge) inception voltage, CIV—the lowest voltage at which continuous partial discharge (or corona) exceeding a specified intensity is observed as the applied voltage is gradually increased. Where the applied voltage is alternating, the CIV is expressed as $1/\sqrt{2}$ of the peak voltage. **D 2864, D27**

corona shield—a smooth, rounded metal covering placed around exposed high-voltage components to prevent electrical discharge. **E 7, E04**

corona wire—a long, thin wire suspended in air and electrically isolated that when connected to a high voltage source will produce corona. **F 335, F05**

corotron, *n*—a name for a specific type of corona. **F 1457, F05**

correctable (as related to typewriter ribbons)—an image that may be completely removed from the substrate by means of lift-off rather than erasure or cover-up. **F 221, F05**

corrected air flow, *n*—the volume of air movement per unit of time under standard atmospheric conditions. The flow is expressed in cubic feet per minute or litres per second. **F 395, F11**

corrected count, *n*—the cell count corrected for coincidence. **F 2312, F04**

corrected grain—portions of the grain surface lightly abraded with emery wheel or sandpaper, so as to lessen the effect of grain damage. **D 1517, D31**

corrected load, *n*—the load in kilograms-force (or newtons) for each run obtained by multiplying the applied load by the ratio of the Hertz scar diameter to the measured scar diameter at that load. **D 4175, D02**

corrected load, *n*—the load in kilograms-force (or newtons) obtained by multiplying the applied load by the ratio of the Hertz scar diameter to the measured scar diameter at that load. **D 4175, D02**

corrected temperature rise, *n*—the temperature of the calorimeter, caused by the process that occurs inside the bomb; that is, the observed temperature change corrected for various effects. **D 121, D05**

corrected temperature rise, *n*—the increase in temperature of the calorimeter caused by the process that occurs inside the bomb; the observed temperature change corrected for various effects. **D 5681, D34**

corrective maintenance—maintenance required to return property to such condition that it may be effectively utilized for its designated purpose. **E 2135, E53**

correlated color temperature, *n*—of a source, the temperature, usually expressed in kelvins, of a full radiator that would emit light of the chromaticity most closely resembling that of the light from the source. **E 284, E12**

correlation coefficient (*r*)—a measure of the strength of the linear relationship between *X* and *Y*, calculated by the equation:

$$r_{xy} = \frac{(\sum_{i=1}^n X_i Y_i)}{(\sum_{i=1}^n X_i^2)^{1/2} (\sum_{i=1}^n Y_i^2)^{1/2}}$$

where:

n = the number of observations in *X* and *Y*. **E 131, E13**

corresponding elongation—See **elongation at specified force**. **D 4848, D13**

corresponding force, *n*—synonym for force at specified elongation. **D 4439, D35**

corresponding force—See **force-at-specified-elongation**. **D 4848, D13**

corridor, *n*—an enclosed space connecting a room or compartment with an exit. The corridor may include normal extensions, such as lobbies and other enlarged spaces. **E 176, E05**

Corrodkote test—an accelerated corrosion test for electrodeposits (see Method B 380). **B 374, B08**

corrosion—(1) gradual solution or oxidation of a metal.

(2) solution of anode metal by the electrochemical action in the plating cell. **B 374, B08**

corrosion, *n*—the chemical or electrochemical reaction between a material, usually a metal, and its environment that produces a deterioration of the material and its properties (G15, G01).

corrosion, inhibitor, *n*—a chemical substance or combination of substances that, when present in the proper concentration and form in the environment, prevents or reduces corrosion.

volatile corrosion inhibitor (VCI)—a material that slowly releases vapor to inhibit corrosion within a package by neutralizing the effects of moisture-laden air. **D 996, D10**

corrosion, *n*—the chemical or electrochemical reaction between a material, usually a metal surface, and its environment that can produce a deterioration of the material and its properties. **D 4175, D02**

corrosion—the formation of rust. **F 921, F04**

corrosion—the formation of rust. **F 1078, F04**

corrosion—the chemical or electrochemical reaction between a material, usually a metal, and its environment that produces a deterioration of the material and its properties. **G 15, G01**

corrosion fatigue—the process by which fracture occurs prematurely under conditions of simultaneous corrosion and repeated cyclic loading at lower stress levels or fewer cycles than would be required in the absence of the corrosive environment. **E 1823, E08**

corrosion fatigue—the process in which a metal fractures prematurely under conditions of simultaneous corrosion and repeated cyclic loading at lower stress levels or fewer cycles than would be required in the absence of the corrosive environment. **G 15, G01**

corrosion fatigue strength—the maximum repeated stress that can be endured by a metal without failure under definite conditions of corrosion and fatigue and for a specific number of stress cycles and a specified period of time. **G 15, G01**

corrosion inhibitor—a material added to a product to reduce its tendency to degrade metals. **E 609, E35**

corrosion inhibitor—a chemical substance or combination of substances that, when present in the proper concentration and forms in the environment, prevents or reduces corrosion. **G 15, G01**

corrosion inhibitor package, *n*—the combination of inhibitors added to an engine coolant to mitigate cooling system corrosion. **D 4725, D15**

corrosion of refractories, *n*—destruction of refractory surfaces by the chemical action of external agencies. **C 71, C08**

corrosion potential—the potential of a corroding surface in an electrolyte relative to a reference electrode measured under open-circuit conditions. **G 15, G01**

corrosion products, *n*—products that result from chemical or electrochemical reaction between a metal and its environment. **D 1129, D19**

corrosion products—products that result from chemical or electrochemical reaction between a metal and its environment. **D 6161, D19**

corrosion rate—the amount of corrosion occurring in unit time. (For example, mass change per unit area per unit time; penetration per unit time.) **G 15, G01**

corrosion resistance—ability of a fastener to resist corrosion under specified conditions. **F 1789, F16**

corrosion-resistant—term used to describe a material or treatment designed to inhibit corrosion. (See **rustproof**.) **F 547, F16**

corrosive substance—in *Committee D16 Standards*, material in industrial aromatic hydrocarbons that discolors or tarnishes polished copper. **D 4790, D16**

corrosive sulfur—*n*, elemental sulfur and thermally unstable sulfur compounds in electrical insulating oil that can cause corrosion of certain transformer metals such as copper and silver. **D 2864, D27**

corrosive water, *n*—a standard solution containing 100 ppm each of sulfate, chloride, and bicarbonate ions introduced as the sodium salts to distilled water. **D 4725, D15**

corrosive wear, *n*—wear in which chemical or electrochemical reaction with the environment is significant. **G 40, G02**

corrugated, *adj*—pertaining to a sheet product having a design of sinusoidal alternating ridges and valleys manufactured according to a specific pitch. **C 1154, C17**

corrugated—denotes an asbestos-cement sheet product having a design of alternating ridges and valleys manufactured according to a specified pitch. **D 2946, C17**

corrugated box—See **box**. **D 996, D10**

corrugated fiberboard:

(1) *single face*—the structure formed by one corrugated member glued to the flat facing;

(2) *single wall*—the structure formed by one corrugated inner member glued between two flat facings; also known as double face;

(3) *double wall*—the structure formed by three flat facings and two intermediate corrugated members;

(4) *triple wall*—the structure formed by four flat facings and three intermediate corrugated members. (See also **container-board**.)

corrugating medium—**paperboard** used in forming the fluted portion of the **corrugated board**.

corrugation flute—one of the wave shapes formed in the inner member, that is, the corrugating medium, of corrugated fiberboard. Flutes most commonly used are:

	Number, per Linear ft	Span Between Adjacent Flutes, mm	Height, in. (mm) ^{A,B}
A-flute	36 ± 3	7.9 to 9.1	3/16 (4.7)
B-flute	50 ± 3	4.7 to 6.6	3/32 (2.4)
C-flute	42 ± 3	6.8 to 7.8	3/64 (3.6)
E-flute	94 ± 4	3.0 to 3.5	3/64 (1.2)

^A The values are approximate.

^B Height does not include thickness of facing.

V-board—a term adopted from the grade symbol of **corrugated** or **solid fiberboard** made to comply with the weather-resistant class as defined in Federal Specification PPP-F-320, made of wet strength **paperboard**. Components are especially made to exhibit high strength (against bursting, tearing, or rupturing) when wet.

W-board—same as V-board except the “W” grades are of lower test requirements and primarily for use as interior or intermediate containers. **D 996, D10**

corrugated glass—glass rolled to produce a corrugated contour. **C 162, C14**

corrugated roofing/siding nail—See **roofing nail**. **F 547, F16**

corrugation, *n*—transverse undulations at regular intervals in the surface of the pavement consisting of alternate valleys and crests not more than 1 m (3 ft) apart. **E 867, E17**

corrugation, *n*—transverse undulations at regular intervals in the surface of the pavement consisting of alternate valleys and crests not more than 1 m (3 ft) apart. **E 1778, E17**

cortex, *n*—*in mammalianhair fibers*, the principal body of the fiber made up of elongated cells. **D 123, D13**

cortex, *n*—*in mammalianhair fibers*, the principal body of the fiber made up of elongated cells. **D 4845, D13**

corundum—a naturally occurring hexagonal mineral of the composition Al₂O₃, which can also be prepared synthetically to high purity; noted for its hardness (9 on Mohs scale) and refractoriness (M.P. = 2045°C). **C 242, C21**

cosolvent—solvent used to improve the mutual solubility of other ingredients. **D 3064, D10**

cost analysis—subdividing the project estimate into component parts to find and compare their relationship to previously established historical costs. **E 631, E06**

cost analysis, *n*—subdividing the project estimate into component

parts to find and compare their relationship to previously established historical costs. **E 833, E06**

cost effective—the condition whereby the present value benefits (savings) of an investment exceeds its present value costs. **E 631, E06**

cost effective, *adj*—the condition whereby the present value benefits (savings) of an investment exceeds its present value costs. **E 833, E06**

cost effective—among decision alternatives, the one whose cost is lower than its benefit. The most cost effective program would be the one whose cost-benefit ratio is the lowest among various programs competing for a given amount of funds. **E 2135, E53**

Coster-Kronig transition—*AES, XPS* Auger process involving an electron from the same principal shell as the initial vacancy (for example, *L₁L₂M*). **E 673, E42**

cost limitations—the budget boundaries for project elements. **E 631, E06**

cost limitations, *n*—the budget boundaries for project elements. **E 833, E06**

cost model—the description of the project divided into discrete elements showing quantities and unit price for each element. **E 631, E06**

cost model, *n*—the description of the project divided into discrete elements showing quantities and unit price for each element. **E 833, E06**

cost overruns, *n*—in project design or construction, or both, the unanticipated increase in cost due to factors such as unanticipated site conditions, changes in the cost of building materials, labor, weather, and labor disputes. **E 833, E06**

cost professional, *n*—in project design or construction, or both, a person engaged in the occupation of understanding, managing or estimating project costs, or a combination thereof. **E 833, E06**

cotton, *n*—a vegetable seed fiber consisting of unicellular hairs attached to the seed of several species of the genus *Gossypium* of the family Malvaceae. **D 123, D13**

cotton, *n*—a vegetable seed fiber consisting of unicellular hairs attached to the seed of several species of the genus *Gossypium* of the family Malvaceae. **D 7139, D13**

cotton cellulose, purified—chemical cellulose from cotton fiber or linters. (see also **chemicalcotton**) **D 1695, D01**

cotton color diagram, *n*—a diagram showing the color ranges of standards officially established by the U.S. Department of Agriculture for the various grades of cotton in relation to scales of reflectance. *R_v*, on the vertical axis, and yellowness, + *b*, on the horizontal axis. **D 123, D13**

cotton color diagram, *n*—a diagram showing the color ranges of standards officially established by the U.S. Department of Agriculture for the various grades of cotton in relation to scales of reflectance. *R_v*, on the vertical axis, and yellowness, + *b*, on the horizontal axis. **D 7139, D13**

cotton count, *n*—an indirect yarn numbering system generally used in the cotton system equal to the number of 840-yd lengths of yarn per pound. **D 123, D13**

cotton count, *n*—an indirect yarn numbering system generally used in the cotton system equal to the number of 840-yd lengths of yarn per pound. **D 4849, D13**

cottonizing, *n*—*in flax*, the processing of flax fiber so as to make it suitable for use in the cotton spinning system. **D 123, D13**

cottonizing, *v*—*in flax*, the processing of flax fiber so as to make it suitable for use in the cotton spinning system. **D 6798, D13**

cotton linters—see **linters**. **D 1695, D01**

cotton linters, *n*—the short fibers adhering to cottonseed after the operation of ginning (seed removal and cleaning); cut from the seed in a series of passes through cutting blades and referred to as “first-cut linters,” “second-cut linters,” “mill run,” and so forth; used primarily in the manufacture of cotton fiber content paper and cellulose derivatives. **D 1968, D06**

cotton maturity, *n*—the degree of fiber wall development.

D 123, D13

cotton maturity, *n*—the degree of fiber wall development.

D 7139, D13

cotton system, *n*—a spinning system adapted to fibers less than 65 mm (2.5 in.) in length.

D 123, D13

cotton system, *n*—a spinning system adapted to fibers less than 65 mm (2.5 in.) in length.

D 4849, D13

cotton waste, *n*—material removed from seed cotton, ginned lint, or stock in process by any cleaning or processing machinery and usually consisting of undesirable fibers or a mixture of cotton fibers with foreign matter.

D 123, D13

cotton waste, *n*—material removed from seed cotton, ginned lint, or stock in process by any cleaning or processing machinery and usually consisting of undesirable fibers or a mixture of cotton fibers with foreign matter.

D 7139, D13

could not be identified/cannot identify—these terms are objectionable not only because they are ambiguous but also because they are biased; they imply that the examiner's task is only to identify the suspect, not to decide whether or not the suspect is the writer. If one of these terms is used, it should always be followed by "or eliminate[d]".

E 1658, E30

coulomb—the quantity of electricity that is transmitted through an electric circuit in 1 s when the current in the circuit is 1 A. The quantity of electricity that will deposit 0.0011180 g of silver.

B 374, B08

coulometer—an electrolytic cell arranged to measure the quantity of electricity by the chemical action produced in accordance with Faraday's law.

B 374, B08

count, *n*—in *woventextiles*, the number of warp yarns (ends) and filling yarns (picks) per unit distance as counted while the fabric is held under zero tension, and is free of folds and wrinkles.

D 123, D13

count, *n*—in *knittedfabrics*, the number (counted units) of wale loops and course loops per 25 mm (1 in.).

D 123, D13

count, *n*—in *wovenfabric*, the number of warp yarns (ends) and filling yarns (picks) per unit distance as counted while the fabric is held under zero tension, and is free of folds and wrinkles.

D 4850, D13

count, *n*—in *knittedfabrics*, the number (counted units) of wale loops and course loops per 25 mm (1 in.).

D 4850, D13

count—approximate number of nails per pound influenced by sizing of individual elements.

F 547, F16

count, acoustic emission (emission count) (N)—the number of times the acoustic emission signal exceeds a preset threshold during any selected portion of a test.

E 1316, E07

counter—a device for the measurement of radiation intensity by means of an electrical triggering principle (Geiger-Müller).

E 7, E04

counter—a piece of stiffening material inserted between the lining and the outside of a shoe upper at the back of the shoe. The purpose of the counter is to strengthen the back part and to prevent it from sagging and losing its shape. There are two types of counter: flat and molded.

F 869, F08

countercurrent adsorption—an adsorption process in which the flow of fluid is in a direction opposite to the movement of the adsorbent.

D 2652, D28

counter-current flow—flow through a membrane module in which the fluid on the upstream and downstream sides of the membrane move parallel to the membrane surface but in the opposite direction.

D 6161, D19

counter electrode, *n*—in *atomic emission spectrometry*, the electrode in an analytical pair that does not contain the specimen being analyzed.

E 135, E01

counter electrode—the electrode in an electrochemical cell that is used to transfer current to or from a test electrode.

G 15, G01

counterflashing—formed metal or elastomeric sheeting secured on or into a wall, curb, pipe, roof-top unit, or other surface, to cover and

protect the upper edge of a base flashing and its associated fasteners.

D 1079, D08

counterintelligence-scope polygraph (CSP), *n*—screening examination administered by the Federal Government on individuals with sensitive security clearances to detect and deter espionage, security breaches, sabotage, or other acts against the government. Sometimes referred to as a *loyalty* examination.

E 2035, E52

counter pocket—a piece of lining material attached to inside quarters of unlined shoes to conceal counter.

F 869, F08

countersunk head—head with bearing surface conically shaped: "deep" having 32° to 74° included angle; "medium" having 75° to 99° included angle; "slight" having 100° to 160° included angle.

F 547, F16

count, event (N_e)—the number obtained by counting each discerned acoustic emission event once.

E 1316, E07

counting method—in *fatiguespectrum loading*, a method of counting the occurrences and defining the magnitude of various loading parameters from a load-time history; (some of the counting methods are: level crossing count, peak count, mean crossing peak count, range count, range-pair count, rain-flow count, racetrack count).

E 1823, E08

count median size, *n*—a measurement of particle size of samples of particulate matter, consisting of that diameter of particle such that one half of the number of particles is larger and half is smaller.

D 1356, D22

count rate, acoustic emission (emission rate or count rate) (Ṅ)—the time rate at which emission counts occur.

E 1316, E07

count, ring-down—see **count, acoustic emission**, the preferred term.

E 1316, E07

country hides—hides taken off by butchers and farmers; their quality is usually lower than that of packer hides because they are removed by less skilled hands and are not cured as well as packer hides.

D 1517, D31

counts—EIA, events recorded by the detector and registered in a channel of a backscattering spectrum. Counts constitute the ordinate of a BS spectrum.

integrated—sum of all counts registered in a given set of channels or their corresponding energy ranges.

per channel—number of counts in a single channel; unit of the ordinate of a backscattering spectrum.

E 673, E42

couplant—a material used at the structure-to-sensor interface to improve the transmission of acoustic energy across the interface during acoustic emission monitoring.

E 1316, E07

couplant—a substance used between the search unit and test surface to permit or improve transmission of ultrasonic energy.

E 1316, E07

coupler, color—a substance capable of reacting with the oxidation product of a color-forming developer to produce a colored dye image.

E 7, E04

coupling, *n*—in *nonpressure sewer pipe*, a section for joining non-pressure sewer pipe, that when properly installed with the proper accessories, develops an assembled joint equivalent in serviceability and strength to the pipe sections, when tested in accordance with 8.3 of Specification C 428.

C 1154, C17

coupling, *n*—for *asbestos-cement conduit, sewer, underdrain, and storm drain pipe*, component made from a larger diameter pipe of the same type or type II and of the same class, or of a higher class, or produced otherwise to yield at least equal performance, for joining asbestos-cement pipe that when properly installed, forms a silt-tight joint, allows alignment corrections and slight changes in direction, and provides an assembled joint equivalent in serviceability and strength to the pipe sections.

D 2946, C17

coupling, *n*—for *asbestos-cement non-pressure sewer pipe*, section for joining asbestos-cement non-pressure sewer pipe, that when properly installed with the proper accessories, develops an assembled joint equivalent in serviceability and strength to the pipe sections when tested in accordance with 8.3 of Specification C 428.

D 2946, C17

coupling, *n*—for *asbestos-cement pressure pipe*, section for joining

coupling, *n*

asbestos-cement pipe that, when properly installed with the proper accessories, develops a joint equivalent in strength and serviceability to the pipe sections. **D 2946**, C17

coupling—two electric circuits are said to be coupled to each other when they have an impedance in common so that a current in one causes a voltage in the other. **E 1316**, E07

coupling agent, *n*—a substance having functional groups that are capable of reacting with the surfaces of two different substances, thereby chemically bridging them. **D 907**, D14

coupling coefficient, *k'*—the ratio of the mutual inductance between two windings and the geometric mean of the individual self-inductances of the windings. **A 340**, A06

coupon, *n*—a solid specimen, rectangular in any cross-section, that is saw-cut from a concrete masonry unit or related unit for the purpose of testing, and whose properties are considered representative of the whole unit. **C 1209**, C15

coupon, *n*—a portion of a material or laboratory sample from which multiple specimens can be taken for testing. **D 4439**, D35

coupon—a specimen, usually flat, but occasionally curved or cylindrical.. **G 15**, G01

course, *n*—*in knitted fabrics*, a row of successive loops in the width direction of the fabric. **D 123**, D13

course, *n*—*in knitted fabrics*, a row of successive loops in the width direction of the fabric. **D 4850**, D13

course administrator—an individual responsible for managing administrative details of a course, separate from actual instruction of the course. **F 1177**, F30

course instructor/coordinator (I/C)—an individual who is authorized by the appropriate entity to present and assess competence in all of the subject matter contained in a curriculum. This person also oversees all instruction in the course and makes final evaluations concerning student competence. **F 1177**, F30

cover, *n*—*in yarns*, the outside layer of fibers that form the surface of a yarn. **D 123**, D13

cover—the perpendicular distance from any point in the roof of an underground opening to the ground surface. (ISRM) **D 653**, D18

cover—*in grouting*, the thickness of rock and soil material overlying the stage of the hole being grouted. **D 653**, D18

cover—See **container**. **D 996**, D10

cover, *n*—*in yarns*, the outside layer of fibers that form the surface of a yarn. **D 4849**, D13

cover—the section of the lock case designed to be removed for access to components within the case. **F 471**, F12

cover—an electrically insulated enclosure designed to be installed temporarily on various types of irregularly shaped electrical equipment to protect personnel and equipment working in close proximity. **F 819**, F18

coverage, *n*—the area to be covered per unit volume of coating to obtain specified dry thickness and desired performance. **C 168**, C16

coverage—the surface area to be continuously covered by a specific quantity of a particular material. **D 1079**, D08

cover coat—a porcelain enamel finish applied and fused over a ground coat or direct to the metal substrate. **C 286**, B08

covered yarn, *n*—a compound structure which contains distinguishable inner and outer fibrous elements which can be different. **D 123**, D13

covered yarn, *n*—a compound structure which contains distinguishable inner and outer fibrous elements which can be different. **D 4849**, D13

cover flange—See **railing systems**. **E 631**, E06

cover flange—Synonym for **escutcheon**. **E 631**, E06

cover flange—Synonym for **escutcheon**. **E 1481**, E06

covering capacity, dry, *n*—the area covered to a dry thickness of 1 in. (25 mm) by 100 lb (45.4 kg) of dry cement when mixed with the recommended amount of water, molded and dried to constant weight. **C 168**, C16

covering capacity, wet, *n*—the area covered to a wet thickness of 1

in. (25 mm) by 100 lb (45.4 kg) of dry cement when mixed with the recommended amount of water, and molded. **C 168**, C16

covering power—the ability of a plating solution under a specified set of plating conditions to deposit metal on the surfaces of recesses or deep holes. (To be distinguished from throwing power.) **B 374**, B08

covering power—the ability of a glaze to cover the surface of the fired ware uniformly and completely. **C 242**, C21

covering power—the degree to which a porcelain enamel coating obscures the underlying surface. **C 286**, B08

cover plate—Synonym for **escutcheon**. **E 631**, E06

cover plate—Synonym for **escutcheon**. **E 1481**, E06

cover plate, collector—a sheet of transparent (or translucent) glazing placed above the absorber in a solar collector, to provide thermal and environmental protection. **E 772**, E44

cover ring—Synonym for **escutcheon**. **E 631**, E06

cover ring—Synonym for **escutcheon**. **E 1481**, E06

coverstrip, *n*—a thin layer of black compound which covers the unexposed white sidewall portion of a finished tire. **F 538**, F09

cover-up—the obliteration of one or more images by means of an opaque material similar in color to the substrate. **F 221**, F05

cowhide—term specifically applied to leather made from hides of cows, although it is sometimes loosely used to designate any leather tanned from hides of animals of the bovine species. **D 1517**, D31

CPU—chloroplatinate unit (color indicator). **D 6161**, D19

CR—abbreviation for **carriage return**. **F 1457**, F05

crack—a partial break in the stone (see fracture, microcrack, seam). **C 119**, C18

crack—an irregular separation with well-defined sharp edges visible on the surface of a pipe. **C 896**, C04

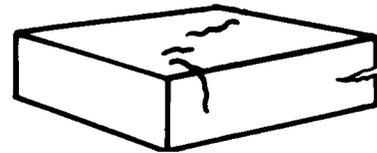
crack—a small fracture, that is, small with respect to the scale of the feature in which it occurs. (ISRM) **D 653**, D18

crack—a visual separation that occurs internally or penetrates down from the pultruded surface to the equivalent of one full ply or more of reinforcement. **D 3918**, D20

crack, *n*—fissure or discontinuity of the pavement surface not necessarily extending through the entire thickness of the pavement. **E 867**, E17

crack, *n*—fissure or discontinuity of the pavement surface not necessarily extending through the entire thickness of the pavement. **E 1778**, E17

crack—line of fracture without complete separation.



F 109, C21

crack—any narrow opening or fissure in the surface that is visible to the naked eye. **F 412**, F17

crack—crystalline fracture passing through or along the grain boundaries which is normally caused by overstressing the metal during manufacturing, such as forging, forming, or heat treating. **F 1789**, F16

crack and crevice application—application by a means that projects the material into cracks and crevices of a structure. **E 1102**, E35

crack-arrest fracture toughness, K_{Ic} [FL^{-3/2}]—the value of the stress-intensity factor shortly after crack arrest. **E 1823**, E08

crack (building defect), *n*—a flaw consisting of complete or incomplete separation within a single element or between contiguous elements of constructions. **E 631**, E06

crack, (CK), *n*—*as used in fractography*, a volume-distributed flaw that is a plane of fracture without complete separation. **C 1145**, C28

crack deflection, n —a toughening mechanism in advanced ceramics or ceramic matrix composites characterized by fracture surface roughening and crack tilting/twisting during propagation around grains or a reinforcing component caused by stress fields around the grains or component developed through mismatches in thermal expansion or mechanical properties (such as elastic modulus), or both, between grains or between reinforcement and matrix.

C 1145, C28

crack depth, a [L]—in *part-through surface-crack specimens (PS)*, the distance from, and normal to, the cracked plate surface to the point of maximum penetration of the crack front into the material. Crack depth is less than the specimen thickness. E 1823, E08

crack displacement [L]—the force-induced separation vector between two points (on the facing surfaces of a crack) that were initially coincident. E 1823, E08

cracked ammonia, n —see **dissociated ammonia**. B 243, B09

cracked gases, n —hydrocarbon gases that contain unsaturates.

D 4175, D02

cracker, n —heavy-duty mill having two deeply corrugated or pyramid-cut rolls for breaking down a rubber or a mix, or for cutting rubber or a mix into pieces. D 1566, D11

crack extension, Δa [L]—an increase in crack size. E 1823, E08

crack-extension force, G [FL⁻¹ or FLL⁻²]—the elastic energy per unit of new separation area that is made available at the front of an ideal crack in an elastic solid during a virtual increment of forward crack extension. E 1823, E08

crack-extension resistance, K_R [FL^{-3/2}], G_R [FL⁻¹] or J_R [FL⁻¹]—a measure of the resistance of a material to crack extension expressed in terms of the stress-intensity factor, K ; crack-extension force, G ; or values of J derived using the J -integral concept. E 1823, E08

crack filler, n —bituminous material used to fill and seal cracks in existing pavements. D 8, D04

cracking—a defect in the bisque consisting of fractures or separations. C 286, B08

cracking—in *protective coatings*, the formation of breaks in a coating film that extend through to the underlying surface. D 4538, D33

cracking—in leak testing, same as **dissociation**. E 1316, E07

cracking, n —a condition where ink that has been absorbed into a substrate causes the coating to shrink to a state much smaller than the original coating dimension causing fractures in the image area. F 1857, F05

cracking, alligator (crocodile)—see **alligator (crocodile) cracking**. E 867, E17

cracking, block—see **block cracking**. E 867, E17

cracking (coatings), n —phenomenon manifested in paint films by a break extending through to the surface painted. E 631, E06

cracking (coatings), n —phenomenon manifested in paint films by a break extending through to the surface painted. E 1605, E06

cracking, durability "D"—see **durability "D" cracking**. E 867, E17

cracking, edge—see **edge cracking**. E 867, E17

cracking, longitudinal—see **longitudinal cracking**. E 867, E17

cracking, map—see **map cracking**. E 867, E17

cracking, reflection, at joints—see **reflection cracking at joints**. E 867, E17

cracking resistance, n —the ability of a coating to resist breaks of the film where the breaks extend through to the surface painted and the previously applied coating or the substrate is visible. The use of a minimum magnification of 10 diameters is recommended in cases where it is difficult to differentiate between cracking and checking. See **checking resistance**. D 16, D01

cracking, slippage—see **slippage cracking**. E 867, E17

cracking, transverse—see **transverse cracking**. E 867, E17

crack jump behavior—in *chevron-notch specimen tests*, that type of sporadic crack growth which is characterized primarily by periods during which the crack front is nearly stationary until a critical force is reached, whereupon the crack becomes unstable and suddenly advances at high speed to the next arrest point, where it

remains nearly stationary until the force again reaches a critical value, and so forth. E 1823, E08

crackled—glassware, the surface of which has been intentionally cracked by water immersion and partially healed by reheating before final shaping. C 162, C14

crackled—a mottled textural effect in a wet process porcelain enamel resembling a wrinkled surface. C 286, B08

crack length, a [L]—See **crack size** and **surface crack length**. Also see crack length in the *Description of Terms*. E 1823, E08

crack mark, n —an open place causing a streak of variable length approximately parallel to the length or width. D 123, D13

crack mark, n —*inbonded, fused, or laminated fabrics*, a sharp break or crease in the surface contour of either the face fabric or the backing fabric that becomes evident when the bonded, fused, or laminated composite is rolled, bent, draped, or folded. D 123, D13

crack mark, n —an open place causing a streak of variable length approximately parallel to the length or width. (*Syn.* open place, thin spot) D 3990, D13

crack-mouth opening displacement (CMOD), $2v_m$ [L]—the Mode I (also called opening-mode) component of crack displacement resulting from the total deformation (elastic plus plastic), measured under force at the location on a crack surface that has the greatest elastic displacement per unit force. E 1823, E08

crack-off—the process of severing a glass article by breaking, as by scratching and then heating. C 162, C14

crack orientation, n —a description of the plane and direction of a fracture in relation to a characteristic direction of the product. This identification is designated by a letter or letters indicating the plane and direction of crack extension. The letter or letters represent the direction normal to the crack plane and the direction of crack propagation. C 1145, C28

crack-plane orientation—an identification of the plane and direction of a fracture in relation to product configuration. This identification is designated by a hyphenated code with the first letter(s) representing the direction normal to the crack plane and the second letter(s) designating the expected direction of crack propagation. E 1823, E08

crack (RD), n —in a rigid die system, generally a planar defect.

B 243, B09

cracks, n —fissure(s) originating in the surface of a rubber vulcanizate or product as a result of natural weathering. D 1566, D11

cracks, flex, n —fissures originating in the surface of a rubber vulcanizate, resulting from cyclic deformation (usually bending). D 1566, D11

crack size, a [L]—a lineal measure of a principal planar dimension of a crack. This measure is commonly used in the calculation of quantities descriptive of the stress and displacement fields and is often also termed crack length or depth. E 1823, E08

crack size, a [L]—in Test Method E 1457, the physical crack size is represented as a_p . The subscript p is everywhere implied.

E 1823, E08

crack(s), ozone, n —fissure(s) originating in the surface of a rubber vulcanizate, caused by exposure to an ozone-containing environment; these fissures are perpendicular to the direction of strain, and usually occur in rubbers having main chain unsaturation. D 1566, D11

cracks (rigid die system (RD)), n —the following names and definitions apply only to items produced in a rigid die system (RD) as opposed to those cracks produced by other systems, that is, metal injection molding, vacuum hot pressing, and so forth. B 243, B09

crack strength—the maximum value of the nominal stress that a cracked specimen is capable of sustaining. F 2078, F07

crack strength, σ_c [FL⁻²]—the maximum value of the nominal stress that a cracked structure is capable of sustaining. E 1823, E08

crack-tip opening displacement (CTOD), δ , [L]—the crack displacement resulting from the total deformation (elastic plus plastic) at variously defined locations near the original (prior to force application) crack tip. E 1823, E08

crack-tip plane strain

crack-tip plane strain—a stress-strain field (near the crack tip) that approaches plane strain to the degree required by an empirical criterion. **E 1823, E08**

crack-tip plane stress—a stress-strain field (near the crack tip) that is not in plane strain. **E 1823, E08**

craftsman, n—an artisan who is skilled in creating new cultural objects. **D 123, D13**

craftsman, n—an artisan who is skilled in creating new cultural objects. **D 5038, D13**

crampon, n—a foot-mounted piece of equipment with spikes designed to provide traction or support on snow and ice. **F 1773, F08**

crash towel, n—a plain weave nonterry product with hems or selvages which has a rough texture caused by uneven yarns. **D 123, D13**

crash towel, n—a plain weave non-terry product with hems or selvages which has a rough texture caused by uneven yarns. **D 7023, D13**

crate, n—a rigid **shipping container** of framed construction joined together with nails, bolts or any equivalent method of fastening. The framework may or may not be enclosed with sheathing. It may be demountable (reusable) or nondemountable. (See also **rubbing strip, strut**.)

open crate—a **crate** with exposed frame members and not enclosed by **sheathing**.

sheathed crate—a **crate** that is enclosed by having the frame members completely covered with **sheathing** boards or material. **D 996, D10**

crater—excavation (generally of conical shape) generated by an explosive charge. (ISRM) **D 653, D18**

crater, n—a small, shallow surface imperfection. **D 883, D20**

crater—a small, shallow pultrusion surface imperfection. **D 3918, D20**

crater, n—a small, shallow surface imperfection. (D20) **F 412, F17**

crater edge effect—*SIMS*, a signal caused by secondary ions that originate from depths shallower than the maximum depth of the crater formed by primary bombardment. **E 673, E42**

cratering—*in protective coatings*, the formation of round depressions in a coating film that do not expose the previous coat or the substrate. **D 4538, D33**

crawling—a parting and contraction of the glaze on the surface of ceramic ware during drying or firing, resulting in unglazed areas bordered by coalesced glaze. **C 242, C21**

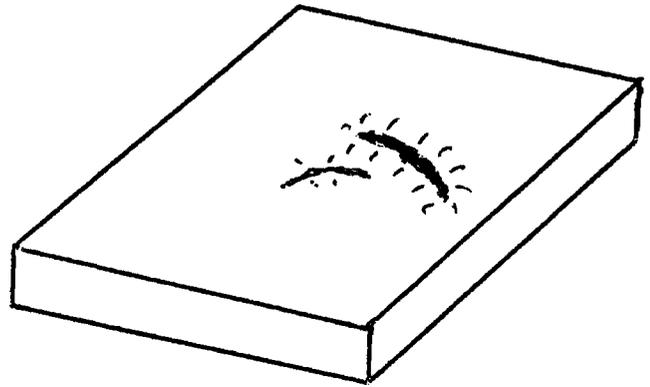
crawling—a defect in the porcelain enamel appearing as agglomerates or irregularly shaped islands. **C 286, B08**

crawling, n—defect in which the wet film recedes from localized areas of the substrate (usually caused by insufficient wetting) leaving those areas uncoated. **D 16, D01**

crawling—*in protective coatings*, a defect in which a wet coating film recedes from a small area to form an uneven surface shortly after application. **D 4538, D33**

crawling, n—a nonuniform contraction of the printing ink on the substrate due to poor wetting. Also referred to as *reticulation* or *pearling*. **D 6488, D01**

crawling—a parting and contraction of the glaze on the surface of ceramic ware during drying or firing, resulting in unglazed areas bordered by coalesced glaze.



F 109, C21

craze—multiple fine cracks at or under the pultruded surface.

D 3918, D20

craze, crazing—a defect appearing as one or more fine cracks in the porcelain enamel. **C 286, B08**

crazed, adj—*in building construction*, having a random network of cracks in a sealant, coating, or membrane surface which do not penetrate through the body of the material. **C 717, C24**

crazed, adj—*in building construction*, exhibiting crazing. **C 717, C24**

craze, hairline—multiple fine pultrusion surface separation cracks that exceed 1/4 in. (6.4 mm) in length and do not penetrate in depth to the equivalent of full ply of reinforcement. **D 3918, D20**

craze, resin—multiple fine separation cracks at the pultruded surface not penetrating into the reinforcement.

NOTE—This condition is usually due to resin shrinkage during cure in resin-rich areas. **D 3918, D20**

craze, star—multiple fine pultrusion surface separation cracks exceeding 1/4 in. (6.4 mm) in length but not penetrating in depth to the equivalent of a full ply of reinforcement, that appear to emanate from a central point.

NOTE—This condition is often caused by impact damage.

D 3918, D20

crazing—a network of fine hairline cracks in a coating. **B 374, B08**

crazing—the cracking that occurs in fired glazes or other ceramic coatings as a result of tensile stresses. May also occur in the surface portion of uncoated (unglazed) whiteware bodies.

C 242, C21

crazing, n—*in building construction*, a network of cracks in a sealant, coating or membrane surface. **C 717, C24**

crazing, v—*in building construction*, the formation of a network of random surface cracks in a sealant, coating, or membrane. **C 717, C24**

crazing, n—apparent fine cracks at or under the surface of a plastic. **D 883, D20**

crazing, n—a fracture at or under the surface. **D 907, D14**

crazing, n—formation of a random pattern of shallow cracks on a rubber surface usually due to ageing by light. **D 1566, D11**

crazing—*in protective coatings*, the formation of a criss-cross pattern of minute cracks on the surface of a coating film. **D 4538, D33**

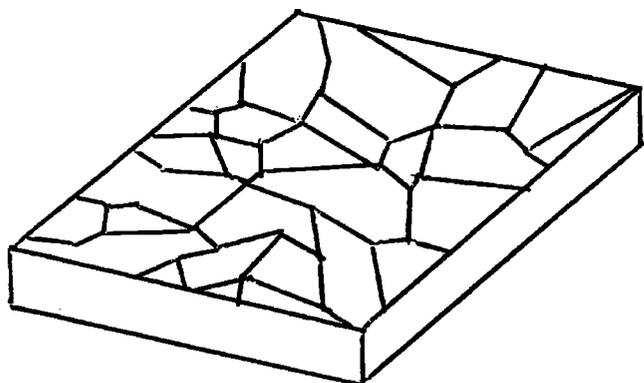
crazing, n—a network of apparent fine cracks on or beneath the

surface of materials such as in transparent plastics, glazed ceramics, glass, or clear coatings. **E 284, E12**

crazing—the development of a multitude of very fine cracks in a material such as ceramic glaze, varnish, paint, etc., often the result of exposure to sunlight, weathering, or certain solvents. **E 631, E06**

crazing—the development of a multitude of very fine cracks in a material such as ceramic glaze, varnish, paint, etc., often the result of exposure to sunlight, weathering, or certain solvents. **E 1749, E06**

crazing—the cracking that occurs in fired glazes or other ceramic coatings as a result of tensile stresses, may also occur in the surface portion of uncoated (unglazed) whiteware bodies.



crazing, n—apparent fine cracks at or under the surface of a plastic. **F 109, C21**

crazing, n—minute, closely grouped, generally superficial cracks that usually results from light activated oxidation. **F 412, F17**

crazing, n—apparent fine cracks at or under the surface of a plastic. **F 538, F09**

crazing, n—apparent fine cracks at or under the surface of a plastic. **F 1251, F04**

crazing—the occurrence of very small, localized, micro-cracks at or under the surface of, but not extending entirely through, a transparent material, which act like tiny mirrors that reflect light in unwanted directions. **F 2429, F07**

CRC—abbreviation for cyclic redundancy check. **F 1457, F05**

CRE—abbreviation for constant-rate-of-extension. **D 123, D13**

CRE—abbreviation for constant-rate-of-extension. **D 4849, D13**

creaming—the separation of a layer of the dispersed phase of an emulsion polish to the surface of the liquid continuous phase. **D 2825, D21**

creaming (rubber latex), n—a reversible process of concentration by gravitational force of rubber particles near the bottom or top of the latex. **D 1566, D11**

crease, n—a fabric defect evidenced by a break, line, or mark in a fabric generally caused by a sharp fold. **D 123, D13**

crease, n—a fabric defect evidenced by a break, line, or mark generally caused by a sharp fold. (*Syn.* mill wrinkle) **D 3990, D13**

crease—a ridge or groove made by folding and pressing. **F 2112, F01**

crease cycle—a 180 degree crease followed by a flattening of the crease. **F 2112, F01**

crease mark, n—a visible deformation left in a fabric after a crease has been incompletely removed during fabric processing. **D 123, D13**

crease mark, n—a visible deformation left in a fabric after a crease has been incompletely removed during fabric processing. **D 3990, D13**

crease retention, n—that property of a fabric which enables it to maintain an inserted crease. **D 123, D13**

crease retention, n—that property of a fabric which enables it to maintain an inserted crease. **D 4850, D13**

creep, n—the time dependent part of a strain resulting from stress. **C 717, C24**

creep—time dependent deformation of a material under load. **C 904, C03**

creep, n—the time-dependent part of a strain resulting from stress. **C 1145, C28**

creep—slow movement of rock debris or soil usually imperceptible except to observations of long duration. Time-dependent strain or deformation, for example, continuing strain with sustained stress. **D 653, D18**

creep, n—the time-dependent part of strain resulting from stress. **D 883, D20**

creep, n—in an adhesive, the time-dependent deformation usually resulting from sustained stress (sometimes called cold flow). **D 907, D14**

creep—the time-dependent part of a strain resulting from stress. **D 1079, D08**

creep, n—the time-dependent part of a strain resulting from stress. **D 1566, D11**

creep, n—the time-dependent increase in accumulative strain in a material resulting from an applied constant force. **D 4439, D35**

creep, n—the time-dependent increase in strain in a solid resulting from force. **E 6, E28**

creep, n—the time-dependent part of strain resulting from stress. (D20) **F 412, F17**

creep, n—the time-dependent part of strain resulting from stress. **F 1251, F04**

creep crack growth behavior—a plot of the time rate of crack growth, da/dt , as a function of $C^*(t)$. **E 1823, E08**

creeping wave—A compression wave that travels in a solid immediately adjacent to a boundary and generates a shear mode “head-wave” (q.v.) travelling away from the boundary at the critical angle. **E 1316, E07**

creep of frozen ground—the slow deformation that results from long-term application of a stress too small to produce failure in the frozen material. **D 7099, D18**

creep recovery, n—the time-dependent decrease in strain in a solid, following the removal of force. **E 6, E28**

creep rupture strength [FL^{-2}], n —the stress that will cause fracture in a creep test at a given time, in a specified constant environment. **E 6, E28**

creep strain, n—the total strain, at any given time, produced by the applied stress during a creep test. **D 907, D14**

creep strength—the failure strength of a material at a given rate of strain or after a given period under deviatoric stress. **D 7099, D18**

creep strength [FL^{-2}], n —the stress that causes a given creep in a creep test at a given time in a specified constant environment. **E 6, E28**

creep zone boundary—the locus of points ahead of the crack front where the equivalent strain caused by the creep deformation equals the equivalent strain caused by the elastic deformation. **E 1823, E08**

crenulations—multiple kinks that can increase the apparent fiber cohesion. **D 2946, C17**

creped duplex paper—See paper. **D 996, D10**

creped paper—See paper. **D 996, D10**

crepe rubber—originally unvulcanized natural rubber with light color and knobby surface for soles and heels. Most crepe rubber for shoes is now of synthetic elastomers. **F 869, F08**

crescent crack—damage having the appearance of a crescent, produced in a glass surface by the frictional translation of a hard, blunt object across the glass surface. The crescent shape is concave toward the direction of translation on the damaged surface. **C 162, C14**

cresol(s)—methyl phenol, hydroxymethyl benzene (C_7H_8O) mol weight 108.13; colorless, yellowish, brownish, yellow, or pinkish liquid; phenolic odor. Three isomeric cresols exist. **D 4790, D16**

crest—outermost part of thread, joining flanks. (See **double crest**.)
F 547, F16

crest diameter—twice the distance between nail axis and crest, measured perpendicular to nail axis. Thread crest diameters for given shank diameters:

Wire Diameter, in.	Helically Threaded Nails		Annularly Threaded Nails, Stiff-Stock and
	Stiff-stock, in.	Hardened, in.	Hardened, in.
0.120	0.134 to	0.140 to	0.132 to
	0.138	0.144	0.136
0.135	0.161 to	0.161 to	0.149 to
	0.166	0.166	0.154
0.148	0.173 to	0.173 to	0.161 to
	0.180	0.180	0.166
0.165	0.196 to	0.196 to	0.180 to
	0.201	0.201	0.185
0.177	0.209 to	0.209 to	0.193 to
	0.213	0.213	0.197

F 547, F16

crest factor, *cf*—the ratio of the maximum value of a periodically alternating quantity to its rms value.

NOTE—For a sinusoidal variation the crest factor is $\sqrt{2}$. A 340, A06

creylic acids—commercial mixtures of phenolic materials which may include phenol, cresols, xylenols, and other alkylated phenols.
D 4790, D16

crevice corrosion—localized corrosion of a metal surface at, or immediately adjacent to, an area that is shielded from full exposure to the environment because of close proximity between the metal and the surface of another material.
G 15, G01

cricket, *n*—a construction to divert water around or away from a chimney, curb, wall, expansion joint, or other penetration. (See **saddle**.)
D 1079, D08

criminalistics, *n*—a branch of forensic science concerned with the examination and interpretation of physical evidence, for the purpose of aiding forensic investigation.
E 1732, E30

crimp, *n*—as applied to a continuous-element zipper, the predetermined formation of the monofilament cross-section at the point where the continuous element is interlocked.
D 123, D13

crimp, *n*—in a textile strand, the undulations, waviness, or succession of bend, curls, or waves in the strand induced either naturally, mechanically, or chemically.
D 123, D13

crimp, *n*—as applied to a continuous element zipper, the predetermined formation of the monofilament cross-section at the point where the continuous element is interlocked.
D 2050, D13

crimp—an operation that mechanically seals the valve to the container.
D 3064, D10

crimp, *n*—in a textile strand, the undulations, waviness, or succession of bend, curls, or waves in the strand induced either naturally, mechanically, or chemically.
D 4849, D13

crimp, *n*—in a yarn, the undulations, waviness, or succession of bends, curls, or waves in the yarn induced either naturally, mechanically, thermally, or chemically.
D 4849, D13

crimp contraction, *n*—an indicator of crimp capacity or a characterization of a yarn's ability to contract under tension.
D 123, D13

crimp contraction, *n*—an indicator of crimp capacity or a characterization of a yarn's ability to contract under tension.
D 4849, D13

crimp development medium, *n*—for testing of textured yarn, an environment that allows the temporary set of fiber crimp to be overcome and that allows the filaments to assume their permanently set configuration.
D 123, D13

crimp development medium, *n*—for testing of textured yarn, an environment that allows the temporary set of fiber crimp to be overcome and that allows the filaments to assume their permanently set configuration.
D 4849, D13

crimped head—head with undulating or pronged rim, or both.
F 547, F16

crimp frequency, *n*—in manufactured staple fibers, the number of crimps or waves per unit length of extended or straightened fiber.
D 123, D13

crimp frequency, *n*—in manufactured staple fibers, the number of crimps or waves per unit length of extended or straightened fiber.
D 4849, D13

crimp index, *n*—an indirect measure of the amplitude of the crimp.
D 123, D13

crimp index, *n*—an indirect measure of the amplitude of the crimp.
D 4849, D13

crimp recovery, *n*—a measure of the ability of a yarn to return to its original crimped state after being subjected to tension.
D 123, D13

crimp recovery, *n*—a measure of the ability of a yarn to return to its original crimped state after being subjected to tension.
D 4849, D13

crinkled—a textural effect in a porcelain enamel surface having the appearance of fine wrinkles or ridges.
C 286, B08

criteria, *n*—the second part of a performance statement, consisting of quantitative statements defining the level or range of performance necessary to meet an objective or, where such a level or range cannot be established, the units of measurement of the performance.
E 2151, E06

criterion—See **requirement statement**.
E 631, E06

criterion, *n*—An established precedent, rule, measure, norm, or code upon which a decision may be based.
E 631, E06

criterion—See **requirement statement**.
E 1480, E06

criterion, *n*—an established precedent, rule, measure, norm, or code upon which a decision may be based.
E 2114, E06

criterion of failure—complete separation, or the presence of a crack of specified length visible at a specified magnification. Other criteria may be used but should be clearly defined.
E 1823, E08

critical angle—the incident angle of the ultrasonic beam beyond which a specific refracted wave no longer exists.
E 1316, E07

critical angle, θ_c —the angle whose sine is equal to the relative refractive index for light striking an interface from the greater to the lesser refractive medium: $\theta_c = \sin^{-1} n_{21}$, where n_{21} = the ratio of the refractive indices of the two media.
E 131, E13

critical anodic current density—the maximum anodic current density observed in the active region for a metal or alloy electrode that exhibits active-passive behavior in an environment.
G 15, G01

critical bed depth—the minimum depth of an adsorbent bed required to contain the mass transfer zone.
D 2652, D28

critical circle (critical surface)—the sliding surface assumed in a theoretical analysis of a soil mass for which the factor of safety is a minimum.
D 653, D18

critical cooling rate, *n*—the slowest rate of continuous cooling at which austenite can be cooled from above the transformation range to prevent its transformation above M_s .
A 941, A01

critical crack size [L]—the crack size in a chevron-notch specimen at which the specimen's stress-intensity factor coefficient, Y^* , is a minimum, or equivalently, the crack size at which the maximum force would occur in a purely linear elastic fracture mechanics test. At the critical crack size, the width of the crack front is approximately one third the dimension B.
E 1823, E08

critical current density—a current density above which a new and sometimes undesirable reaction occurs.
B 374, B08

critical curve—in a binary, or higher order, phase diagram, a line along which the phases of a heterogeneous equilibrium become identical.
E 7, E04

critical curve—in a binary, or higher order, phase diagram, a locus of points along which two or more phases exist in stable thermodynamic equilibrium.
E 1142, E37

critical damping—the minimum viscous damping that will allow a displaced system to return to its initial position without oscillation.
D 653, D18

critical damping (in dynamic mechanical measurement)—that damping required for the borderline condition between oscillatory and nonoscillatory behavior.
D 4092, D20

critical defect, *n*—a serious defect that judgment and experience indicate is likely to prevent the usability or proper performance of a product from its intended purpose.
D 123, D13

- critical defect**, *n*—a serious defect that judgment and experience indicate is likely to prevent the usability or proper performance of a product from its intended purpose. **D 4850**, D13
- critical density**—the unit weight of a saturated granular material below which it will lose strength and above which it will gain strength when subjected to rapid deformation. The critical density of a given material is dependent on many factors. **D 653**, D18
- critical difference**, *n*—the observed difference between two test results, which should be considered significant at the specified probability level. **D 123**, D13
- critical edge distance**—minimum anchor edge distance, measured from the anchor centerline to the edge of the structural member, at which the full anchor capacity can be obtained without concrete edge breakout failure or splitting failure. **E 2265**, E06
- critical flow**—open channel flow in which the energy, expressed in terms of depth plus velocity head, is a minimum for a given flow rate and channel. The Froude number is unity at critical flow. **D 4410**, D19
- critical flux at extinguishment**, *n*—a flux level at the specimen surface corresponding to the distance of farthest advance and subsequent self-extinguishment of the flame on the centerline of a specimen. **E 176**, E05
- critical frequency**, f_c —frequency at which maximum or minimum amplitudes of excited waves occur. **D 653**, D18
- critical half thickness**, (*a*), *n*—an estimation of the half thickness of a sample in an *unstirred container*, in which the heat losses to the environment are less than the retained heat. This buildup of internal temperature leads to a thermal-runaway reaction. **E 1445**, E27
- critical height** (*ch*), *n*—the maximum exposed height of a cone or pyramid that will not cause a puncture failure of a geosynthetic at a specified hydrostatic pressure for a given period of time. **D 4439**, D35
- critical height**, H_c (*L*)—the maximum height at which a vertical or sloped bank of soil or rock will stand unsupported under a given set of conditions. **D 653**, D18
- critical humidity**—the relative humidity above which the atmospheric corrosion rate of some metals increases sharply. **G 15**, G01
- critical hydraulic gradient**—see **hydraulic gradient**. **D 653**, D18
- critical illumination**—see **illumination, critical**. **E 175**, E41
- critical parts**, *n*—those components used in the test that are known to affect test severity. **D 4175**, D02
- critical path method**—method of scheduling in a detailed manner the essential steps or actions that must be taken in sequence from the start to the completion of a construction project. **E 631**, E06
- critical pitting potential**—the least noble potential where pitting corrosion will initiate and propagate. (See breakdown potential.) **G 15**, G01
- critical point**—in a phase diagram, that specific value of composition, temperature, pressure or combinations thereof at which the phases of a heterogeneous equilibrium become identical. (See also **transformation temperature**.) **E 7**, E04
- critical point**—in a binary phase diagram, that specific value of composition, temperature, pressure, or combinations thereof at which the phases of a heterogeneous equilibrium become identical. **E 1142**, E37
- critical pressure**—that pressure above which the liquid and vapor states are no longer distinguishable. **E 7**, E04
- critical pressure**—that pressure at the critical point. **E 1142**, E37
- critical property**, *n*—a quantitatively measurable characteristic which is absolutely necessary to be met if a material or product is to provide satisfactory performance for the intended use. **D 1711**, D09
- critical radiant flux**, *n*—the level of incident radiant heat energy on the floor covering system at the most distant flame-out point. It is reported as W/cm^2 (or $Btu/ft^2 \cdot s$). **E 176**, E05
- critical radiant flux**, *n*—the level of incident radiant heat energy on the attic floor insulation system at the most distant flame-out point. It is reported as W/cm^2 (or $Btu/ft^2 \cdot s$). **E 176**, E05
- critical slip angle**, (rad or degree), *n*—the value of the slip angle at the peak lateral force coefficient. **F 538**, F09
- critical slope**—the maximum angle with the horizontal at which a sloped bank of soil or rock of given height will stand unsupported. **D 653**, D18
- critical slope ratio**, r_c —the unloading slope ratio at the critical crack size. **E 1823**, E08
- critical spacing**—minimum anchor spacing, measured centerline to centerline of the anchors, at which the full anchor capacity can be obtained without influence from adjacent anchors. **E 2265**, E06
- critical surface**—see **critical circle**. **D 653**, D18
- critical surface**—in a ternary, or higher order, phase diagram, the area upon which the phases in equilibrium become identical. **E 7**, E04
- critical surface**—in a ternary or higher order phase diagram, the area upon which the phases in equilibrium become identical. (E 7, E04). **E 1142**, E37
- critical temperature**—that temperature above which the vapor phase cannot be condensed to liquid by an increase in pressure. **E 7**, E04
- critical temperature**—that temperature at the critical point. **E 1142**, E37
- critical temperature**, (T_c), *n*—an estimation of the lowest temperature of an *unstirred container* at which the heat losses to the environment are less than the retained heat leading to a buildup of internal temperature. This temperature buildup leads to a thermal-runaway reaction. **E 1445**, E27
- critical void ratio**—see **void ratio**. **D 653**, D18
- critical wax strength number**, *n*—in *paper surface strength*, the average highest numerical designation of wax that does not disturb the surface of the paper whose surface strength is tested by the wax pick method under specified conditions. See **pick**. **D 1968**, D06
- crizzle**—an imperfection in the form of a multitude of fine surface fractures. **C 162**, C14
- CRL**—abbreviation for constant-rate-of-loading. **D 123**, D13
- CRL**—abbreviation for constant-rate-of-loading. **D 4849**, D13
- crocidolite**, *n*—common name for **riebeckite asbestos**. **D 2946**, C17
- crocking**, *n*—a transfer of color from the surface of a colored fabric to an adjacent area of the same fabric or to another surface principally by rubbing action. (Compare **color staining, color bleeding**.) **D 123**, D13
- crocking**—the transfer of finish or color when leather is rubbed with a wet or dry cloth. **D 1517**, D31
- crocking**, *n*—a transfer of color from the surface of a colored fabric to an adjacent area of the same fabric or to another surface principally by rubbing action. (Compare **color staining**.) **D 3990**, D13
- crook**—a distortion of a piece of lumber in which there is a deviation in a direction perpendicular to the edge from a straight line from end to end of the piece. **D 9**, D07
- Crookes glass**—a glass having low transmission for ultraviolet light, and containing cerium and other rare earths. **C 162**, C14
- crop**—a side with the belly trimmed off. **D 1517**, D31
- crop oil concentrate**—an emulsifiable petroleum oil-based product containing 15 to 20 % w/w surfactant and a minimum of 80 % w/w phytobland oil. **E 1519**, E35
- crop oil (emulsifiable)**—an emulsifiable petroleum oil-based product containing up to 5 % w/w surfactant and the remainder of a phytobland oil. **E 1519**, E35
- crop oil (non-emulsifiable)**—See **phytobland oil**. **E 1519**, E35
- cross band**, *n*—inner layers of veneer whose grain direction is usually perpendicular to that of the face plies, applied particularly to plywood of five or more plies and lumber-core panels. **D 1038**, D07
- cross band**, *v*—to place the grain of the inner layer of veneer at right angles to that of the face and back. **D 1038**, D07
- crossbar**, *n*—a stroke that intersects other portions of the character at both ends. (cf. arm and cross stroke). **E 2195**, E30

crossbend test

crossbend test—a test in which fired or bisque porcelain enamel panels are progressively distorted by bending to determine the resistance of the coating to cracking. **C 286, B08**

cross break—a separation of the wood cells across the grain. Such breaks may be due to internal stress resulting from unequal longitudinal shrinkage or external forces. **D 9, D07**

cross-chest width, *n*—in body measurements, the distance from front break-point to front break-point. **D 123, D13**

cross-contamination, *n*—contamination of a material or product with another material or product. **E 2363, E55**

cross-contamination, *n*—the unintended presence of a cell or a material with another cell or material. **F 2312, F04**

cross-country track, *n*—surface not subject to repeated traffic in addition, no roads, routes, well-worn trails or man-made improvements; can consist of tank trails with crushed rock or having large exposed obstacles (rocks, boulders, etc.). **F 538, F09**

crosscut—to cut a board, timber, or log generally transverse to the direction of the fibers. A synonym is “buck.” **D 9, D07**

cross-cut chisel point—chisel point with beveled point faces parallel to staple-crown axis. (See **right-angle chisel point**.) **F 592, F16**

cross direction—the direction of the paper or paperboard at right angles to the machine direction. Sometimes referred to as CD, CMD (cross machine direction), and across machine direction. **D 1968, D06**

cross direction—one of three mutually perpendicular directions used to define a worked material, specifically that direction in the plane of working which is at right angles to the direction of maximum elongation. **E 7, E04**

cross-dye effect, *n*—variation in dye pick-up between yarns or fibers, resulting from their inherent dye affinities. **D 123, D13**

crossed head—cup head with raised lines in cup forming cross. Also known as X head. **F 547, F16**

cross-fiber—asbestos that is located in (or derives from) veins or seams in which the fibers are close-packed and are oriented at a large angle to the boundaries of the veins or seams. **D 2946, C17**

cross-fired furnace—See **side-fired furnace**. **C 162, C14**

cross flow—flow through a membrane module in which the fluid on the upstream side of the membrane moves parallel to the membrane surface and the fluid on the downstream side of the membrane moves away from the membrane in the direction normal to the membrane surface. **D 6161, D19**

crossflow membrane filtration—a separation of the components of a fluid by semipermeable membranes through the application of pressure and flow parallel to the membrane surface. Includes the processes of reverse osmosis, ultrafiltration, nanofiltration, and microfiltration. **D 6161, D19**

cross grain—See **grain**. **D 9, D07**

cross grains or reeves, *n*—in mica, tangled laminations causing imperfect cleavage. **D 1711, D09**

cross grating—a two-dimensional diffraction grating, patterns from which are similar in the effects produced by diffracted electrons from thin flakes and films, and whose theory may therefore be used to explain the latter. **E 7, E04**

cross laminate—a laminate in which some of the layers of material are oriented approximately at right angles to the remaining layers with respect to the grain or strongest direction in tension. (See also **parallel laminate**.) **D 883, D20**

cross laminate, *n*—see **cross laminate** under **laminate, *n***. **D 907, D14**

cross laminate—a laminate in which some of the layers of material are oriented approximately at right angles to the remaining layers with respect to the grain or strongest direction in tension. (See also **parallel laminate**.) (D20) **F 412, F17**

crosslink, *v*—to form chemical bonds between molecules to produce a three-dimensional network. **D 907, D14**

crosslink, *n*—chemical bond bridging one polymer chain to another. **D 1566, D11**

crosslink density, *n*—number of crosslinks per unit mass or volume of vulcanizate. **D 1566, D11**

crosslinking, *n*—the formation of a three dimensional polymer by means of interchain reactions resulting in changes in physical properties. **D 883, D20**

cross linking—the reaction of a difunctional molecule with each of two molecules of a polymer. This change of the polymer from linearity produces profound changes in the physical properties. **D 1695, D01**

crosslinking, *n*—the formation of a three dimensional polymer by means of interchain reactions resulting in changes in physical properties. (D20) **F 412, F17**

crosslinking (the act of), *n*—formation of chemical bonds between polymer chains to give a network structure. **D 1566, D11**

cross-machine direction, *n*—the direction in the plane of the fabric perpendicular to the direction of manufacture. **D 4439, D35**

cross-machine direction, CD, *n*—the direction in the plane of the fabric perpendicular to the direction of manufacture. **D 123, D13**

cross-method reproducibility (R_{XY}), *n*—a quantitative expression of the random error associated with the difference between two results obtained by different operators using different apparatus and applying the two methods *X* and *Y*, respectively, each obtaining a single result on an identical test sample, when the methods have been assessed and an appropriate bias-correction has been applied in accordance with this practice; it is defined as the 95 % confidence limit for the difference between two such single and independent results. **D 4175, D02**

crossply laminate—a laminate composed of only 0 and 90° plies. This is not necessarily symmetric. **D 3878, D30**

cross-product contamination, *n*—the unintentional mixing of powders with distinct differences in either physical characteristics or chemical composition or both. **B 243, B09**

cross section—a section of a stem, board, or other piece of wood taken at right angles to its longitudinal axis. **D 9, D07**

cross section, σ —the quotient of *P* by Φ , where *P* is the probability of the interaction for one target entity when subjected to the particle fluence Φ (ICRU).

$$\sigma = P/\Phi$$

Unit: m²

The special unit of cross section is the barn, *b*.

$$1 \text{ b} = 10^{-28} \text{ m}^2$$

E 170, E10

cross section:

enhanced elastic—EIA, cross section for elastic scattering that is larger than that predicted by *Rutherford* due to partial penetration of a nucleus in the specimen by the incident particle.

nuclear reaction—EIA, the probability of a particular nuclear reaction as a function of energy and the emission direction of the detected product. Usually expressed as an area in units of barns = 10⁻²⁸ m².

Rutherford—EIA, nuclear reaction cross section for the particular case of elastic scattering as calculated from classical mechanics. First evaluated by *Rutherford*.

stopping—EIA, the energy loss of a particle incident on the specimen per unit area density of specimen atoms. Usually expressed in units of eV·cm²/atom. **E 673, E42**

cross section—the apparent cross-sectional area of the nucleus as calculated on the basis of the probability of occurrence of a reaction by collision with a particle. It does not necessarily coincide with the geometrical cross-sectional area πr^2 . It is given in units of area, 1 barn = 10⁻²⁴ cm². **E 1316, E07**

cross section, *n*—shows the width and thickness of material, including the center section's shape, core diameter, and core wrap. **F 1379, F14**

- cross-sectioning**—a method in which a specimen is mechanically cleaved, cut, or polished in a plane perpendicular to the interface under study, so that associated compositional differences or gradients in the plane of the polished surface may be observed. **E 673, E42**
- cross section of the cavity, *n***—in a mold for test specimens, the area of a planar section perpendicular to the flow pattern during filling of the mold that forms the critical portion of the test specimen. **D 883, D20**
- cross stroke, *n***—a stroke that crosses another portion of the character and is not attached at either end. (For example, the horizontal stroke of the “t”) (cf. crossbar). **E 2195, E30**
- crosstalk, *n***—the undesired effect of force readings appearing on an unloaded axis of a transducer while applying force to another. **E 867, E17**
- cross talk**—the signal leakage (acoustic or electric) across an intended acoustic or electric barrier. **E 1316, E07**
- croch, *n***—*in anatomy*, the body area adjacent to the vertex of the included angle between the legs. **D 123, D13**
- croch, *n***—the body area adjacent to the vertex of the included angle between the legs. **D 5219, D13**
- croch, *n***—*in anatomy*, the body area adjacent to the vertex of the included angle between the legs. **F 1494, F23**
- croch height, *n***—the vertical distance from the midpoint of the croch to the floor, taken with the subject standing and without shoes.
- croch height (infant special case), *n***—the straight distance from the midpoint of the croch to the soles of the feet, taken with subject lying down flat with legs extended and foot positioned at 1.57 rad (90°) to the leg. **D 5219, D13**
- croch length (total), *n***—the distance from waist level at the center front, through the croch and to the waist level at the center back, avoiding constriction at the croch. **D 5219, D13**
- croupon**—untanned, whole cattlehide with the belly and shoulder cut off. Comparable to a butt bend in tanned leather. **D 1517, D31**
- crowding**—improper horizontal character spacing. **F 149, F05**
- crowfoot weave, *n***—a broken-twill weave 1-up and 3-down or 3-up and 1-down with two ends to the right and two ends to the left, commonly referred to as four-harness satin or broken crow. **D 123, D13**
- crowfoot weave, *n***—a broken-twill weave one-up and three-down or three-up and one-down with two ends to the right and two ends to the left, commonly referred to as 4-harness satin or broken crow. **D 7018, D13**
- crow**—the top or roof of a melter. **C 162, C14**
- crow**—the top or highest point of the internal surface of the transverse cross section of a pipe. **C 822, C13**
- crow, *n***—*in anatomy*, the top of the head. **D 123, D13**
- crow**—also roof or back, that is, the highest point of the cross section. *In tunnel linings*, the term is used to designate either the arched roof above spring lines or all of the lining except the floor or invert. (ISRM) **D 653, D18**
- crow, *n***—the top of the head. **D 5219, D13**
- crow**—staple end opposite staple point, connecting both staple legs and providing bearing area. **F 592, F16**
- crow optical glass**—See **optical crown glass**. **C 162, C14**
- crow process**—{archaic} a method of making flat glass by blowing a large bulb, opening it, and then spinning it flat. **C 162, C14**
- crow width**—overall width of staple including both staple legs. **F 592, F16**
- crowfeet, *n***—*infabrics*, fine wrinkles of varying degree of intensity, size, and shape. **D 123, D13**
- crowfeet, *n***—small flowmarks of V-shape on calendered sheeting. **D 1566, D11**
- crowfeet, *n***—*infabrics*, fine wrinkles of varying degrees of intensity, size, and shape. **D 3990, D13**
- CRT**—abbreviation for constant-rate-of-traverse. **D 4849, D13**
- crude asbestos**—hand-cobbed (released from its ore by manual hammer impact) cross-vein asbestos in its natural or unfiberized form. **D 2946, C17**
- crude mica**—mica as mined; crude crystals with dirt and rock adhering. **D 1711, D09**
- crude oil, *n***—a naturally occurring hydrocarbon mixture, generally in a liquid state, which may also include compounds of sulfur, nitrogen, oxygen, metals, and other elements. (Synonym—*crude petroleum, crude*.) **D 4175, D02**
- crude stripper oil, *n***—a by-product of the manufacture of citrus juice, composed largely of d-limonene and containing up to 1.5 % of aldehydes. (See also **d-limonene**.) **D 804, D01**
- crudiness (kroodiness)**—the extent to which a sample of asbestos contains crudy elements. See **crudy**. **D 2946, C17**
- crudy (kroodi)**—the quality of processed asbestos with relatively low specific surface area and degree of fiberization, containing an appreciable portion of intact assemblages of fiber (derived from the term crude asbestos). **D 2946, C17**
- crudy (kroodi) bundle**—a heavy assemblage of asbestos in closed-packed parallel orientation, that may be partially crushed, and that has a transverse dimension exceeding 8 mm. **D 2946, C17**
- crush**—*on flat glass sheets*, a lightly pitted condition with a dull gray appearance. **C 162, C14**
- crush, *n***—*in pile yarn floor coverings*, loss of tuft definition due to entanglement and compression of pile fibers. **D 123, D13**
- crush, *n***—*in pile yarn floor coverings*, loss of tuft definition due to entanglement and compression of pile fibers. **D 5684, D13**
- crushed feathers, *n***—feathers and feather fiber resulting from curling, crushing, or chopping feathers without removing the quill. **D 123, D13**
- crushed feathers, *n***—feathers and feather fiber resulting from curling, crushing, or chopping feathers without removing the quill. **D 7022, D13**
- crushed gravel, *n***—the product resulting from the artificial crushing of gravel with substantially all fragments having at least one face resulting from fracture. **C 125, C09**
- crushed leather**—leather made from chrome-vegetable retanned kidskins with the grain accentuated by boarding or other process. **D 1517, D31**
- crushed stone, *n***—the product resulting from the artificial crushing of rocks, boulders, or large cobblestones, substantially all faces of which have resulted from the crushing operation. **C 125, C09**
- crushed stone**—the product resulting from the artificial crushing of rocks, boulders, or large cobblestones, substantially all faces of which have resulted from the crushing operation. **D 1079, D08**
- crusher-run, *n***—the total unscreened product of a stone crusher. **D 8, D04**
- crushing strength, *n***—*for pipes*, a property of solid material that indicates its ability to withstand collapse from external, compressive loads. **C 1154, C17**
- crushing strength**—the property of a particle to resist physical breakdown when contained and subjected to a slowly increasing continuously applied force. **D 2652, D28**
- crushing strength**—property of solid material that indicates its ability to withstand collapse from external compressive loads. **D 2946, C17**
- crush strength, *n***—*in catalysis*, a measure of the resistance of a single particle of a formed catalyst to loss of form when subjected to a compressive force. **D 3766, D32**
- crust**—used as an adjective or in the phrase “in the crust,” refers to leather than has been tanned but not finished (see also **rough**). **D 1517, D31**
- crust-like cryostructure**—the structural properties of a frozen deposit of angular blocks that are coated with ice, while large spaces between the blocks are not filled with ice. **D 7099, D18**

cryofront

cryofront—the boundary between frozen and unfrozen ground, as indicated by the position of the 0°C isotherm in the ground.

D 7099, D18

cryogenesis—the combination of thermophysical, physico-chemical, and physico-mechanical processes that occur in freezing, frozen, and thawing earth materials.

D 7099, D18

cryogenic aquiclude—a frozen layer of ground with sufficiently low permeability as to act as a confining bed for an aquifer.

D 7099, D18

cryogenic fabric—the distinct soil micromorphology which results from the effects of freezing and thawing processes.

D 7099, D18

cryogenic temperature—the term can apply to temperatures below -50°C but is usually used for those temperatures close to absolute zero (-273°C).

D 7099, D18

cryogenic temperatures—for purposes of this practice, cryogenic temperatures are temperatures at or below -70°C.

E 1705, E48

cryogenic temperatures—temperatures below or equal to -100°C.

E 1705, E48

cryolithology—the study of the genesis, structure, and lithology of frozen earth materials.

D 7099, D18

cryology—the study of the properties of snow, ice, and frozen ground.

D 653, D18

cryopedology—the study of soils at temperatures below 0°C.

D 7099, D18

cryopeg—a layer of unfrozen ground in which the temperature is perennially below 0°C. In general, the freezing of such layers is prevented due to the depression of the freezing point by solids dissolved in the pore water.

D 7099, D18

cryoplanation—the process through which cryoplanation terraces form.

D 7099, D18

cryoplanation terraces—hillside benches or table-like summit surfaces which are thought to have resulted from intense frost wedging associated with snowbanks. These are usually underlain by permafrost and are considered by some as diagnostic landforms of permafrost terrain.

D 7099, D18

cryoprotectant—a chemical substance used to protect cells during freezing and rewarming.

E 1705, E48

cryosol—soil within 1 to 2 m of the surface in which the mean annual ground temperature is below 0°C.

D 7099, D18

cryosphere—that part of the Earth's crust, hydrosphere, and atmosphere subject, for at least a part of each year, to temperatures below 0°C (32°F).

D 7099, D18

cryostructure—the structural characteristics of frozen earth materials.

D 7099, D18

cryosuction—a suction which develops in freezing or partially-frozen fine-grained materials due to temperature-dependent differences in unfrozen water content.

D 7099, D18

cryotexture—the textural characteristics of frozen earth materials cemented together with ice.

D 7099, D18

cryotic ground—soil or rock in which the temperatures are 0°C, or below.

D 7099, D18

cryoturbate—a body of earth material moved or disturbed by the action of frost.

D 7099, D18

cryoturbation—(1) a collective term to describe all soil movements due to frost action; (2) irregular structures formed in earth materials by deep frost penetration and frost action processes.

D 7099, D18

cryptoflorescence, n—crystalline deposit of water-soluble compounds in the pores of masonry.

C 1232, C15

cryptosporidium—a waterborne protozoan that forms cysts and causes acute gastrointestinal illness in humans.

D 6161, D19

crystal—a solid composed of atoms, ions, or molecules arranged in a pattern which is periodic in three dimensions.

E 7, E04

crystal—solid composed of atoms, ions, or molecules, arranged in a pattern which is periodic in three dimensions, (E 7, E04).

E 1142, E37

crystal analysis—a method for determining crystal structure, for

example, the size and shape of the unit cell and the location of all atoms within the unit cell.

E 7, E04

crystal, birefringent—a cr pertaining to the use of a microscope.

E 175, E41

crystal glass—(1) colorless, highly transparent glass which is frequently used for art or tableware.

(2) colorless, highly transparent glass historically containing

lead oxide.

C 162, C14

crystalline glaze—See *crystalline glaze* under **glaze**.

C 242, C21

crystalline regions—see **crystallinity**.

D 1695, D01

crystallinity—a regular arrangement of the atoms of a solid in space.

In most polymers, including cellulose, this state is usually imperfectly achieved. The crystalline regions (ordered regions) are submicroscopic volumes in which there is more or less regularity of arrangement of the component molecules. In these regions there is sufficient geometric order to enable definite X-ray diffraction patterns to be obtained. (see also **degree of crystallinity; degree of order**)

D 1695, D01

crystallinity—regular arrangement of the atoms of a solid in space.

E 1142, E37

crystallinity index—a number used to represent the state of crystallinity of cellulose as a whole. Unfortunately, it has been differently defined by different investigators and should not be used unless it is clearly stated which crystallinity index is meant. (see also **crystallinity**)

D 1695, D01

crystallite—a single crystalline region. (see also **crystallinity**)

D 1695, D01

crystallite—a crystalline grain not bounded by habit planes. E 7, E04

crystallite—crystalline grain not bounded by habit planes, (E 7, E04).

E 1142, E37

crystallization—arrangement of previously disordered material segments of repeating patterns into geometric symmetry. E 1142, E37

crystallization, n—a condition where ink evaporates and forms crystals.

F 1857, F05

crystallization, polymer, n—arrangement of previously disordered polymer segments of repeating patterns into geometric symmetry.

D 1566, D11

crystallization temperature—that temperature at which a specimen undergoes crystallization upon cooling.

E 1142, E37

crystallographic cleavage—the separation of a crystal along a plane of fixed orientation relative to the three-dimensional crystal structure within which the separation process occurs, with the separation process causing the newly formed surfaces to move away from one another in directions containing major components of motion perpendicular to the fixed plane.

E 1823, E08

crystallographic discoloration, n—*in mica*, discoloration appearing as bands of lighter or darker shades of basic color of a block of mica.

D 1711, D09

crystal membrane or solid-state electrode membrane—a thin single or mixed crystal that is an ionic conductor and that separates the internal reference element or internal reference solution from the sample solution.

D 4127, D19

crystal (see transducer)—the piezoelectric element in an ultrasonic search unit. The term is used to describe single crystal piezoelectrics as well as polycrystalline piezoelectrics, such as ferroceramics.

E 1316, E07

crystal system—one of seven groups into which all crystals may be divided; triclinic, monoclinic, orthorhombic, hexagonal, rhombohedral, tetragonal, and cubic.

E 7, E04

C-scan—an ultrasonic data presentation which provides a plan view of the test object, and discontinuities therein.

E 1316, E07

C-stage, n—the final stage in the reaction of certain thermosetting materials in which they have become practically insoluble and infusible.

D 883, D20

C-stage, n—the final stage in the reaction of thermosetting resins, in which the material is practically insoluble and infusible.

D 907, D14

C-stage—the final stage in the reaction of certain thermosetting resins

- in which the material is relatively insoluble and infusible. Certain thermosetting resins in a fully cured adhesive layer are in this stage. Sometimes referred to as *resite*. **E 631, E06**
- C-stage**—the final stage in the reaction of certain thermosetting resins in which the material is relatively insoluble and infusible. Certain thermosetting resins in a fully cured adhesive layer are in this stage. Sometimes referred to as *resite*. **E 1749, E06**
- C*(t)**—Integral, $C^*(t)$ [$FL^{-1} T^{-1}$]—a mathematical expression, a line or surface integral that encloses the crack front from one crack surface to the other, used to characterize the local stress-strain rate fields at any instant around the crack front in a body subjected to extensive creep conditions. **E 1823, E08**
- C test, n**—a standard statistical test for homogeneity of variance. **D 121, D05**
- Ct product, n**—the concentration-time product in ppm · min obtained by integration of the area under a concentration-time curve. **E 176, E05**
- CTS**—abbreviation for **clear to send**. **F 1457, F05**
- cuam viscosity**—see **viscosity, cuprammonium**. **D 1695, D01**
- cube, n**—in *packaging*, the volume of space occupied by the unit under consideration, computed by multiplying overall exterior length, width, and height. For shipping purposes cube is expressed to the nearest 0.1 ft³ (2830 cm³). (Compare **displacement**.) **D 996, D10**
- cube texture**—a texture found in wrought metals in the cubic system, in which nearly all the crystal grains have a plane of the type (100) parallel or nearly parallel to the plane of working and a direction of the type [001] parallel or nearly parallel to the direction of elongation. **E 7, E04**
- cubic**—having three mutually perpendicular axes of equal length. **E 7, E04**
- cubic stock**—in general, a thick dimension stone unit which is not precisely defined in terms of thickness for every kind of stone, particularly for limestone and sandstone. For marble or granite, cubic stock is a unit that is greater than 50 mm in thickness. For limestone, cubic stock is a unit that is greater than 75 mm to 100 mm in thickness, and for sandstone, a unit that is greater than 150 mm to 200 mm in thickness. (In contrast, see *thin stone*.) **C 119, C18**
- cuene viscosity**—see **viscosity, cupriethylenediamine**. **D 1695, D01**
- cuff, n**—in *garment construction*, a finished edge at the end of either a garment sleeve or trouser leg created by turning back or rolling up and stitching the fabric. **F 1494, F23**
- cull**—in grading lumber or other wood products, pieces or parts thereof, that do not meet the lowest quality standards requirements. **D 9, D07**
- cullet**—glass product or portions of product usually suitable for addition to raw batch.
- foreign cullet—cullet from an outside source.
 - domestic cullet (factory cullet)—cullet from within the plant.
 - a portion of a glass article that will later be cut off and discarded or remelted. **C 162, C14**
- cullet cut**—synonymous with **block reek**. **C 162, C14**
- cultural object, n**—any man-made or modified natural article that reflects the beliefs, social forms, and material traits of racial, social, religious, or other specific groups. **D 123, D13**
- culture**—controlled inoculation, growth, and harvesting of known microorganisms. **F 1600, F20**
- culvert**—a pipeline intended to convey water under a highway, railroad, canal, or similar facility. **C 822, C13**
- cumene**—(C₉H₁₂) mol weight 120.19; clear, flammable liquid; melting point, -96.0°C; boiling point, 152.4°C. **D 4790, D16**
- cumulative (acoustic emission) amplitude distribution F(V)**—see **distribution, amplitude, cumulative**. **E 1316, E07**
- cumulative (acoustic emission) threshold crossing distribution F_t(V)**—see **distribution, threshold crossing, cumulative**. **E 1316, E07**
- cumulative droplet diameter (D_{v,1} and D_{v,9})**—diameter of drop such that 10 % and 90 %, respectively, of the liquid volume is in drops of smaller diameter. **E 1102, E35**
- cumulative erosion, n**—in *cavitation and impingement erosion*, the total amount of material lost from a solid surface during all exposure periods since it was first exposed to cavitation or impingement as a newly-finished surface. (More specific terms that may be used are *cumulative mass loss*, *cumulative volume loss*, or *cumulative mean depth of erosion*. See also **cumulative erosion-time curve**.) **G 40, G02**
- cumulative erosion rate, n**—the cumulative erosion at a specified point in an erosion test divided by the corresponding cumulative exposure duration; that is, the slope of a line from the origin to the specified point on the cumulative erosion-time curve. (*Synonym: average erosion rate*) **G 40, G02**
- cumulative erosion-time curve, n**—in *cavitation and impingement erosion*, a plot of cumulative erosion versus cumulative exposure duration, usually determined by periodic interruption of the test and weighing of the specimen. This is the primary record of an erosion test. Most other characteristics, such as the incubation period, maximum erosion rate, terminal erosion rate, and erosion rate-time curve, are derived from it. **G 40, G02**
- cumulative frequency spectrum**—See **exceedances spectrum**. **E 1823, E08**
- cumulative occurrences spectrum**—See **exceedances spectrum**. **E 1823, E08**
- cumulative oversize distribution graph, n**—a graph obtained by plotting the total (cumulative) percentage by the mass retained on each of a set of sieves versus the corresponding aperture sizes. **E 1638, E29**
- cumulative permeation, n**—the total mass of chemical that permeates during a specified time from when the material is first contacted. **F 1494, F23**
- cumulative sample**—See **sample**. **D 1356, D22**
- cumulative undersize distribution graph, n**—a graph obtained by plotting the total (cumulative) percentage by the mass passing each of a set of sieves versus the corresponding aperture sizes. **E 1638, E29**
- cup**—a distortion of a board in which there is a deviation flatwise from a straight line across the width of the board. **D 9, D07**
- cup, cupped head**—head with concave or recessed, instead of flat, top surface to accommodate nail set and to prevent its slipping during countersinking. **F 547, F16**
- cup grease, n**—any lubricating grease having physical properties, such as consistency and texture, suitable for its use in spring-loaded or screw-type lubricating cups. **D 4175, D02**
- cup gun**—a spray gun with a fluid container as an integral part. **C 286, B08**
- cupped oval head**—head with oval or convex top surface and concave bearing surface. (See **umbrella head**.) **F 547, F16**
- cupped point**—incomplete needle point; resulting from breaking of tip of point during forming. **F 547, F16**
- cupping**—the pouring of slip over areas of a part during draining to produce uniform application. **C 286, B08**
- cupping**—the condition sometimes occurring in heavily cold worked rods and wires, in which the outside fibers are still intact and the central zone has failed in a series of cup-and-cone fractures. **E 7, E04**
- cupping, n**—a type of irregular wear characterized by a variation in wear rate that may be periodic (essentially cycloidally shaped) around the tread band circumference in one or more rows; the variation of loss is essentially independent of individual projections if the pattern contains these projections. **F 538, F09**
- cuprammonium process**—a process for making rayon by dissolving

cuprammonium process

cellulose in an ammoniacal copper solution and spinning the resulting solution into an acid bath, thereby regenerating the cellulose as fibers.

D 1695, D01

cuprammonium viscosity—see **viscosity, cuprammonium**.

D 1695, D01

cupriethylenediamine viscosity (cuene or CED)—see **viscosity, cupriethylenediamine**.

D 1695, D01

curb—a component for holding the tumblers in place. F 471, F12

cure, *v*—*in building construction*, to attain the intended performance properties of a compound by means of evaporation, chemical reaction, heat, radiation, or combinations thereof. C 717, C24

cure, *n*—*in building construction*, the process by which a compound attains its intended performance properties by means of evaporation, chemical reaction, heat, radiation, or combinations thereof.

C 717, C24

cure, *n*—the reaction mechanism in which the physical, chemical and mechanical properties of a hydraulic cement change through the phases of slurry-paste-solid with time, with or without external heat, in the presence of water.

C 1154, C17

cure—*in grouting*, the change in properties of a grout with time.

D 653, D18

cure, *v*—to change the properties of a polymeric system into a more stable, usable condition by the use of heat, radiation, or reaction with chemical additives.

D 883, D20

cure, *v*—to develop the strength properties of an adhesive by chemical reaction.

D 907, D14

cure, *n*—See **vulcanization**, the preferred term.

D 1566, D11

cure—reaction mechanism in which the physical, chemical, and mechanical properties of a hydraulic cement change through the phases of slurry-paste-solid with time, with or without external heat, in the presence of water.

D 2946, C17

cure—to change the properties of a polymeric system into a more stable, usable condition by the use of heat, radiation, or reaction with chemical additives.

E 631, E06

cure—to change the properties of a polymeric system into a more stable, usable condition by the use of heat, radiation, or reaction with chemical additives.

E 1749, E06

cure, *v*—to develop the ultimate properties of a wet-state material by a chemical process.

E 2110, E06

cure, *v*—to change the properties of a polymeric system into a more stable, usable condition by the use of heat, radiation, or reaction with chemical additives. (ISO, D20)

F 412, F17

cure, *v*—to change the properties of a polymeric system into a more stable, usable condition by the use of heat, radiation, or reaction with chemical additives.

F 1251, F04

cure, air or ambient, *n*—the method of setting or hardening products wherein the portland cement is allowed to hydrate at atmospheric conditions of pressure, preferably under conditions to inhibit water and heat loss.

C 1154, C17

cure, autoclave, *n*—a means for accelerating the cure reaction at elevated temperature and pressure in saturated steam, where reactive siliceous material has been incorporated into the cementitious matrix, such that a hydrothermal reaction takes place between the cement and silica yielding calcium silicate.

C 1154, C17

cure cycle—the schedule of time periods, at specified conditions, to which a reacting thermosetting material is subjected to reach a specified property level.

D 883, D20

cured, *adj*—*in building construction*, pertaining to the state of a compound that has attained its intended performance properties by means of evaporation, chemical reaction, heat, radiation, or combinations thereof.

C 717, C24

cure meter, *n*—a testing device that measures the progress of vulcanization at a vulcanizing temperature.

D 1566, D11

cure (portland cement plaster or stucco), *v*—(*I*) to provide conditions conducive to the hydration process of portland cement plaster

or stucco, or (*2*) to maintain proper temperature and a sufficient quantity of water within the plaster to ensure cement hydration.

C 11, C11

cure time—*in grouting*, the interval between combining all grout ingredients or the formation of a gel and substantial development of its potential properties.

D 653, D18

cure time—the period of time that a reacting thermosetting material is exposed to specific conditions to reach a specified property level.

D 883, D20

cure time—the amount of time required for an adhesive anchor to develop its specified strength.

E 2265, E06

Curie point—that temperature above which a substance becomes paramagnetic.

E 7, E04

Curie point—see **Curie temperature**.

E 1142, E37

Curie point—the temperature at which ferromagnetic materials can no longer be magnetized by outside forces, and at which they lose their residual magnetism (approximately 1200 to 1600°F (649 to 871°C) for many metals).

E 1316, E07

Curie temperature—temperature above which a ferromagnetic or ferroelectric material becomes paramagnetic, or paraelectric, respectively.

E 1142, E37

Curie temperature, T_c —the temperature above which a ferromagnetic material becomes paramagnetic.

A 340, A06

curing, *n*—action taken to maintain moisture and temperature conditions in a freshly-placed cementitious mixture to allow hydraulic cement hydration and (if applicable) pozzolanic reactions to occur so that the potential properties of the mixture may develop (see ACI 308).

C 125, C09

curing, *n*—see the preferred term **vulcanization**.

D 123, D13

curing—treating raw hides or skins so as to minimize putrefaction and bacterial action, but to enable the skins to be wet back conveniently in preparation for tanning (see **brining**, **dry pickling**, **dry salting**, **green salting**, and **pickle**).

D 1517, D31

curing, *n*—see the preferred term **vulcanization**.

D 6477, D13

curing, *n*—chemical process of developing ultimate properties of a finish or other material over a specified period of time. Compare **drying**.

E 631, E06

curing agent, *n*—an additive incorporated in the constituents of products producing a change in chemical activity between the cementitious components with an increase or decrease in the rate of cure.

C 1154, C17

curing agent, *n*—a substance or mixture of substances that controls a curing reaction.

D 907, D14

curing agent, *n*—synonym for **vulcanizing agent**, the preferred term.

D 1566, D11

curing agent—additive incorporated in the furnish of asbestos-cement products resulting in modified chemical activity between the cementitious components with an increase or decrease in the rate of cure.

D 2946, C17

curing compound, *n*—a liquid that, when applied as a coating to the surface of newly-placed concrete, forms a membrane that retards the evaporation of water and, in the case of white pigmented compounds, reflects heat (see also **curing**).

C 125, C09

curing retarder—a material added to cement to increase the time for curing. Sodium chloride in high concentrations is an example.

D 653, D18

curing temperature, *n*—the temperature to which an adhesive or an assembly is subjected to cure the adhesive.

D 907, D14

curing time—the period between application and the time when the material attains its intended physical properties.

C 717, C24

curing time, *n*—the period of time during which an assembly is subjected to heat or pressure, or both, to cure the adhesive. (See also **joint-conditioning time**, **setting time**.)

D 907, D14

curl—See **kink**.

D 3990, D13

curl—the degree of curvature of a sheet of paper or carbon paper.

F 221, F05

curl, *n*—a phenomenon in which the edges of a paper substrate bend towards the center of the paper.

F 1857, F05

curled selvage, n—self-descriptive. **D 123, D13**

curled selvage, n—self-descriptive. (*Syn.* rolled selvage, turned-over edge) **D 3990, D13**

curling—a defect similar to crawling. **C 286, B08**

curling temperature—the temperature at which noticeable curling occurs on gradually heating a leather specimen in water. **D 1517, D31**

curl resistance—the tendency of sheet carbon to be flat on exposure to varying conditions of temperature and humidity. **F 221, F05**

curls—long flat flakes manufactured by the cutting action of a knife in such a way that they tend to be in the form of a helix. **D 1554, D07**

current, ac core loss, I_c —the rms value of the in-phase component (with respect to the induced voltage) of the exciting current supplied to a coil which is linked with a ferromagnetic core. **A 340, A06**

current, ac exciting, I —the rms value of the total current supplied to a coil that is linked with a ferromagnetic core.

NOTE—Exciting current is measured under the condition that any other coil linking the same core carries no current. **A 340, A06**

current, ac, magnetizing, I_m —the rms value of the magnetizing component (lagging with respect to applied voltage) of the exciting current supplied to a coil that is linked with a ferromagnetic core. **A 340, A06**

current carrying capacity—the maximum level of electrical current that a circuit can conduct without sustaining damage. **F 2112, F01**

current, dc, I_{dc} —a steady-state dc current. A dc current flowing in an inductor winding will produce a unidirectional magnetic field in the magnetic material. **A 340, A06**

current density—the electric current to or from a unit area of an electrode surface. **G 15, G01**

current density (cd)—current per unit area. **B 374, B08**

current dollars—dollars of purchasing power in which actual prices are stated, including inflation or deflation. **E 631, E06**

current dollars, n—dollars of purchasing power in which actual prices are stated, including inflation or deflation. **E 833, E06**

current efficiency—the proportion, usually expressed as a percentage, of the current that is effective in carrying out a specified process in accordance with Faraday's law. **B 374, B08**

current efficiency—the ratio of the electrochemical equivalent current density for a specific reaction to the total applied current density. **G 15, G01**

current flow method—a method of magnetizing by passing a current through a component via prods or contact heads. The current may be alternating, rectified alternating, or direct. **E 1316, E07**

current good manufacturing practices (CGMP)—current regulations published by the United States Food and Drug Administration (FDA) regarding manufacturing, processing, packaging and storing of drug and biological products. **E 1705, E48**

current induction method—a method of magnetizing in which a circulating current is induced in a ring component by the influence of a fluctuation magnetic field that links the component. **E 1316, E07**

current integration—the measurement of total electric charge deposited into a specimen by the incident beam. **E 673, E42**

current response—change in freeboard or draft due to current forces acting to displace the boom from rest. **F 818, F20**

currying—a process of treating tanned hides with oils and greases to prepare them for belting, sole, harness leathers, etc. **D 1517, D31**

curstive, n—a type of writing in which the letters are joined and the writing instrument is not lifted after most strokes. **E 2195, E30**

curtain grouting—injection of grout into a sub-surface formation in such a way as to create a barrier of grouted material transverse to the direction of the anticipated water flow. **D 653, D18**

curtaining—see **sag** or **sagging**. **D 16, D01**

curtains—a defect in sheet steel ground coatings characterized by a draped pattern of darkened areas that are sometimes blistered. May

also appear in cover coats applied over the ground coat or direct-on. **C 286, B08**

"curtain type" boom—boom consisting of a flexible skirt supported by flotation. **F 818, F20**

curtain wall—See **wall**. **E 631, E06**

curvature, n—the shape of the needle viewed in profile. Some common shapes include, but are not limited to: straight, 1/2 curve or "ski", 1/8 circle, 1/4 circle, 3/8 circle, 1/2 circle, 5/8 circle, and compound curvature. **F 1840, F04**

curvature of field—a property of a lens that causes the image of a plane to be focused into a curved surface instead of a plane. **E 7, E04**

curved head—head with hemispherical or nearly hemispherical bearing surface and flat top surface. Also, head of plain, flat-headed nail with two opposite edges cupped downward. **F 547, F16**

curve interpolation point, n—those intermediate points generated between curve points by means of a CAD vendor's system curve interpolation algorithm; those points used to create a curve in order to represent a contour. **D 6963, D13**

curve point, n—a user defined point on a contour. **D 6963, D13**

curve resolving—the construction of the individual peaks of a spectrum that consists of overlapping peaks, also called curve fitting or peak fitting. **E 673, E42**

curve, thermal, n—the plot of a parameter against temperature or time. (ICTAC) **E 473, E37**

curve tolerance, n—the maximum perpendicular distance that the resulting curve can deviate from the original curve after transferring the data for the first time. **D 6963, D13**

cushion, n—for *inflatable restraints*, the inflatable fabric envelope portion of a module. **D 123, D13**

cushion, v—to use **cushioning material** to reduce shock and vibration transmitted to a packaged product from an externally applied force. **D 996, D10**

cushion, n—for *inflatable restraints*, the inflatable fabric envelope portion of a module. **D 6799, D13**

cushioned vinyl flooring, n—any vinyl sheet floor covering incorporating a foam layer as part of its construction. **F 141, F06**

cushioning material—a material used to isolate or reduce the effect of externally applied shock or vibration forces, or both. (See also **buffer, divider, molded shape**.)

creped cellulose wadding—a material consisting of cellulose fibers produced by the sulfite process, loosely matted into sheet form and then creped. It is available in single or multiple sheet form, either plain or embossed, and may be backed with various papers. It is also available impregnated with asphalt for water resistance.

filler pad—in *packaging*, a **pad** used to fill space; sometimes applied to a soft flexible pad made with various loose filling materials to provide cushioning effects. (Compare **buffer**.)

foam-in-place cushioning material, n—one formed by dispensing, usually into a box or mold, reactive chemical components that expand to envelop items packaged or occupy void areas.

macerated paper—generally, waste paper torn up mechanically for use as a **cushioning material**. **D 996, D10**

cushion overpressurization, n—for *inflatable restraints*, the process of inflating a cushion at internal pressures greater than design deployment pressures; bag burst. **D 6799, D13**

custodial records—memoranda in any form written or electronic that documents the life cycle of property. **E 2135, E53**

custody—having charge and control; to be in possession of. **E 2135, E53**

customary units—a set of industry-unique units from the cgs-emu system of units and U.S. inch-pound systems and units derived from the two systems.

NOTE—Examples of customary units used in ASTM A06 standards include:

customary units

Quantity Name	Quantity Symbol	Unit Name	Unit Symbol
Magnetic field strength	<i>H</i>	oersted	Oe
Magnetic induction (magnetic flux density)	<i>B</i>	gauss	G
Specific core loss	$P_c(\beta; f)$	watt/pound	W/lb

A 340, A06

customer video, *n*—a printer control printed wiring board that receives video data and commands from a host to transfer them to the image output terminal control. (See **C-Video**.) F 1457, F05

cut, *n*—see **fraction**. B 243, B09

cut, *n*—*in asbestos and glass yarns*, the number of 100-yd lengths of yarn per pound; an indirect yarn numbering system. D 123, D13

cut, *n*—*in wool yarns*, the number of 300-yd lengths of yarn per pound; an indirect yarn numbering system. D 123, D13

cut, *n*—*as applied to woven fabric*, a length approximately 60 yard in the greige. D 123, D13

cut, *n*—*in asbestos and glass yarns*, the number of 100-yd lengths of yarn per pound; an indirect yarn numbering system. D 4849, D13

cut, *n*—*in wool yarns*, the number of 300-yd lengths of yarn per pound; an indirect yarn numbering system. D 4849, D13

cut, *n*—*as applied to woven fabric*, a length approximately 60 yard in the greige. D 4850, D13

cutaneous sense, *n*—any of the senses whose receptors lie in the skin or immediately beneath it (or in the external mucous membranes): contact, pressure, warmth, cold, and pain. E 253, E18

cutback—solvent-thinned bitumen used in cold-process roofing adhesives, flashing cements, and roof coatings. D 1079, D08

cut-back asphalt, *n*—petroleum residuum (asphalt) which has been blended with petroleum distillates. D 8, D04

cut-back products, *n*—petroleum or tar residuums which have been blended with distillates. D 8, D04

cut file, *n*—numerically controlled fabric cutter instructions entered in blocks of ASCII characters. D 6963, D13

cut glass—glassware decorated by grinding figures or patterns on its surface by abrasive means, followed by polishing. C 162, C14

cuticle, *n*—*in mammalian hair fibers*, the layers of flattened cells enclosing the cortex, which forms an envelope of overlapping scales surrounding the fiber. D 123, D13

cuticle, *n*—*in mammalian hair fibers*, the layers of flattened cells enclosing the cortex, which forms an envelope of overlapping scales surrounding the fiber. D 4845, D13

cutinite—See **cutinite** under **maceral**. D 121, D05

cut-layers—as applied to laminated plastics, a condition of the surface of machined or ground rods and tubes and of sanded sheets in which cut edges of the surface layer or lower laminations are revealed. D 883, D20

cut lines, *n*—the outside edges of a pattern piece used as a guide for cutting out the pattern piece. (See **piece boundary**.) D 6963, D13

cut-off, *n*—*in zippers*, the measurement of a separate element from the head side to the pocket side of the legs. D 123, D13

cutoff—a detail designed to prevent lateral water movement into the insulation where the membrane terminates at the end of a day's work, or used to isolate sections of the roofing system. It is usually removed before the continuation of the work. D 1079, D08

cut-off, *n*—the measurement of a separate element from the head side to the pocket side of the legs. D 2050, D13

cutoff frequency—*of an anechoic wedge or set of wedges*, the lowest frequency above which the normal incidence sound absorption coefficient is at least 0.990. C 634, E33

cutoff height—a specified distance of a high on the surface record from a chord representing 25 ft (7.5 m) on the longitudinal scale. The chord may represent less than 25 ft (7.5 m) if it is from the lows on each side of the high. E 867, E17

cut-off level—same as **rejection level**. E 1316, E07

cut-off scar—a mark on the base of a glass bottle caused by the cutting of the gob in the Owens process. C 162, C14

6/8 cut (or 6/8 point)—a herringbone patterned surface, consisting of short parallel concave grooves rotated 10 to 30 degrees from each other, produced by a hand or pneumatic hammer fitted with a carbide-tipped chisel of closely-spaced blades. C 119, C18

cut pick—See **broken pick**. D 3990, D13

cut pile floor covering, *n*—a pile floor covering in which the pile is composed of adjacent tuft elements that are separated or cut. D 123, D13

cut pile yarn floor covering, *n*—a pile floor covering in which the pile is composed of adjacent tuft elements that are separated or cut. D 5684, D13

cut resistance, *n*—*in chainsaw testing*, the ability of a material, while in contact with the linked cutters, to resist cut through of the cutters of a moving saw chain, independent of either jamming or chain stop. F 1494, F23

cut selvage, *n*—cuts or breaks that occur in the selvage only. D 123, D13

cut selvage, *n*—cuts or breaks that occur in the selvage only. (*Syn.* broken selvage, damaged selvage) D 3990, D13

cut sizes—flat glass sheets cut to specific dimensions. C 162, C14

cut stock—a term for softwood lumber indicating the product generally has been manufactured to dimensions suitable for a fabricating operation with little further processing required. D 9, D07

cut stock—a term generally applied to bottom stock for shoes, such as soles, taps, lifts, blocks, and strips cut from sole leather. Also applies to cut-to-pattern leather. D 1517, D31

cut stone—stone fabricated to specific dimensions. C 119, C18

cut strip test, *n*—*in fabric testing*, a strip test in which the specimen is cut to the specified testing width. D 123, D13

cut strip test, *n*—*in fabric testing*, a strip test in which the specimen is cut to the specified testing width. D 4850, D13

cutting—(1) a workman engaged in grinding designs on glass.

(2) one who cuts flat glass.

(3) the tool used in cutting glass. C 162, C14

cut thread—produced by removing material from the surface with a form cutting tool. F 1789, F16

cut-through time, *n*—*for chainsaw cut resistance*, the time required for a running chainsaw to effect complete breakthrough of a protective garment or protective device. F 1494, F23

cutting—(1) scoring flat glass with a diamond or a steel wheel, and breaking it along the scratch.

(2) producing cut glass. C 162, C14

cutting down—polishing or buffing for the purpose of removing roughness or irregularities. B 374, B08

cutting edge, *n*—cutting edges are made of various geometric shapes, that is, triangular, diamond, and hexagonal. The various edges may be sharpened by the manufacturer depending on the user performance. F 1840, F04

cuttings—small-sized rock fragments produced by a rock drill. (ISRM) D 653, D18

cutting wear, *n*—*in solid impingement erosion*, the erosive wear associated with the dissipation of kinetic energy of impact arising from the tangential component of the velocity of the impacting particles. G 40, G02

cut wire blasting—blasting with short, cut lengths of metal wire. See **abrasive blasting**. B 374, B08

C-Video—customer video. F 1457, F05

CVR—contrast variation ratio is the ratio between the maximum and minimum PCS within a graphic shape:

$$CVR = \frac{PCS, \max}{PCS, \min}$$

F 149, F05

CVT—abbreviation for **constant velocity transport**. F 1457, F05

cycle—the firing period in a regenerative furnace. C 162, C14

- cycle**—*in fatigue*, one complete sequence of values of force (strain) that is repeated under constant amplitude loading (straining). The symbol N (see definition of **fatigue life**) is used to indicate the number of cycles. **E 1823, E08**
- cycle annealing, *n***—**annealing** employing a predetermined and closely controlled time-temperature cycle to produce specific properties or a specific microstructure. **A 941, A01**
- cycle length, *n***—*in braided rope*, the distance, parallel to the rope axis, of the strand to make one revolution around the rope. **D 123, D13**
- cycle ratio, *D***—the ratio of cycles endured, n , to the estimated fatigue life, N_f , obtained from the stress versus fatigue life ($S-N$) or the strain versus fatigue life ($\epsilon-N$) diagram for cycles of the same character, that is, $D = n/N_f$. **E 1823, E08**
- cycles endured, *n***—*in fatigue*, the number of cycles of specified character (that produce fluctuating force) which a specimen has endured at any time in its force history. **E 1823, E08**
- cycle time, *n***—in molding, the total time used to carry out a complete sequence of operations making up the molding cycle. **D 883, D20**
- cycle time**—the time required by an alcohol plant to complete one cycle. **E 1705, E48**
- cycle time, *n***—*in an intermittent contact test*, the interval of time from the start of one contact period to the start of the next contact period. **F 1494, F23**
- cyclically magnetized condition, *CM***—a magnetic material is in a cyclically magnetized condition when, after having been subjected to a sufficient number of identical cycles of magnetizing field, it follows identical hysteresis or flux-current loops on successive cycles which are not symmetrical with respect to the origin of the axes. **A 340, A06**
- cyclic loading**—See **fatigue loading**. **E 1823, E08**
- cyclic redundancy check, *n***—an error checking system used in data transmission. (See **CRC**.) **F 1457, F05**
- cyclohexane-995**—cyclohexane with a purity of 99.5 weight % minimum determined by analysis by gas chromatography. Refer to proposed specifications for complete requirements. **D 4790, D16**
- cyclone, *n***—a cone-shaped air-cleaning apparatus that operates by centrifugal separation and is used in particle collecting and fine grinding operations. **E 2201, E50**
- cylinder**—See **container**. **D 996, D10**
- cylinder height, *n***—*for the CFR engine*, the relative vertical position of the engine cylinder with respect to the piston at top dead center (tdc) or the top machined surface of the crankcase. **D 4175, D02**
- cylinder kraft**—See **containerboard**. **D 996, D10**
- cylinder process**—{archaic} manufacture of window glass wherein molten glass is blown and drawn into the form of a cylinder, which is subsequently split longitudinally, reheated in a flattening kiln, and flattened. **C 162, C14**
- cylinder stock, *n***—lubricant for independently lubricated engine cylinders, such as those of steam engines and air compressors. Cylinder stock are also used for lubrication of valves and other elements in the cylinder area. **D 4175, D02**
- cylinder (test)**—a cast cylindrical specimen of concrete. **C 822, C13**
- cylindrical wet-scrub extraction, *n***—a carpet cleaning method in which (1) a cleaning agent is sprayed onto the carpet, and (2) soil and cleaning agents are removed by a machine which feeds water into two counter-rotating brushes. **D 123, D13**
- cylindrical wet-scrub extraction, *n***—a carpet cleaning method in which (1) a cleaning agent is sprayed onto the carpet, and (2) soil and cleaning agents are removed by a machine which feeds water into two counter-rotating brushes. **D 5253, D13**

D

- d-10**—the diameter of a soil particle (preferably in millimetres) at which 10 % by weight (dry) of the particles of a particular sample are finer. Synonymous with the effective size or effective grain size. **D 653, D18**
- d-60**—the diameter of a soil particle (preferably in millimetres) at which 60 % by weight (dry) of the particles of a particular sample are finer. **D 653, D18**
- DAC (distance amplitude correction) (swept gain, time corrected gain, time variable gain, and so forth)**—electronic change of amplification to provide equal amplitude from equal reflectors at different depths. **E 1316, E07**
- daisy wheel element**—an element used in an impact printing device in which the fully formed characters are contained on the ends of finger-like projections radiating out from the center of a disk, the device resembling a daisy. **F 909, F05**
- daisy wheel printer**—an impact printing device utilizing a daisy wheel element. The paper on the carriage remains stationary while the element is positioned and caused to strike the paper to produce the characters in their proper positions. **F 909, F05**
- Dalton**—an arbitrary unit of molecular weight, one twelfth the mass of the nuclide of carbon 12. **D 6161, D19**
- dam, n**—a solid material (such as silicone rubber, steel, or aluminum), used in processing composites, to contain the matrix material within defined boundaries or to prevent crowning of a processing bag. **D 3878, D30**
- damage, n**—*in structures and structural mechanics*, a structural anomaly in material or structure created by manufacturing or service usage. **D 3878, D30**
- damage, n**—*in cavitation or impingement*, any effect on a solid body resulting from its exposure to these phenomena. This may include loss of material, surface deformation, or any other changes in microstructure, properties, or appearance. **G 40, G02**
- damaged feathers, n**—feathers that have been broken, damaged by insects, by mildew or rot, or otherwise materially injured. **D 123, D13**
- damaged feathers, n**—feathers that have been broken, damaged by insects, by mildew or rot, or otherwise materially injured. **D 7022, D13**
- damaged selvage**—See **cut selvage**. **D 3990, D13**
- damage resistance, n**—*in structures and structural mechanics*, a measure of the relationship between the force, energy, or other parameter(s) associated with an event or sequence of events and the resulting damage size and type. **D 3878, D30**
- damage tolerance, n**—1) *in structures and structure materials*, a measure of the relationship between damage size and type and the level of a performance parameter, such as stiffness or strength, at which the structure or structural material can operate for a particular loading condition; 2) *in structural systems*, a measure of the ability of such systems to function at designated performance parameters (for example, magnitude, length of time, and type of loading(s)) without system failure in the presence of a particular or specified level of damage. **D 3878, D30**
- damp**—to cause a loss or dissipation of the oscillatory or vibrational energy of an electrical or mechanical system. **C 634, E33**
- damp, adj**—moist but not visibly wet. **D 4538, D33**
- damping**—reduction in the amplitude of vibration of a body or system due to dissipation of energy internally or by radiation. (ISRM) **D 653, D18**
- damping, n**—that property of a material or system that causes it to convert mechanical energy to heat when subjected to deflection; in rubber, the property is caused by hysteresis; in some types of systems, it is caused by friction or viscous behavior. **D 1566, D11**
- damping, adj**—*as a modifier of dynamic force*, descriptive of that component of complex force leading dynamic deflection by 90°, and that is responsible for the conversion of mechanical energy to heat; denoted by the double prime (") as a superscript symbol, as F". **D 1566, D11**
- damping**—the loss in energy, dissipated as heat, that results when a material or material system is subjected to an oscillatory load or displacement. **D 4092, D20**
- damping**—loss in energy, dissipated as heat, that results when a material or material system is subjected to an oscillatory load or displacement, (D 4092, D20). **E 1142, E37**
- damping ratio**—for a system with viscous damping, the ratio of actual damping coefficient to the critical damping coefficient. **D 653, D18**
- damping ratio, μ** —the ratio of actual damping to critical damping. **D 4092, D20**
- damping, search unit**—limiting the duration of a signal from a search unit subject to a pulsed input by electrically or mechanically decreasing the amplitude of successive cycles. **E 1316, E07**
- dampproofing**—treatment of a surface or structure to resist the passage of water in the absence of hydrostatic pressure. **D 1079, D08**
- D.A.N., n**—Divers Alert Network. **F 1549, F32**
- dangerously flammable textile, n**—not defined. This term is implied in the Standard For The Flammability Of Clothing Textiles (16 CFR Part 1610) under the Flammable Fabrics Act (15 USC 1191 et seq.) from which a meaning can be inferred. (See also **flammable textile**.) **D 123, D13**
- dangerously flammable textile, n**—not defined. This term is implied in the Standard for the Flammability of Clothing Textiles (16 CFR Part 1610) under the Flammable Fabrics Act (15 USC 1191, et seq.) from which a meaning can be inferred. (See also **flammable textile**.) **D 4391, D13**
- Danner process**—a mechanical process for continuously drawing glass cane or tubing from a rotating mandrel. **C 162, C14**
- DAPI staining**—staining of DNA in particular by using DAPI fluorochrome stain (Serva 18860). **E 1705, E48**
- dark adaptation**—the adjustment of the eyes when one passes from a bright to a darkened place. **E 1316, E07**
- dark adaptation**—conditioning of photoelectrostatic copying papers in the absence of light to permit the recovery of photoconductive properties. **F 335, F05**
- dark decay**—loss of apparent surface voltage in the absence of light. **F 335, F05**
- dark decay rate**—the rate of loss of apparent surface voltage per unit time in the absence of light. **F 335, F05**
- darkfield illumination**—the illumination of an object such that it appears illuminated with the surrounding field dark. This results from illuminating the object with rays of sufficient obliquity so that none can enter the objective directly. As applied to electron microscopy, the image is formed using only electrons scattered by the object. **E 7, E04**
- dark (or Townsend) discharge**—a discharge which may or may not be self-sustaining. It is characterized by a uniform field, current in the microampere range, and a nonluminous inter-electrode space. **B 542, B02**
- darts, n**—See **comet**. **D 6488, D01**
- dashpot**—a hydraulic cylinder device with a controlled leak designed to eliminate impact loading of mechanisms. Hardness testers may employ a dashpot to bring an indenter into contact with a specimen without impact or other disturbance. **E 7, E04**
- data, n**—a quantitative or qualitative representation that is observed, measured, collected, or gathered that characterizes some static or dynamic attribute of the physical world or the use of it by individuals or groups of people and that is suitable for communication, interpretation, or processing by humans or machines. **E 867, E17**
- database, n**—a collection of related data typically organized in a computerized record keeping system that is part of a system whose purpose is to maintain the data and information derived from it so it can be made available for use. **E 867, E17**
- database management system (DBMS), n**—a set of programs that

manipulate and maintain a database while providing independence from an application. **E 867, E17**

data collection objective—a statement explaining the reasons that certain data is needed, the questions it is expected to answer, and the decisions that will be made on the basis of the data, that is used in developing sampling and analytical plans. **E 1605, E06**

data collection system metadata, *n*—data about the conditions and procedures under which original source data were observed, surveyed, measured, gathered, or collected, as well as about the equipment that was used. **E 867, E17**

data dictionary, *n*—an information construct that describes the particular data stored in a database typically in terms of a common set of attributes that include the meaning, concept, and use; see IEEE 1489. **E 867, E17**

data element, *n*—a data item that is a basic building block of a data dictionary that is a formal representation of some single unit of information of interest with a singular instance value at any point in time about some entity of interest. **E 867, E17**

data element, *n*—a single, atomic piece of data that cannot be subdivided and still retain any meaning. **F 1294, F05**

data identifier, DI, *n*—a specified character, or string of characters, that define the intended use of the data elements that follow. **F 1294, F05**

data logging, *v*—to capture a stream of near-real-time data as it passes through a transportation management center. **E 867, E17**

data mart, *n*—a National ITS Architecture market package in which an archiving system collects and archives operational data from one organizational source; it is analogous to a library whose collection is acquired from a single publisher. **E 867, E17**

data monitor, *n*—a mode of printer operation in which the information transmitted to the printer is printed in hexadecimal numbers. **F 1457, F05**

data products interface, *n*—a parallel interface standard that is used to connect elements of a communications system. **F 1457, F05**

data quality, *n*—the fitness of data for all purposes that require it. Examples of data quality measures include accuracy, completeness, coverage, and timeliness. **E 867, E17**

data quality objective (DQO)—qualitative and quantitative statements of the overall level of uncertainty that a decision-maker is willing to accept in results or decisions derived from environmental measurements, includes uncertainties in sampling location, sample handling, and sample analysis. **D 5681, D34**

data quality objective process, *n*—a quality management tool based on the scientific method and developed by the U.S. Environmental Protection Agency to facilitate the planning of environmental data collection activities. **D 5681, D34**

data quality objectives (DQOs), *n*—qualitative and quantitative statements derived from the DQO process describing the decision rules and the uncertainties of the decision(s) within the context of the problem(s). **D 5681, D34**

data quality objectives process, *n*—a quality management tool based on the scientific method and developed by the U.S. Environmental Protection Agency (EPA) to facilitate the planning of environmental data collection activities. The DQO process enables planners to focus their planning efforts by specifying the use of the data (the decision), decision criteria (decision point), and decision maker's acceptable decision error rates. The products of the DQO process are the DQOs. **D 5681, D34**

data quality objectives process, *n*—a quality management tool based on the Scientific Method and developed by the U.S. Environmental Protection Agency to facilitate the planning of environmental data collection activities. The DQO process enables planners to focus their planning efforts by specifying the use of the data (the decision), decision criteria (action level), and decision maker's acceptable decision error rates. The products of the DQO process are the DQOs. **D 5681, D34**

data set, *n*—data communications equipment for transmitting coded data over phone lines. **F 1457, F05**

data sources, *n*—the systems that provide data. **E 867, E17**

data stream compatibility, *n*—the extent to which an electronic signal agrees with the signal requirements of a system. (See DSC.) **F 1457, F05**

data terminal equipment, *n*—any piece of equipment at which a communications path ends or begins, a terminal or a printer. (See DTE.) **F 1457, F05**

data terminal ready, *n*—an electronic signal from the printer to the host that the printer is ready to be used. (See DTR.) **F 1457, F05**

data traceability, *n*—the ability to verify data by having access to, and documentation of, all prior information used to generate it and needed for its interpretation. **D 1129, D19**

data warehouse, *n*—a National ITS Architecture market package in which physically distributed data sources (1) contribute to a central clearinghouse, where each data source is locally managed and (2) exchange multiple transportation-related data; it is analogous to a library whose collection is acquired from multiple publishers. **E 867, E17**

dating nail—galvanized, regular-stock-steel, copper or brass, 1½ by ¼ to 2½ by ⅜ in. nails with ⅜ to ½ in. flat numeral head and medium diamond point. **F 547, F16**

Daubert v. Merrell Dow Pharmaceuticals, Inc., *n*—although not a PDD case, the Daubert case set aside the landmark Frye rule's "general acceptability" provisions in favor of the Federal Rules of Evidence. This paved the way for the admissibility of PDD evidence in most jurisdictions. See: Daubert v. Merrell Dow Pharmaceuticals, Inc. (1992), 509 U. S. 579, 125 1. Ed 2d 469; United States v. Frye 54 App D.C. 46, 293 F 1013. **E 2035, E52**

daylight, *n*—as used in weathering, the term equivalent to "sunlight". It refers to the full spectrum of solar irradiance, that is, ultraviolet through infrared, and includes both diffuse sky and direct solar irradiance. **G 113, G03**

daylight illuminant, *n*—illuminant having the same, or nearly the same, relative spectral power distribution as a phase of daylight. **E 284, E12**

daylight 0.785 rad, 0 rad (45°, 0°) luminous directional reflectance, *n*—daylight 0.785 rad, 0 rad (45°, 0°) luminous directional reflectance (for brevity called reflectance) is the ratio of the luminous flux from a specimen illuminated at an angle of 0.785 rad (45°) by CIE Standard Source C (average daylight) and viewed perpendicularly by the CIE Standard Observer, to the luminous flux from the standard magnesium oxide layer, similarly illuminated and viewed. **D 2946, C17**

day tank—a periodic melting unit, which supplies glass for small volume applications. **C 162, C14**

dB_{AE}—a logarithmic measure of acoustic emission signal amplitude, referenced to 1 µV at the sensor, before amplification.

$$\text{Signal peak amplitude (dB}_{AE}) = (dB_{1\mu V \text{ at sensor}}) = 20 \log_{10}(A_1/A_0)$$

where:

A_0 = 1 µV at the sensor (before amplification), and

A_1 = peak voltage of the measured acoustic emission signal (also before amplification).

Acoustic Emission Reference Scale:

dB _{AE} Value	Voltage at Sensor
0	1 µV
20	10 µV
40	100 µV
60	1 mV
80	10 mV
100	100 mV

E 1316, E07

dB control—a control that adjusts the amplitude of the display signal in dB units. **E 1316, E07**

DBP—disinfection by-products (a rule as part of the SDWA). **D 6161, D19**

dc—symbol used to designate an electric voltage or current whose

amplitude does not vary periodically with respect to time, as for example the output of a chemical cell or that of a thermocouple. The term is also applied to the output of such devices as dynamos and rectifiers, whose amplitude is not strictly time-invariant.

D 2864, D27

DC1/DC3, n—a control sequence used with asynchronous transmission that enables the printer to signal the host to start and to stop transmitting data.

F 1457, F05

DCOF—dynamic coefficient of friction.

F 141, F06

DCOF—dynamic coefficient of friction

F 1646, F13

D-cracking, n—*in concrete*, a series of cracks near to and roughly parallel to features such as joints, edges, and structural cracks.

C 125, C09

DCS, n—decompression sickness, a medical condition with a variety of symptoms that may result from gas or bubbles in the tissues of divers after pressure reduction.

F 1549, F32

3-D data set—a three-dimensional data set with a topographical z-data value for each (x, y) pixel location within the interferometer's field of view.

E 2444, E08

2-D data trace—a two-dimensional data trace that is extracted from a topographical 3-D data set and that is parallel to the xz- or yz-plane of the interferometer.

E 2444, E08

deactivation, n—the process of placing a facility in a safe and stable condition to minimize the long-term cost of a surveillance and maintenance program and to protect the workers, the public, and the environment.

E 833, E06

deactivation—the process of prior removal of the active corrosive constituents, usually oxygen, from a corrosive liquid by controlled corrosion of expendable metal or by other chemical means, thereby making the liquid less corrosive.

G 15, G01

dead anneal—jargon for a state of negligible residual stress.

C 162, C14

dead-burned, adj—the state of a basic refractory material resulting from a heat treatment that yields a product resistant to atmospheric hydration or recombination with carbon dioxide.

C 71, C08

dead burned dolomite—dolomitic limestone that has been heated with or without additives to a temperature sufficiently high and for a long enough time to decompose the carbonate structure so as to form calcium oxide and periclase in a matrix that provides resistance to subsequent hydration and recombination with carbon dioxide.

C 51, C07

dead-burned magnesite, n—see **magnesite, dead-burned**.

C 71, C08

dead-burned refractory dolomite, n—see **dolomite, dead-burned refractory**.

C 71, C08

dead cotton, n—a small nep of cotton fibers which is gathered on the surface of the fabric and which is different in color from the surrounding fabric

D 123, D13

dead cotton, n—a small nep of cotton fibers which is gathered on the surface of the fabric and which is different in color from the surrounding fabric.

D 3990, D13

dead end filtration—a process in which water is forced through a media which captures the retained particles on and within it, where the process involves one influent and one effluent stream.

D 6161, D19

dead end flow—flow through a membrane module in which the only outlet for the upstream fluid is through the membrane.

D 6161, D19

dead leg—any inactive, trapped or stagnant zone of a biological fluid that is to be sampled aseptically where this liquid zone would not be representative of the bulk fluid that is to be sampled. This "dead leg" zone could deviate from the bulk system in oxygen content, nutrients levels, material composition, temperature, bacterial contamination, and other process variables that would prevent any sample drawn through this system from representing the bulk fluid quality to be tested.

E 1705, E48

dead level—absolutely horizontal, or zero slope (see also **slope**).

D 1079, D08

dead level asphalt—a roofing asphalt conforming to the requirements of Specification D 312, Type I.

D 1079, D08

dead level roofing—a roofing system applied on a surface with a 0 to 2 % incline.

D 1079, D08

deadload—the load imposed on pipe, that is determined by depth and width of the trench at top of pipe, as well as unit weight and character of backfill material.

C 896, C04

dead load—See **load**.

D 996, D10

deadload—the static load imposed on the top of the pipe.

F 412, F17

dead plate—*in automatic production of molded glass*, a stationary plate receiving a glass article awaiting transfer.

C 162, C14

dead time—any interval during data acquisition when the instrument or system is unable to accept new data for any reason.

(E 750)

E 1316, E07

dead-weight loading—a method of loading in which a weight is supported solely by the specimen and has no other mechanical connection to the testing machine. In hardness testing, the weight is supported by the indenter.

E 7, E04

dead zone—the distance in the material from the surface of the test object to the depth at which a reflector can first be resolved under specified conditions. It is determined by the characteristics of the search unit, the ultrasonic test instrumentation, and the test object.

E 1316, E07

deaeration—*in environmentally affected fatigue testing*, the process of removal of air from the liquid environment before and during a test.

E 1823, E08

deaerator—a device to remove air from water.

D 6161, D19

deagglomeration—the process of breaking down, usually by physical means, the masses of particles that are held together by relatively weak cohesive forces resulting in a final system of aggregates or primary particles, or both.

C 242, C21

deairing—the process of removing entrapped air, or absorbed air from a mass or slurry, usually by application of a vacuum.

C 242, C21

deairing, n—the process of removing entrapped air or absorbed air from a mass or slurry, usually by application of a vacuum.

C 1145, C28

dealloying—See **parting**.

G 15, G01

debinding, n—see **binder removal**.

B 243, B09

debiteuse—a slotted, floating clay block through which glass issues in the Fourcault process.

C 162, C14

debond—a deliberate separation of a bonded joint or interface, usually for repair or rework purposes.

D 3878, D30

debossment—the depth of a print impression into the surface of a document.

F 149, F05

debris, n—*in internal combustion engines*, solid contaminant materials unintentionally introduced into the engine or resulting from wear.

D 4175, D02

debris—as applied to geologic debris flows, a mixture of loose, poorly-sorted rock fragments or soil material, or both, potentially ranging from clay to boulder-size particles that may include fragmental organic matter and other exotic detritus.

D 4410, D19

debris, n—*in tribology*, particles that have become detached in a wear or erosion process.

G 40, G02

debris flow—a sudden and destructive form of landslide, in which loose materials on a slope, with at least half of the particles being larger than sand, are mobilized by saturation and flow downwards.

D 7099, D18

debulk, v—to decrease voids between lamina before laminate consolidation through use of vacuum or by mechanical means.

D 3878, D30

debulking—the application of a temporary vacuum bag, bleeder, vacuum, or pressure, with or without heat, to remove trapped air and possibly some resin, in order to compact a composite lay-up. (Syn. **pre-bleeding, compacting**.)

E 631, E06

debulking—the application of a temporary vacuum bag, bleeder, vacuum, or pressure, with or without heat, to remove trapped air

- and possibly some resin, in order to compact a composite lay-up. (Syn. **pre-bleeding, compacting**.) E 1749, E06
- deburring**—the removal of burrs, sharp edges, or fins by mechanical, chemical, or electrochemical means. B 374, B08
- debutanization**, *n*—of *crude petroleum*, the removal of the light hydrocarbons up to and including *n*-butane, and retention of the heavier hydrocarbons. D 4175, D02
- Debye ring**—a continuous circle, concentric about the undeviated beam, produced by monochromatic X-ray diffraction from a randomly oriented crystalline powder. An analogous effect is obtained with electron diffraction. E 7, E04
- Debye-Scherrer method**—a method of X-ray diffraction employing monochromatic radiation and a polycrystalline specimen mounted on the axis of a cylindrical strip of film. (See **powder method**.) E 7, E04
- decarbonator**—a device to remove carbon dioxide from water. D 6161, D19
- decarburization**, *n*—the loss of carbon from the surface of a steel object as a result of its being heated in a medium that reacts with the carbon. A 941, A01
- decarburization**—loss of carbon from the surface layer of a carbon containing alloy due to reaction with one or more chemical substances in a medium that contacts the surface. B 374, B08
- decarburization**—loss of carbon from the surface of a carbon containing alloy due to a reaction with one or more chemical substances in a medium that contacts the surface. Decarburization may be either (1) *partial*, that is, where carbon content is less than the unaffected interior but greater than the room temperature solubility limit of carbon in ferrite or (2) *complete*, that is, where carbon content is less than the solubility limit of carbon in ferrite so that only ferrite is present. E 7, E04
- decarburization**—loss of carbon from the surface layer of the fastener, normally associated with heat treatment. F 1789, F16
- decarburized enameling steel**—a special type of steel sheet of extremely low carbon content, suitable for porcelain enamel cover coat application direct to the metal (Type I of Specification A 424). C 286, B08
- decarburized steel*—see **decarburized enameling steel**. C 286, B08
- decating mark**, *n*—a crease mark or impression extending across the cloth near the beginning or end of a piece due to the thickness of the fabric leader seam. D 123, D13
- decating mark**, *n*—a crease mark or impression extending across the cloth near the beginning or end of a piece due to the thickness of the fabric leader seam. (Syn. apron mark, leader mark) D 3990, D13
- decay**—decomposition of wood substance caused by action of wood-destroying fungi, resulting in softening, loss of strength and weight, and often in change of texture and color.
- advanced (or typical) decay*—the older stage of decay in which the destruction is readily recognized because the wood has become punky, soft and spongy, stringy, ring-shaked, pitted, or crumbly. Decided discoloration or bleaching of the rotted wood is often apparent.
- incipient decay*—the early stage of decay that has not proceeded far enough to soften or otherwise perceptibly impair the hardness of the wood. It may be accompanied by a slight discoloration or bleaching of the wood.
- pocket rot*—advanced decay that appears in the form of a hole, pocket, or area of soft rot usually surrounded by apparently sound wood. D 9, D07
- decay constant**, λ —of a radioactive nuclide in a particular energy state, the quotient of dP by dt , where dP is the probability of a given nucleus undergoing a spontaneous nuclear transition from that energy state in the time interval dt (ICRU).
- $$\lambda = dP/dt$$
- Unit: s^{-1} E 170, E10
- decay rate**, d ; $[T^{-1}]$; dB/s—*for airborne sound*, the rate of decrease of sound pressure level after the source of sound has stopped; *for vibration*, the rate of decrease of vibratory acceleration, velocity, or displacement level after the excitation has stopped. C 634, E33
- decay time**—the interval of time required for a pulse to decay from its maximum value to some specified fraction of that value. (ISRM) D 653, D18
- deceleration period**, *n*—*in cavitation or liquid impingement erosion*, the stage following the acceleration period or the maximum rate period (if any) during which the erosion rate has an overall decreasing trend although fluctuations may be superimposed on it. (See also **erosion rate-time pattern**.) G 40, G02
- deception indicated (DI)**, *n*—deception indicated is a conventional term for a PDD outcome. A decision of DI means that the physiological data are stable and interpretable and that the evaluation criteria used by the examiner concluded that the examinee was not being completely truthful to the relevant issue. Deception indicated corresponds to the term “Significant Physiological Responses,” or SPR. E 2035, E52
- deception test**, *n*—a family of PDD examinations where direct questions are posed to the examinee during physiological recording regarding the examinee’s involvement in what is covered in the relevant question. Unlike recognition tests, both truthful and deceptive examinees are aware of which questions are relevant, and direct participation, not just recognition, is tested. Deception tests include PDD comparison question tests and PDD Relevant/Irrelevant tests. E 2035, E52
- decibel**, dB—the term used to identify ten times the common logarithm of the ratio of two like quantities proportional to power or energy. (See **level, sound transmission loss**.) Thus, one decibel corresponds to a power ratio of $10^{0.1}$ and n decibels corresponds to a power ratio of $(10^{0.1})^n$. C 634, E33
- decibel (dB)**—twenty times the base ten logarithm of the ratio of two ultrasonic signal amplitudes, $dB = 20 \log_{10}(\text{amplitude ratio})$. E 1316, E07
- decision analysis**—a technique for making economic decisions in an uncertain environment that allows a decision maker to include alternative outcomes, risk attitudes, or subjective impressions about uncertain events in an evaluation of investments. E 631, E06
- decision analysis**, *n*—a technique for making economic decisions in an uncertain environment that allows a decision maker to include alternative outcomes, risk attitudes, or subjective impressions about uncertain events in an evaluation of investments. E 833, E06
- decision error**
- false negative error*, *n*—this occurs when environmental data mislead decision maker(s) into not taking action specified by a decision rule when action should be taken.
- false positive error*, *n*—this occurs when environmental data mislead decision maker(s) into taking action specified by a decision rule when action should not be taken. D 5681, D34
- decision point**, *n*—the numerical value that causes the decision-maker to choose one of the alternative actions point (for example, compliance or noncompliance). D 5681, D34
- decision point**, *n*—the numerical value which causes the decision maker to choose one of the alternative actions (for example, conclusion of compliance or noncompliance). D 5681, D34
- decision rule**, *n*—a set of directions in the form of a conditional statement that specify the following: (1) how the sample data will be compared to the decision point, (2) which decision will be made as a result of that comparison, and (3) what subsequent action will be taken based on the decisions. D 5681, D34
- decision rule**, *n*—a set of directions in the form of conditional statements that specifies: (1) how the sample data will be compared to the decision point or action level, (2) which decision will be made as a result of that comparison, and (3) what subsequent action will be taken based on the decisions. D 5681, D34
- deck**—the horizontal structural substrate supporting the plaza deck system. See also **structural slab**. C 717, C24
- deck**—the structural surface to which the roofing or waterproofing system (including insulation) is applied. D 1079, D08

deck, *n*—in upholstered furniture, the upholstered support under the seat cushion in a loose-seat construction. E 176, E05

decking—the multiple layer loading of ware for firing. C 286, B08

deck oven—equipment where the cavity is generally wider than it is tall, and the bottom of the cavity is called the deck. See oven.

F 1827, F26

decoder, *n*—as part of the two-dimensional symbol and linear bar code reading systems, the electronic package that receives the signals from the scanner, executes the algorithm to interpret the signals into meaningful data, and acts as the interface to other devices.

F 1294, F05

decolorizing—the process of producing a colorless appearance in glass.

C 162, C14

decommissioning, *n*—takes place after deactivation, and includes surveillance and maintenance, decontamination, dismantlement, surveillance and long-term monitoring, or any combination thereof.

E 833, E06

decommissioning (closure)—the engineered closure of a well, borehole, or other subsurface monitoring device sealed with plugging materials. Decommissioning also includes the planning and documenting of all associated activities. A synonym is abandonment.

D 653, D18

decomposers—microorganisms, predominantly bacteria and fungi, that convert complex organic matter into simpler organic and inorganic molecules.

F 1600, F20

decomposition—for peats and organic soils, see humification.

D 653, D18

decomposition potential—the minimum potential, exclusive of IR drop, at which an electrochemical process can take place at an appreciable rate.

B 374, B08

decompression, *n*—the technique used to allow the controlled removal of excess inert gas from the body during and after a dive to prevent decompression sickness (DCS).

F 1549, F32

deconstruction, *n*—disassembly of buildings for the purpose of recovering materials.

E 2114, E06

decontamination—the process of removing undesirable physical or chemical constituents, or both, from equipment to reduce the potential for cross-contamination.

The process of removing or reducing to a known level undesirable physical or chemical constituents, or both, from a sampling apparatus to maximize the representativeness of physical or chemical analysis proposed for a given sample.

D 653, D18

decontamination, *n*—the removal of hazardous or radioactive material, or both, from facilities, soils, or equipment to preclude the occurrence of foreseeable adverse health effects.

E 833, E06

decontamination, *n*—the removal of a contaminant or contaminants from the surface or matrix, or both, of CPC to the extent necessary for its next intended action (for example, reuse and disposal).

F 1494, F23

deconvolution—AES, XPS, a mathematical procedure to (1) remove the contribution to a peak of one of the factors contributing to its line width, for example, X-ray linewidth, analyzer broadening; or (2) remove the energy loss background by deconvoluting the spectrum with an electron energy loss spectrum.

E 673, E42

deconvolution—a procedure by which line-of-sight measurements of drop size distribution and optical extinction are converted into local representations of the distribution and number density.

E 1620, E29

decorated—adorned, embellished, or made more attractive by means of color or surface detail.

C 242, C21

decorating fire—See decorating fire under firing.

C 242, C21

decoration:

inglaze decoration—a ceramic decoration applied on the surface of an unfired glaze and matured with the glaze.

overglaze decoration—a ceramic or metallic decoration applied and fired on the previously glazed surface of ceramic ware.

polychrome decoration—a multicolor decoration.

underglaze decoration—a ceramic decoration applied directly on the surface of ceramic ware and subsequently covered with a transparent glaze.

C 242, C21

decortivating, *n*—in flax, the process of mechanically separating fiber bundles from straw.

D 123, D13

decortivating, *v*—in flax, the process of mechanically separating fiber bundles from straw.

D 6798, D13

decoupling—the ratio of the radius of the blasthole to the radius of the charge. In general, a reducing of the strain wave amplitude by increasing the spacing between charge and blasthole wall. (ISRM)

D 653, D18

de-enameling—the removal of porcelain enamel from the base metal.

C 286, B08

deep buff—the first cut or split underneath the top grain or machine buff on which no traces of the grain remain.

D 1517, D31

deep emission function decay length—the asymptotic emission function decay length for increasing depths from the surface.

E 673, E42

deep etching—macroetching; etching preliminary to macro-examination, intended to develop gross features such as segregation, grain flow, cracks or porosity.

E 7, E04

deep mine injection, *n*—placement of materials such as ash and flue gas cleaning material into underground depleted mine cavities through boreholes, either pneumatically or hydraulically.

E 2201, E50

deep wood failure, *n*—failure that is invariably several to many cells away from the adhesive layer, in which the fracture path is strongly influenced by the grain angle and the growth-ring structure.

D 907, D14

deerskin—a deerskin tanned and finished with the grain surface intact.

D 1517, D31

defect, *n*—an imperfection of sufficient magnitude to warrant rejection based on the specified requirements.

A 941, A01

defect, *n*—of a manufactured carbon or graphite product, any irregularity in the chemistry, microstructure, or macrostructure.

C 709, D02

defect—any irregularity or imperfection in a tree, log, piece, product, or lumber that reduces the volume of sound wood or lowers its durability, strength, or utility value.

D 9, D07

defect, *n*—specific for inflatable restraints, an imperfection in a cut piece of fabric that judgment and experience indicate is likely to result in either the hazardous or improper deployment of the inflatable restraint module in which the imperfection is incorporated.

D 123, D13

defect, *n*—a departure of a quality characteristic from its intended level, or state, that occurs with a severity sufficient to cause an associated product or service not to satisfy intended normal, or reasonably foreseeable, usage requirements.

D 1711, D09

defect, *n*—of a manufactured carbon or graphite product, any irregularity in the chemistry, microstructure, or macrostructure.

D 4175, D02

defect, *n*—in inspection and grading, the departure or non-conformance of some characteristic from its intended level or state.

D 4850, D13

defect, *n*—specific for inflatable restraints, an imperfection in a cut piece of fabric that judgment and experience indicate is likely to result in either hazardous or improper deployment of the inflatable restraint module in which the imperfection is incorporated.

D 6799, D13

defect, *n*—one or more flaws whose aggregate size, shape, orientation, location, or properties do not meet specified acceptance criteria and are rejectable.

E 1316, E07

defect—condition in which a functional segment, a sample item, or sample item element of a property control system contains one or more deficiencies.

E 2135, E53

defect—departure of a quality characteristic from its intended level or state (or the sum of departures of different quality characteristics) that occurs with a severity sufficient to cause a fastener not to

- satisfy intended normal, or reasonably foreseeable, usage requirements. The term *defect* is appropriate for use when a quality characteristic is evaluated in terms of its usage. **F 1789, F16**
- defect, in inspection and grading, *n***—the departure or nonconformance of some characteristic from its intended level or state. **D 123, D13**
- defective, *adj***—having flaws or dimensional deviations greater than acceptable for the intended use. **C 709, D02**
- defective, *adj***—having flaws or dimensional deviations greater than acceptable for the intended use. **D 4175, D02**
- defective pain surface**—pain that is cracking, flaking, chipping, or peeling from a building component (for example, window sill, door, or door frame). **E 631, E06**
- defective unit**—a unit that fails to conform to one or more of the visual, dimensional, or tactile requirements. **D 1517, D31**
- defect resolution**—a property of a test system that enables the separation of indications due to defects in a test specimen that are located in close proximity to each other. **E 1316, E07**
- deficiency**—departure from, or noncompliance with, specified accreditation criteria. **E 1187, E36**
- define (X-rays)**—limit a beam of X-rays by passage through apertures in order to obtain a parallel, divergent, or convergent beam. **E 7, E04**
- defining fixed point, *n***—thermometric fixed point of an idealized system, to which a numerical value has been assigned, used in defining a temperature scale. **E 344, E20**
- definition**—the clarity or sharpness of a microscopical image. **E 7, E04**
- definition, *n***—statement that describes a concept and permits its differentiation from other concepts within a system of concepts. **E 1992, E02**
- definition, image definition**—the sharpness of delineation of image details in a radiograph. Generally used qualitatively. **E 1316, E07**
- definitive care**—a level of therapeutic intervention capable of providing comprehensive health care services for a specific condition. **F 1177, F30**
- deflagration**—an explosion in which the flame or reaction front propagates at a speed well below the speed of sound in the unburned medium, such that the pressure is virtually uniform throughout the enclosure (shredder) at any time during the explosion. **D 5681, D34**
- deflagration index, (K_{St}), *n***—maximum dP/dt normalized to a 1.0 m³ volume. It is measured at the optimum dust concentration. K_{St} is defined according to the following cubic relationship:
- $$K_{St} = (dP/dt)_{max} V^{1/3}$$
- where:
- P = pressure, (bar)
 t = time, (s)
 V = volume, (m³)
 K_{St} = (bar m/s)
- E 1445, E27**
- deflection**—the deviation of a structural element from its original shape or plane due to physical loading, temperature changes or rotation of its supports. **C 717, C24**
- deflection**—deformation or displacement from the original contour or shape. **C 904, C03**
- deflection, *n***—the linear distance that a test specimen bends at the center from no load to stated load, when loaded as a beam with the load applied at the center of the span. **C 1154, C17**
- deflection**—linear distance that a test specimen bends at the center from no load to stated load when loaded as a beam. **D 2946, C17**
- deflection temperature**—the temperature at which a specimen will deflect a given distance at a given load under prescribed conditions of test. (See Test Method D 648.) Formerly called heat distortion. **F 412, F17**
- deflectometer, *n***—a specialized extensometer used for sensing of extension or motion, usually without reference to a specific gage length. **E 6, E28**
- deflector atomizer**—an atomizer in which a liquid jet spreads out over a solid surface, forming a spray whose shape depends upon the solid surface. **E 1620, E29**
- deflocculate**—to separate agglomerates in a slurry by chemical and physical means to achieve and maintain particle-to-particle separation. **C 242, C21**
- deflocculating**—the thinning of the consistency of a slip by adding a suitable electrolyte. **C 286, B08**
- deflocculating agent (deflocculant) (dispersing agent)**—an agent that prevents fine soil particles in suspension from coalescing to form flocs. **D 653, D18**
- defoaming agent**—a material that eliminates or suppresses foam in the spray tank. **E 1519, E35**
- defoliant**—a chemical that causes the foliage to drop from plants. **E 609, E35**
- deformability**—*in grouting*, a measure of the elasticity of the grout to distort in the interstitial spaces as the sediments move. **D 653, D18**
- deformability**—the ability of a material to change its shape or size under the influence of an external or internal agency. **D 7099, D18**
- deformation, *n***—a change in shape of a material caused by forces of compression, shear, tension, or torsion. **D 123, D13**
- deformation**—change in shape or size. **D 653, D18**
- deformation**—a change in the shape or size of a solid body. (ISRM) **D 653, D18**
- deformation, *n***—a change in shape of a material caused by forces of compression, shear, tension, or torsion. **D 4848, D13**
- deformation bands**—bands produced within individual grains during cold working which differ variably in orientation from the matrix. **E 7, E04**
- deformation eutectic*—See **eutectic, deformation**. **C 242, C21**
- deformation lines**—thin bands or lines produced in grains of some metals, particularly those of face-centered cubic structure, by cold working; they are not removed by repolishing and re-etching. **E 7, E04**
- deformation, permanent, *n***—the net long-term change in a dimension of a specimen after deformation and relaxation under specified conditions. (Syn. **permanent set, nonrecoverable deformation, and nonrecoverable stretch**.) **D 4848, D13**
- deformation point**—See **dilatometric softening point**. **C 162, C14**
- deformation resolution (deformation sensitivity), R_d (L)**—ratio of the smallest subdivision of the indicating scale of a deformation-measuring device to the sensitivity of the device. **D 653, D18**
- deformation wear, *n***—*in solid impingement erosion*, the erosive wear of a material associated with the dissipation of kinetic energy of impact arising from the normal component of the velocity of the impacting particles. It is therefore the sole component of wear for particles impacting at a 90° angle of attack. **G 40, G02**
- deformed*—See **mechanically deformed**. **F 547, F16**
- degas, *v***—the process of removing gases from a liquid. **G 126, G04**
- degasification**—the process of removing dissolved gasses from water. **D 6161, D19**
- degassing**—removal of gases. **D 2652, D28**
- degradable, *adj***—*in erosion control*, decomposes under biological, chemical processes, or ultraviolet stresses associated with typical application environments. **D 653, D18**
- degradable plastic, *n***—a plastic designed to undergo a significant change in its chemical structure under specific environmental conditions resulting in a loss of some properties that may vary as measured by standard test methods appropriate to the plastic and the application in a period of time that determines its classification. **D 883, D20**
- degradation**—a deleterious change in the physical or chemical properties, or both, of a material. **C 904, C03**
- degradation, *n***—a deleterious change in the chemical structure, physical properties, or appearance of a plastic. **D 883, D20**
- degradation**—in general chemical use, the conversion of a complex

degradation

compound to a simpler. Specifically for cellulose, the breakdown of the polymer chain, usually by hydrolysis or oxidation. Degradation is usually applied to changes in chemical structure. (see also **deterioration**) **D 1695, D01**

degradation, n—change of a chemical compound to a less complex compound (dictionary definition). **D 1968, D06**

degradation—the geologic process by which stream beds, flood plains, the bottoms of other water bodies, and other land surfaces are lowered in elevation by the removal of material by fluids. **D 4410, D19**

degradation—damage by weakening or loss of some property, quality, or capability. **E 631, E06**

degradation—damage by weakening or loss of some property, quality, or capability. **E 1749, E06**

degradation, n—a deleterious change in chemical structure, physical properties, or appearance of a plastic. (D20) **F 412, F17**

degradation, n—a deleterious change in the chemical structure, physical properties, or appearance of a plastic. **F 1251, F04**

degrade, n—a reduction in quality of lumber, logs, or other wood products due to processing. **D 9, D07**

degrained leather—leather from which the grain has been removed after tanning, by splitting, abrading, or other process. **D 1517, D31**

degras, moellon—the partially oxidized oil pressed out of sheepskin after tannage with cod or other marine oil. (See also **moellon**.) **D 1517, D31**

degras (wool fat, wool grease, wool wax), n—a fat-like material comprised primarily of sterols, other higher alcohols, and fatty acids, obtained from the solvent extraction of sheep's wool. **D 4175, D02**

degreasing—the removal of grease and oils from a surface.

solvent degreasing—degreasing by immersion in liquid organic solvent.

vapor degreasing—degreasing by solvent vapors condensing on the parts being cleaned. **B 374, B08**

degree Celsius, °C, n—derived unit of temperature in the International System of Units (SI). (See **kelvin**.) **E 344, E20**

degree centigrade, n—obsolete term. Use **degree Celsius**. **E 344, E20**

degree-day—a unit of heat measurement equal to one degree of the variation of the mean temperature for a day from a given reference (or, base) temperature. **D 7099, D18**

degree day—see **degree day, heating** and **degree day, cooling**. **E 772, E44**

degree-day, cooling, (DDC or DDF, Celsius or Fahrenheit respectively)—one cooling degree-day is counted for each degree that the daily mean temperature is higher than a base temperature; used to estimate energy requirements for air conditioning or refrigeration. **E 772, E44**

degree-day, heating, (DDC or DDF, Celsius or Fahrenheit respectively)—one heating degree-day is counted for each degree that the daily mean temperature is lower than a base temperature; used to estimate energy requirements for heating. **E 772, E44**

degree-days—the difference between the average temperature each day and 32°F (0°C). In common usage degree-days are positive for daily average temperatures above 32°F and negative for those below 32°F (see **freezing index**). **D 653, D18**

degree Fahrenheit, °F, n—non-SI unit of temperature commonly used in the United States of America. **E 344, E20**

degree of consolidation (percent consolidation), U (D)—the ratio, expressed as a percentage, of: (1) the amount of consolidation at a given time within a soil mass, to (2) the total amount of consolidation obtainable under a given stress condition. **D 653, D18**

degree of crystallinity—the fraction by mass of a cellulose sample occurring in crystalline regions. The method of determining crystallinity must be stated. (see also **crystallinity**) **D 1695, D01**

degree of deacetylation, n—the fraction or percentage of glu-

cosamine units (GlcN: deacetylated monomers) in a chitosan polymer molecule. **F 2312, F04**

degree of freedom—in heterogeneous equilibrium, an external variable that may be adjusted independently without causing a change of state; the external variables usually considered are: temperature, pressure, and concentration parameters numbering one less than the order of the system. **E 7, E04**

degree of lateral order—the relative degree of molecular alignment. As for degree of crystallinity, quantitative values must be defined in terms of the experimental measurements. (see also **crystallinity**) **D 1695, D01**

degree of polymerization, DP—in general, the average number of base units, or of monomeric units per molecule in linear polymers. Specifically, the average number of anhydroglucose units (or derivative units) per molecule of cellulose (or cellulose derivative). The type of average obtained depends upon the method used for the determination. Hence, the method must always be specified. **D 1695, D01**

degree of saturation—see **percent saturation**. **D 653, D18**

degree of saturation—the extent or degree to which the voids in rock contain fluid (water, gas, or oil). Usually expressed in percent related to total void or pore space. (ISRM) **D 653, D18**

degree of saturation—(1) the total degree of saturation of frozen soil is the ratio, expressed as a percentage, of the volume of ice and unfrozen water in the soil pores to the volume of the pores; (2) the degree of saturation of frozen soil by ice, expressed as a percentage, is the ratio of the volume of ice in the soil pores to the volume of the pores. **D 7099, D18**

degree of sensitivity (sensitivity ratio)—see **remolding index**. **D 653, D18**

degree of substitution, DS—in a cellulose derivative, the average number of hydroxyl groups substituted per anhydroglucose unit. DS varies from zero to about 3. **D 1695, D01**

degree of thickening (DT), n—the ratio of an oil's viscosity with an additive to that oil's viscosity without the additive. A measure of the amount by which an additive increases the base fluid viscosity. **D 4175, D02**

degrees of freedom, n—for a set, the number of values that can be assigned arbitrarily and still get the same value for each of one or more statistics calculated from the set of data. **D 123, D13**

degrees-of-freedom—the minimum number of independent coordinates required in a mechanical system to define completely the positions of all parts of the system at any instant of time. In general, it is equal to the number of independent displacements that are possible. **D 653, D18**

degrees of freedom, n—the divisor used in the calculation of variance. **D 4175, D02**

degrees of freedom—the number of observations minus the number of constraints imposed upon the system. In general, only one constraint (for example, the mean value) is imposed and the total degrees of freedom are one less than the number of observations. **D 4790, D16**

deheading—removal of the lid of a closed-head drum; usually accomplished with a drum deheader. **D 5681, D34**

dehumidify—to reduce, by any process, the quantity of water vapor within a given space. **E 41, G03**

deionization—the removal of ions from a solution by ion exchange. **B 374, B08**

deionization (DI)—the removal of ions from a solution by ion exchange. **D 6161, D19**

delamination, n—as related to metallic coated steel, the separation of a coating (either full or partial thickness) from underlying layers; the separation can occur in small localized areas or large areas of surface. **A 902, A05**

delamination, n—the separation of the layers of material in a laminate. **D 883, D20**

delamination, n—the separation of layers in a laminate because of failure of the adhesive, either in the adhesive itself or at the interface between the adhesive and the adherend. **D 907, D14**

delamination, *n*—the separation of layers in a laminate because of failure of the adhesive, either in the adhesive itself or at the interface between the adhesive and the adherend. **D 1038, D07**

delamination—separation of plies in a laminate. This may be local or may cover a large area in the laminate. **D 3878, D30**

delamination—the separation of two or more layers or plies of reinforcing material within a pultrusion. **D 3918, D20**

delamination—*in protective coatings*, a separation of one coat from another coat within a coating system; or from the substrate. **D 4538, D33**

delamination—See *resistance to delamination*. **D 5684, D13**

delamination—the separation of the layers (lamina) of material in a laminate. **E 631, E06**

delamination—separation into constituent layers. **E 631, E06**

delamination, *n*—(1) the separation of one coating from another coat within a coating system, or from the substrate. (D 4538) (2) the separation of layers in a laminated material such as plywood because of failure of the adhesive. (D 907) **E 1605, E06**

delamination—the separation of the layers (lamina) of material in a laminate. **E 1749, E06**

delamination—the separation of layers in a multilayered structure. **F 17, F02**

delamination—See Terminology F 17. **F 1327, F02**

delamination strength, *n*—the tensile force required to separate the component layers under specified force. **D 123, D13**

delay—time interval (fraction of a second) between detonation of explosive charges. (ISRM) **D 653, D18**

delay distance (*D*), *n*—the distance the air flows past a wind vane during the time it takes the vane to return to 50 % of the initial displacement. **D 1356, D22**

delayed deformation, *n*—deformation which is time-dependent and exhibited by material subject to a continuing force. **D 123, D13**

delayed deformation, *n*—deformation which is time-dependload of a skein of yarn adjusted for the linear density of the yarn expressed in an indirect system. **D 4848, D13**

delayed fishscaling—a fishscaling defect that occurs after the final porcelain enamel processing (see also **fishscaling**). **C 286, B08**

delayed sweep—an A-scan or B-scan presentation in which an initial part of the time scale is not displayed. **E 1316, E07**

deleading—deprecated term. Use **lead-based paint hazard abatement**. **E 631, E06**

deleading—activities conducted to eliminate lead-based paint or lead-based paint hazards in public buildings, commercial buildings, or steel structures. **E 1605, E06**

delegated practice—the medical activities of providers performed under the authority and direction of a licensed physician. **F 1177, F30**

deleterious impurities—impurities that might be a health or safety concern, particularly with respect to toxicity, carcinogenicity, or immunogenicity. Deleterious impurities must be controlled and their levels determined using suitable analytical methods. **E 1705, E48**

delft ware—a calcareous earthenware having an opaque white glaze and monochrome overglaze decorations. (Originated in Delft, Holland.) **C 242, C21**

delicate or gentle cycle, *n*—a cycle in which agitation is slow and time is reduced. **D 123, D13**

delicate or gentle cycle, *n*—a cycle in which agitation is slow and time is reduced. **D 7023, D13**

delicate pretreatment procedure, *n*—*in textile conservation*, the washing, rinsing, drying, and pressing actions followed when fabrics are of certain yarn and fabric constructions or fiber contents, such as lightweight or sheer fabrics, fine yarns, silks, or wools. (Compare **sturdy pretreatment procedure**.) **D 123, D13**

delimited term, *n*—a term whose term entry includes a specified domain or area of application. **E 1992, E02**

delivery—(1) the final act of any glass-forming unit on a particular article; consisting of motion to remove the article from the mold.

(2) the process or equipment used for directing charges or gobs of glass to a forming machine. **C 162, C14**

delivery—the leather or fabricated leather articles presented at any one time for inspection or test. **D 1517, D31**

delivery rate—mass of mixture discharged from the dispenser per unit of time at a specified temperature, usually expressed in g/s at 80 °F (26 °C). **D 3064, D10**

delivery rate—use **sedimentdelivery ratio** or sediment yield, whichever is meant. **D 4410, D19**

delta, δ , *n*—*in the measurement of rubber properties*, the symbol for the phase angle by which the dynamic force leads the dynamic deflection; mathematically true only when the two dynamic waveforms are sine waves (Synonym—*loss angle*). **D 1566, D11**

delta—a sediment deposit formed where moving water is slowed by a slower moving body of water. **D 4410, D19**

delta code, *n*—*in encoding information in a one-dimensional medium*, intervals that are subdivided into modules that are assigned values of “1” or “0” where “1s” are bars and “0s” are spaces. Examples are UPC, Code 128, Code 93 and Code 49. **F 1294, F05**

delta ferrite—designation commonly assigned to delta iron containing alloying elements in solid solution. Small amounts of carbon and large amounts of other alloying elements markedly affect the high-and-low-temperature limit of equilibrium. **E 7, E04**

delta iron (δ Fe)—solid phase of pure iron which is stable at temperatures between 1400 and 1539°C and possesses the body-centered cubic lattice. Strictly, there is no difference between delta and alpha iron. **E 7, E04**

delta peak temperature, *n*—difference between the maximum temperature and the initial temperature of the sensor during the test, °C. **F 819, F18**

demagnetization—the reduction of residual magnetism to an acceptable level. **E 1316, E07**

demagnetization curve—the portion of a flux versus dc current plot (dc hysteresis loop) that lies in the second or fourth quadrant, that is, between the residual induction point, B_r , and the coercive force point, H_c . Points on this curve are designated by the coordinates, B_d and H_d . **A 340, A06**

demagnetizing coefficient, D_B —is defined by the equation:

$$D_B = [\Gamma_m(H_a - H)]/B_i$$

where:

H_a = applied magnetic field strength,

H = magnetic field strength actually existing in the magnetic material,

B_i = intrinsic induction, and

Γ_m = 1 in the cgs system and $4\pi \times 10^{-7}$, henry/metre in the SI system.

NOTE—For a closed, uniform magnetic circuit, the demagnetizing coefficient is zero. **A 340, A06**

demagnetizing factor, N_D —defined as 4π times the demagnetizing coefficient, D_B . **A 340, A06**

demagnetizing field strength, H_d —a magnetic field strength applied in such a direction as to reduce the induction in a magnetized body. See **demagnetization curve**. **A 340, A06**

demineralization—the process of removing minerals from water. **D 6161, D19**

demulsibility, *n*—*in petroleum products*, the ability of a mixture of liquids (usually hydrocarbons and water) to separate into its components after the mixture has been vigorously agitated. **D 4175, D02**

denaturant—toxins or noxious materials added to ethanol to make it unfit for human consumption. **E 1705, E48**

denaturants, *n*—natural gasoline, gasoline components, unleaded gasoline, or toxic or noxious materials added to fuel ethanol to make it unsuitable for beverage use but not unsuitable for automotive fuel use. **D 4175, D02**

denatured alcohol

denatured alcohol—ethyl alcohol containing an addition of a poisonous substance, making it unfit for human consumption.

E 7, E04

denatured ethanol—ethanol that is mixed with other chemicals or denaturants to make it unsuitable for human consumption.

E 1705, E48

denatured fuel ethanol, n—fuel ethanol made unfit for beverage use by the addition of denaturants.

D 4175, D02

denatured fuel ethanol—fuel ethanol to which chemicals (denaturants) have been added to make the ethanol unfit for human consumption in accordance with regulations of the Bureau of Alcohol, Tobacco, and Firearms of the U. S. Treasury Department.

E 772, E44

denatured fuel ethanol—fuel ethanol to which chemicals (denaturants) have been added to make the ethanol unfit for human consumption in accordance with the regulations of the Bureau of Alcohol, Tobacco, and Firearms of the U.S. Treasury Department.

E 1705, E48

dendrites—crystals, usually formed during solidification or sublimation, which are characterized by a tree-like pattern composed of many branches; pine-tree or fir-tree crystals.

E 7, E04

dendritic powder, n—particles, usually of electrolytic origin, having the typical pine tree structure.

B 243, B09

denier, n—the unit of linear density, equal to the mass in grams of 9000 m of fiber, yarn, or other textile strand that is used in a direct yarn numbering system. (See also **linear density**)

D 123, D13

denier, n—a direct numbering system for expressing linear density, equal to the mass in grams per 9000 metres of yarn, filament, fiber, or other textile strand.

D 3878, D30

denier, n—the unit of linear density, equal to the mass in grams of 9000 m of fiber, yarn, or other textile strand that is used in a direct yarn numbering system. (See also **linear density**)

D 4849, D13

denier, n—the number of grams per 9000 m.

E 631, E06

denim, n—a durable woven twill fabric, usually of all cotton or a blend of cotton and manufactured fibers, made from a variety of yarn numbers, and in various fabric weights, colors, designs, and finishes.

D 123, D13

denim, n—a durable woven twill fabric, usually of all cotton or a blend of cotton and manufactured fibers, made from a variety of yarn numbers, and in various fabric weights, colors, designs, and finishes.

D 4850, D13

denitrification—aqueous nitrate reduction or removal.

D 6161, D19

dense—a term used for optical glass having a high index of refraction.

C 162, C14

dense—(1) term used in stress grading of certain softwood species to signify a high specific gravity. (2) a visual estimate of high specific gravity. To be classified as dense, the softwood species shall average on one end or the other of each piece, not less than six annual rings per inch and one-third or more latewood. Pieces not less than four rings per inch shall be accepted as dense if they average one-half or more latewood.

D 9, D07

dense-graded aggregate, n—an aggregate that has a particle size distribution such that when it is compacted, the resulting voids between the aggregate particles, expressed as a percentage of the total space occupied by the material, are relatively small.

D 8, D04

dense (non-porous) membrane—membrane with no detectable pores.

D 6161, D19

dense rubber, n—in building construction, a solid rubber material substantially free of cells or porosity.

C 717, C24

densification crack, n—in a rigid die system, a defect caused by differential stresses in a region of a part that has experienced large differences in shrinkage during sintering.

B 243, B09

densified particulate biomass fuels—a fuel made by mechanical compression of biomass to increase the bulk density and to press the fuel into a specific shape, such as pellets and briquettes. The fuel can have a maximum volume of 16.39 cm³ (1 in.³) such that the largest dimension is 7.62 cm (3 in.).

E 1705, E48

densitometer—an instrument which measures the relationship be-

tween incident light and transmitted or reflected light and, using a logarithmic scale, gives a numerical measurement that corresponds to a material's opacity or a film's photographic density.

E 7, E04

densitometer—not recommended, see **microphotometer**.

E 135, E01

densitometer, n—instrument designed for measuring optical density of a photographic negative or positive or a printed image.

A 284, E12

densitometer—a device for measuring the optical density of radiograph film.

E 1316, E07

densitometry, n—technique for measurement of optical density by use of a densitometer.

E 284, E12

density, δ —the ratio of mass to volume of a material. In the cgs-emu system of units, g/cm³. In SI units, kg/m³.

A 340, A06

density, n—the weight per unit volume of a material.

C 11, C11

density, n—mass per unit volume (preferred over deprecated term **unit weight**).

C 125, C09

density, ρ , n—the mass per unit volume of a material. (ρ in SI units: kg/m³.) (ρ in inch-pound units: lb/ft³.)

C 168, C16

density:

absolute or true density—the weight divided by the volume excluding open and closed pores.

apparent or pycnometric density—the weight divided by the volume excluding open pores, but including closed pores.

tap density—the apparent density of a powdered or granulated material resulting when the receptacle containing the material is vibrated or tapped under standard or specified conditions.

C 242, C21

density—the weight per unit volume in air, expressed in pounds per cubic foot of a product.

C 904, C03

density, n—mass per unit volume expressed in g/cm³ or lb/ft³.

C 1154, C17

density, n—the mass per unit volume of a substrate at a specified temperature and pressure; usually expressed in g/mL, kg/L, g/cm³, g/L, kg/m³ or lb/gal. See **specific gravity**.

D 16, D01

density, n—mass per unit volume.

D 123, D13

density—the mass per unit, ρ (ML⁻³) kg/m³.

density of dry soil or rock, ρ_d (ML⁻³) kg/m³—the mass of solid particles per the total volume of soil or rock.

density of saturated soil or rock, ρ_{sat} (ML⁻³) kg/m³—the total mass per total volume of completely saturated soil or rock.

density of soil or rock (bulk density), ρ (ML⁻³) kg/m³—the total mass (solids plus water) per total volume.

density of solid particles, ρ_s (ML⁻³) kg/m³—the mass per volume of solid particles.

density of submerged soil or rock, ρ_{sub} (ML⁻³) kg/m³—the difference between the density of saturated soil or rock, and the density of water.

density of water, ρ_w (ML⁻³) kg/m³—the mass per volume of water.

D 653, D18

density, n—mass per unit volume (D 3288, D09).

D 996, D10

density, n—the mass per unit volume of substance.

D 1356, D22

density, n—the mass per unit volume of a material.

D 1566, D11

density—the mass per unit volume at a specified temperature.

D 1695, D01

density—mass of a given volume of material at a specified temperature.

D 3064, D10

density, n—mass per unit volume at a specified temperature.

D 4175, D02

density—the weight in vacuo, (that is, the mass) of a unit volume of the material at any given temperature.

D 4175, D02

density—the mass of a substance per unit volume, ρ in kg/L or kg/m³. Use ρ_s for density of solid particles, ρ_w for water, ρ_d for dry sediment with voids, ρ_{sat} for saturated sediment, ρ_{wet} for wet sediment, and ρ_b for submerged sediment (buoyant weight).

D 4410, D19

density, n —see **reflectance density, reflection density, transmission density, or transmittance density.** E 284, E12

density, n —the mass of a unit volume of material. E 344, E20

density—weight per unit volume, usually expressed in pounds per cubic inch, pounds per cubic foot, or kilograms per cubic metre. E 631, E06

density—the mass of a unit volume of a material at a specified temperature. The units shall be stated, such as grams per millilitre, grams per cubic centimetre, pounds per cubic foot, or other. The form of the expression shall be the following:

Density at x . . .

where x = temperature of the material. See also **Baumé gravity and specific gravity.** E 1547, E15

density—weight per unit volume, usually expressed in pounds per cubic inch, pounds per cubic foot, or kilograms per cubic metre. E 1749, E06

density, n —the mass per unit volume; weight per unit volume, expressed as grams per cubic centimeter or pounds per cubic foot for solids and liquids and usually as grams per liter for gases. E 2201, E50

density—see **image density.** F 335, F05

density, n —in *printed symbologies*, the number of data characters that can be contained in a given unit of measure. Linear bar code density is expressed in characters per inch (CPI) and two-dimensional symbol density is expressed in characters per square inch (CPSI). F 1294, F05

density, absolute or true—the mass under specified conditions of a unit volume of a solid sorbent excluding its pore volume and inter-particle voids. D 2652, D28

density, apparent—the weight in air of a unit volume of a material. D 883, D20

density, apparent—the mass per unit volume of a sheet of pulp or paper. It is commonly calculated by dividing the basis weight by the caliper, although it must be recognized that the numerical value thus obtained is dependent upon the definition of the ream. D 1695, D01

density, apparent—the weight in air of a unit volume of a material at a specified temperature. The units shall be stated. The form of expression shall be the following:

Apparent density at x

where x = temperature of the material. E 1547, E15

density, apparent, n —the weight in air of a unit of volume of a material. F 1251, F04

density, apparent (density, bulk, packing)—the mass under specified conditions of a unit volume of a solid sorbent including its pore volume and inter-particle voids. D 2652, D28

density, apparent (of applied insulation), n —the mass per unit volume of in-place mass thermal insulation. C 168, C16

density, block—see **density, particle.** D 2652, D28

density, bulk—the weight per unit volume of a material including voids inherent in material as tested. D 883, D20

density, bulk, n —the mass per unit volume of a material, including any voids present. D 1566, D11

density, bulk—the mass of a cellulosic material that will fill a unit volume of a container under specified conditions. D 1695, D01

density, bulk—see **density, apparent.** D 2652, D28

density, bulk, n —the weight in air of a unit of volume of a material. F 1251, F04

density comparison strip—alternative term for **step-wedge comparison film.** E 1316, E07

density current—the movement of one fluid under, through, or over another fluid of differing density. D 4410, D19

density (dry), n —the mass per unit volume of an unimpregnated powder metallurgy part. B 243, B09

density (film)—transmission density is the common logarithm of the

ratio of the radiant flux incident on the sample to the radiant flux transmitted by the sample, assuming no reflection. E 7, E04

density (film)—the quantitative measure of film blackening when light is transmitted or reflected.

$$D = \log (I_0/I) \text{ or } D = \log (I_0/R)$$

where:

D = density,

I_0 = light intensity incident on the film,

I = light intensity transmitted, and

R = light intensity reflected.

E 1316, E07

density in air—the weight per unit volume in vacuum minus the weight of a volume of air equal to the difference between the volume of the sample and the volume of brass weights equivalent to weight in vacuum of the sample. D 4790, D16

density (ρ , (ML⁻³), kg/m³), n —mass per unit volume. D 4439, D35

density of frozen ground—the ratio of mass per unit of volume of frozen earth materials. D 7099, D18

density (of gases)—the mass of a unit volume of a gas at a stated temperature and pressure. The units shall be stated. The form of expression shall be the following:

Density at x, y

where:

x = temperature of the gas, and

y = pressure of the gas.

E 1547, E15

density of plastics—the weight per unit volume of material at 23°C expressed as D23c, g/cm³ (kg/m³). F 412, F17

density, packing—see **density, apparent.** D 2652, D28

density, packing (bulk)—the ratio of the mass of a collection of discrete pieces of solid material to the sum of the volumes of: the solids in each piece, the voids within the pieces, and the voids among the pieces of the particular collection. D 3766, D32

density, particle (density, block)—the mass under specified conditions of a unit volume of a solid sorbent including its pore volume but excluding inter-particle voids. D 2652, D28

density, particle (envelope)—the ratio of the mass of a particle to the sum of the volumes of: the solid in each piece and the voids within each piece, that is, within close-fitting imaginary envelopes completely surrounding each piece. D 3766, D32

density ratio, n —the ratio, often expressed as a percentage, of the density of a porous material to the density of the same material completely free of porosity. Synonymous with **relative density.** B 243, B09

density, skeletal—the ratio of the mass of discrete pieces of solid material to the sum of the volumes of: the solid material in the pieces and closed (or blind) pores within the pieces. D 3766, D32

density, tamped—the density of packed bed of powdered carbon. D 2652, D28

density, theoretical—the ratio of the mass of a collection of discrete pieces of solid material to the sum of the volumes of said pieces, the solid material having an ideal regular arrangement at the atomic level. D 3766, D32

density (wet), n —the mass per unit volume of a powder metallurgy part impregnated with oil or other nonmetallic materials. B 243, B09

dents—depressions in the copper foil which do not significantly change the thickness of the copper foil. B 846, B05

dents per unit width, n —for *woven pile yarn floor covering*, the number of binding sites per unit width; dents being the reed spaces through which the warp yarns pass in the loom or the metal strips, in the reed that form these spaces. D 123, D13

dents per unit width, n —for *woven pile floor covering*, the number of binding sites per unit width; dents being the reed spaces through which the warp yarns pass in the loom or the metal strips in the reed that form these spaces. D 5684, D13

denuder, *n*

denuder, *n*—a device designed to collect or remove gases from an air stream by diffusion to a collecting surface or secondary air stream while permitting the passage of particles. **D 1356, D22**

deoxidation—process of reducing the oxygen content from steel during the process of steel making, either by adding strong oxide forming elements, such as silicon or aluminum, or by the process of vacuum degassing to such a level that no oxidation of carbon or other elements takes place during solidification of steel. **F 1789, F16**

deoxidation products—a term specifically applied to those non-metallic inclusions formed as a result of the addition of deoxidizing agents to molten metal. **E 7, E04**

deoxidized copper, high-residual phosphorus—copper deoxidized with phosphorus residual in amounts 0.015 to 0.040 %. The copper is not susceptible to hydrogen embrittlement, as determined in Specification B 379. The copper is of relatively low-electrical conductivity due to the amount of phosphorus present.

NOTE—International Standards Organization specifications permit up to 0.050 % phosphorus. **B 846, B05**

deoxidized copper, low-residual phosphorus—copper deoxidized with phosphorus residual in amounts 0.004 to 0.012 %. The copper is not readily susceptible to hydrogen embrittlement, as determined in Specification B 379. The copper in the annealed condition has a minimum conductivity of 90 % IACS. **B 846, B05**

depacifying, *adj*—the process of removing hydrogen ions (protons) from the cathodic surface of an electrolytic cell, thereby promoting continued electrolytic corrosion. **D 4175, D02**

dependent variable, *n*—See **response variable**. **E 456, E11**

dependent variable, *n*—see **response variable**. **E 1325, E11**

deplasticize, *v*—the process of breaking down polymers in plastics and similar materials, resulting in loss of the material's structural integrity. **D 4175, D02**

depletion—selective removal of one component of an alloy, usually from the surface or preferentially from grain boundary regions. **E 7, E04**

depletion—decrease of toner concentration in a developer composition characterized by low-image density. **F 335, F05**

deployed length, *n*—the coils as extended for use. It is specified by the coverage where:

Helical coverage = number of coil loops per unit × helical loop spacing

Concertina coverage = number of coil loops divided by 2 × concertina loop spacing.

F 1379, F14

deployment, *n*—*for inflatable restraints*, the sequence of events related to the activation of a module. **D 123, D13**

deployment, *n*—*for inflatable restraints*, the sequence of events related to the activation of a module. **D 6799, D13**

deployment—placing a boom in the water and making it operational. **F 818, F20**

depolarization—a decrease in the polarization of an electrode at a specified current density. **B 374, B08**

depolarization—not a preferred term. (See **polarization**.) **G 15, G01**

depolarizer—a substance or a means that produces depolarization. **B 374, B08**

depolymerization, *n*—reduction in length of a polymer chain to form shorter polymeric units. Depolymerization may reduce the polymer chain to oligomeric or monomeric units, or both. **F 2312, F04**

deposit—the amount of pesticide on a unit area of surface. **E 609, E35**

deposit corrosion—localized corrosion under or around a deposit or collection of material on a metal surface. (See also **crevice corrosion**.) **G 15, G01**

deposition, *n*—the transfer of an atmospheric constituent to a surface due to gravity or another mechanism, or the material which is transferred.

dry deposition, *n*—all forms of deposition derived from the net vertical transfer of chemical species to a surface that are not

the result of precipitation.

wet deposition, *n*—the precipitation of water from the atmosphere in the form of hail, rain, sleet, and snow.

D 1356, D22

deposition—the chemical, mechanical, or biological processes through which sediments accumulate in a resting place.

D 4410, D19

deposition aid—a material that improves the ability of agricultural sprays to deposit on targeted surfaces. **E 1519, E35**

depositional carbon, *n*—as used in *Test Method D 5061*, a group of carbon forms that are formed from cracking and nucleation of gas-phase hydrocarbon molecules during coal carbonization.

pyrolytic carbon, *n*—as used in *Test Method D 5061*, an anisotropic carbon form that is formed by the deposition of carbon parallel to an inert substrate causing the resulting texture to appear ribbon-like.

sooty carbon, *n*—as used in *Test Method D 5061*, an isotropic carbon form comprised of approximately spherical particles of less than 1- μ m diameter sometimes referred to as combustion black.

spherulitic carbon, *n*—as used in *Test Method D 5061*, a spherical anisotropic carbon form sometimes referred to as thermal black that is formed by the deposition of carbon concentrically around a nucleus.

divided sample—See **divided sample** under **sample**. **D 121, D05**

deposit rate—the amount of any material deposited per unit area. **E 1102, E35**

depreciation—the annual charge to income that results from a systematic and rational allocation of costs over the life of a tangible asset. **E 2135, E53**

depression, *n*—localized pavement surface areas at a lower elevation than the adjacent paved areas. **E 867, E17**

depression, *n*—localized pavement surface areas at a lower elevation than the adjacent paved areas. **E 1778, E17**

depth, *n*—in the case of a beam, the dimension parallel to the direction in which the load is applied. **D 883, D20**

depth, *n*—in the case of a beam, the dimension parallel to the direction in which the load is applied. (D20) **F 412, F17**

depth-dose distribution—variation of absorbed dose with depth from the incident surface of a material exposed to a given radiation. **E 170, E10**

depth factor—the factor included in deriving the allowable bending stress for rectangular members which takes into account the somewhat lower unit strength developed in larger members as compared to smaller members. Archaic terminology, more correctly termed **size factor**. **D 9, D07**

depth-integrated sample—a discharge-weighted (velocity-weighted) sample of water-sediment mixture collected at one or more verticals in accordance with the technique of depth integration; the discharge of any property of the sample expressible as a concentration can be obtained as the product of the concentration and the water discharge represented by the sample. **D 4410, D19**

depth-integrating sediment sampler—a device that collects a representative water-sediment mixture at all points along the sampling vertical. **D 4410, D19**

depth integration—a method of sampling at every point throughout a given depth (the sampled depth) whereby the water-sediment mixture is collected isokinetically so that the contribution from each point is proportional to the stream velocity at the point. This process yields a sample with properties that are discharge weighted over the sampled depth. Ordinarily, depth integration is performed by traversing either a depth- or point-integrating sampler vertically at an acceptably slow and constant rate; however, depth integration can also be accomplished with vertical slot samplers. **D 4410, D19**

depth of field—the depth or thickness of the object space that is simultaneously in acceptable focus. **E 7, E04**

depth of field—the range of distance over which an imaging system

gives satisfactory definition when it is in the best focus for a specific distance. **E 1316, E07**

depth of field, *n*—in bar code reading, the difference between the minimum and maximum distance from the aperture of the reader to the symbol throughout which the bar code can be accurately interpreted. **F 1294, F05**

depth of flow in hydraulics, *n*—the distance from the channel thalweg to the water surface, measure normal to the direction of flow, for a given discharge. **D 653, D18**

depth of focus—the depth or thickness of the image space that is simultaneously in acceptable focus. **E 7, E04**

depth of gloss—the optical phenomenon of relative depth perceived when viewing reflective surfaces. **D 2825, D21**

depth of penetration, *n*—(1) the distance a penetrant has entered into a solid material as measured from the surface of the material; (2) the maximum depth at which a magnetic or ultrasonic indication can be measured in a test specimen. **C 1145, C28**

depth of penetration—in electromagnetic testing, the depth at which the magnetic field strength or intensity of induced eddy currents has decreased to 37 % of its surface value. The depth of penetration is an exponential function of the frequency of the signal and the conductivity and permeability of the material. Synonymous terms are standard depth of penetration and skin depth. (See also **skin effect**.) **E 1316, E07**

depth of penetration, *d_p*—in internal reflection spectroscopy, the distance into the less refractive medium at which the amplitude of the evanescent wave is e^{-1} (that is, 36.8 %) of its value at the surface:

$$d_p = \frac{\lambda_1}{2\pi(\sin^2\theta - n_{21}^2)^{1/2}}$$

where: $n_{21} = n_2/n_1$ = refractive index of sample divided by that of the IRE; $\lambda_1 = \lambda/n_1$ = wavelength of radiant energy in the sample; and θ = angle of incidence. **E 131, E13**

depth of seasonal frost penetration—the maximum thickness of the seasonally frozen layer. **D 7099, D18**

depth of thaw—the distance from the ground surface downward to frozen ground at any time during the thaw season. **D 7099, D18**

depth of zero annual amplitude—the distance from the ground surface downward to the point beneath which there is virtually no annual fluctuation in the mean ground temperature. **D 7099, D18**

depth profiling—AES, XPS, SIMS, monitoring the signal strength as a function of some variable (for example, sputtering time) that can be related to distance from the surface. **E 673, E42**

depth resolution—AES, XPS, SIMS, the depth range over which a signal increases (or decreases) by a specified amount when profiling an ideally sharp interface between two media. By convention, the depth resolution corresponds to the distance over which a 16 % to 84 % (or 84 % to 16 %) change in signal is measured. **E 673, E42**

depth scale—EIA, a relationship between energy loss and target depth that allows a direct correlation between multichannel analyzer channel number and depth in the specimen. **E 673, E42**

depuration—loss of a substance from an organism as a result of any active or passive process. **E 943, E47**

derivative, *adj*—pertaining to the first derivative (mathematical) of any curve with respect to temperature or time. **E 473, E37**

derivative absorption spectrum—a plot of rate of change of absorbance or of any function of absorbance with respect to wavelength or any function of wavelength, against wavelength or any function of wavelength. **E 131, E13**

derived differential curve—the curve derived from the data obtained by the use of the differential method of thermal analysis. The changes in the temperature difference $\Delta(\theta - \theta')$, between a specimen and a neutral body, for a constant interval of temperature $\Delta\theta$ are plotted against the temperature. An arithmetic treatment of the differential data resulting in a plot of $\Delta(\theta - \theta')/\Delta\theta$ versus θ . (See **differential curve**.) **E 7, E04**

dermal autograft, *n*—a skin [autograft] from which epidermis and subcutaneous fat have been removed; used instead of fascia in various plastic [surgery] procedures. **F 2312, F04**

dermal toxicity—the toxic effect to an organism resulting from contact of the pesticide with the skin. **E 609, E35**

desalination—see **demineralization**. **D 6161, D19**

descender, *n*—a stroke that extends below the baseline of the body of the letter formation. **E 2195, E30**

descender, *n*—that portion of an alphabetic character that extends below the baseline. **F 1457, F05**

descender, *n*—a rappel device. **F 1773, F08**

descending fork point—in a ternary phase diagram, the configuration at the convergence of the three divariant curves upon each of the three high-temperature phases associated in Class III univariant equilibrium; for example, the division of a descending liquidus surface valley into two descending liquidus-surface valleys. **E 7, E04**

descriptive analysis, *n*—any method to describe and quantify the sensory characteristics of stimuli by a panel of trained assessors. **E 253, E18**

de-seeding, *n*—in flax, the process of removing seeds and seed-holding structures from plants. **D 123, D13**

de-seeding, *v*—in flax, the process of removing seeds and seed-holding structures from plants. **D 6798, D13**

desiccant, *n*—a hygroscopic substance used to absorb water vapor from the air to maintain a low relative humidity in a container. **D 996, D10**

desiccant, *n*—compounding material used to irreversibly absorb moisture present (in a rubber mix) particularly for the purpose of minimizing risk of porosity during vulcanization. **D 1566, D11**

desiccation crack—a crack or fissure in fine-grained soil material resulting from shrinkage during drying. **D 7099, D18**

desiccation polygon—a closed, multi-sided, pattern in the ground formed by desiccation cracks in fine-grained soils. **D 7099, D18**

designated person—an individual who is qualified by experience or training to perform an assigned task. **F 819, F18**

designated size—the dimensional name for a particular size that may or may not be equal to or related to the dimensions used for design purposes or of the manufactured product. **C 822, C13**

design contingency, *n*—in project design/construction, the amount of funds added to the estimated construction costs to cover unanticipated construction costs due to the incompleteness of the design, where the contingency is inversely proportional to the level of completeness of the design documentation. **E 833, E06**

design depth of frost penetration—(1) in North American usage: the mean of the three largest depths of seasonal frost penetration measured during the past thirty years, or, the largest depth of seasonal frost penetration beneath a snow-free soil surface measured during the past ten years; (2) in Russian usage: the mean of the depths of seasonal frost penetration during at least the last ten years with the ground surface free of snow and the groundwater level beneath the depth of seasonal frost penetration. **D 7099, D18**

design development—the phase of a project consisting of drawings and document preparation to fix and describe the size and character of the building systems, material, and elements. **E 631, E06**

design development, *n*—the phase of a project consisting of drawings and document preparation to fix and describe the size and character of the building systems, material, and elements. **E 833, E06**

design discharge in erosion control, *n*—the volumetric quantity of water flow within a channel which is typically used in determining required channel dimensions and suitable lining materials for ensuring adequate channel capacity and stability. **D 653, D18**

design eye—the reference point in aircraft design from which all visual or optical anthropometrical design considerations are taken. **F 2429, F07**

design life—the period of time during which a system or component is expected to perform its intended function, without significant

design life

- degradation of performance and without requiring major maintenance or replacement. **E 772, E44**
- design load**—the load at which the geosynthetic is required to operate in order to perform its intended function. **D 4439, D35**
- design load, n**—the intended maximum design load condition allowed by design under appropriate nationally recognized structural design criteria. **E 176, E05**
- design of experiments, n**—the arrangement in which an experimental program is to be conducted, and the selection of the levels (versions) of one or more factors or factor combinations to be included in the experiment. Synonyms include experiment design and experimental design. **E 456, E11**
- design of experiments, n**—the arrangement in which an experimental program is to be conducted, and the selection of the levels (versions) of one or more factors or factor combinations to be included in the experiment. Synonyms include experiment design and experimental design. **E 1325, E11**
- design program**—the information detailing project function, purpose, and characteristics inclusive of floor area, functional spaces, equipment, and building systems. **E 631, E06**
- design program**—See **facility performance**. **E 631, E06**
- design program, n**—the information detailing project function, purpose, and characteristics inclusive of floor area, functional spaces, equipment, and building systems. **E 833, E06**
- design program**—See **facility performance**. **E 1480, E06**
- design program, n** (programmed conception)—(*design brief*) document specifying what facilities will be provided to the occupants, and confirming to the owner the requirements for the facility. **E 631, E06**
- design strength**—the minimum acceptable 0.01-in. (0.3-mm) crack D-load. **C 822, C13**
- desires, n**—the functions that the value analysis team determines to be fulfilled if cost is not a factor, or functions which do not otherwise violate a constraint. **E 833, E06**
- desorption, n**—a process in which a sorbed material is released from another material, as the desorption of moisture from fibers; the reverse of absorption, adsorption, or both. **D 123, D13**
- desorption, n**—the process of freeing from a sorbed state. **D 1356, D22**
- desorption**—the separation of an adsorbate as such from a sorbent. **D 2652, D28**
- desorption, n**—a process in which a sorbed material is released from another material, as the desorption of moisture from fibers; the reverse of absorption, adsorption, or both. **D4920, D13**
- desorption**—opposite of absorption. See **absorption**. **D 6161, D19**
- destructive test**—See **test, destructive**. **E 631, E06**
- destructive test**—See **test, destructive**. **E 1749, E06**
- destructive test**—test to determine the properties of a material or the behavior of an item which results in the destruction of the sample or item. **F 1789, F16**
- detached dwelling**—See **dwelling**. **E 631, E06**
- detached dwelling**—a **dwelling unit** standing by itself. **E 631, E06**
- detachment failure**—a slope failure in which the thawed or thawing part of the active layer detaches from the underlying frozen material. **D 7099, D18**
- detected feature**—in *imageanalysis*, an object or constituent of interest that is isolated for measurement by adjustment of the threshold setting to its particular range of gray level. **E 7, E04**
- detection limit, n**—for an analytical instrument, the minimum quantity of analyte expected to yield a response greater than zero. **E 135, E01**
- detection limit**—stated limiting value that designates the lowest concentration or mass that is capable of being estimated or determined with confidence and that is specific to the analytical procedures used. **E 631, E06**
- detection limit**—the smallest concentration of an element or compound that can be measured for specific analysis conditions and data collection periods. **E 673, E42**
- detection limit**—the lowest level of an analyte that can be detected by an instrument or an analytical method.
- instrumental detection limit*—the lowest concentration at which the instrumentation can distinguish analyte content from the background generated by a minimal matrix.
- method detection limit*—the minimum concentration of an analyte that, in a given matrix and with a specific method, has a 99 % probability of being identified, qualitatively or quantitatively measured, and reported to be greater than zero concentration. **E 1605, E06**
- detection limit**—the minimum quantity of analyte that can be reliably detected but not necessarily quantified. **E 2161, E37**
- detection monitoring**—a program of monitoring for the express purpose of determining whether or not there has been a contaminant release to ground water. **D 653, D18**
- detection process**—past-oriented strategy of quality control that attempts to identify the nonconforming product after it has been produced, and then to separate it from the conforming product. **F 1789, F16**
- detection system**—system which relies on final inspection as the primary means of controlling the quality of finished fasteners. **F 1789, F16**
- detector, n**—device to convert radiant energy into a neural signal (such as the eye) or an electrical signal (such as a phototube, photomultiplier tube, photocell, photodiode, or the like). **E 284, E12**
- detector:**
- angle*—EIA, see *angle of detector*:
- efficiency*—EIA, fraction of particles incident on the detector that actually generate a detectable signal.
- foil*—EIA, a thin sheet, usually metal or plastic, placed over a detector to absorb low energy or high mass products, or both, from nuclear reactions, while transmitting other reaction products.
- solid angle*—see *angle, solid, of detector*. **E 673, E42**
- detergency**—the removal of soil, using a detergent. **D 459, D12**
- detergent**—a surface-active agent that possesses the ability to clean soiled surfaces.
- anionic detergent*—a detergent that produces aggregates of negatively-charged ions with colloidal properties.
- cationic detergent*—a detergent that produces aggregates of positively-charged ions with colloidal properties.
- nonionic detergent*—a detergent that produces aggregates of electrically-neutral molecules with colloidal properties. **B 374, B08**
- detergent, n**—*intextile product care*, a cleaning agent containing one or more surfactants as the active ingredient(s). **D 123, D13**
- detergent**—a composition that removes soil.
- anionic detergent*—a detergent that produces negatively charged colloidal ions in solution.
- cationic detergent*—a detergent that produces positively charged colloidal ions in solution.
- dry-cleaning detergent (charge-type)*—a dry-cleaning detergent used at a given percentage by volume that can pass through a diatomaceous earth-coated filter in the dry-cleaning system without change in composition.
- dry-cleaning detergent (dry-cleaning aid)*—a detergent that when added to a dry-cleaning solvent increases cleaning effectiveness.
- dry-cleaning detergent (non-charge type)*—any dry-cleaning detergent that is not of the charge type.
- inorganic alkaline detergent*—a water-soluble inorganic alkali or alkaline salt having detergent properties, but containing no soap or synthetics.
- nonionic detergent*—a detergent that produces electrically neutral-colloidal particles in solution.
- synthetic detergent*—a detergent produced by chemical synthesis

and comprising an organic composition other than soap.

D 459, D12

detergent—a formulated cleaning composition, generally containing one or more surfactant(s) as the essential component(s). However, under **detergent**, see *inorganic alkaline detergent*. Imprecisely, the terms *detergent* and *surfactant* have been used interchangeably.

D 459, D12

detergent, n—*intextile product care*, a cleaning agent containing one or more surfactants as the active ingredient(s).

D 3136, D13

detergent—a cleansing agent; any of numerous synthetic water soluble or liquid-organic preparations that are chemically different from soaps but resemble them in the ability to emulsify oils and hold dirt in suspension.

D 6161, D19

detergent alkylate—a mixture of alkylated aromatic hydrocarbons which when sulfonated yields an alkyl aryl sulfonate detergent. The term usually refers to an alkyl benzene in which the alkyl radical is a mixture of straight-chain and isomeric branched-chain groups, averaging 10 or more carbon atoms.

D 459, D12

detergent feeder—a device that automatically feeds detergents into wash tanks of spray-type commercial dishwashing and glasswashing machines.

F 1827, F26

detergent remover—a penetrant remover that is a solution of a detergent in water.

E 1316, E07

detergent resistance—the degree to which a polish film exhibits no apparent deterioration when spotted or cleaned with a solution of a nonabrasive, nonammoniacal detergent.

D 2825, D21

deteriorated condition—condition of surfaces of such components as walls, windows, and baseboards that are in need of repair (or replacement) due to physical or mechanical breakdown of paint or other materials.

E 631, E06

deteriorated paint—paint or other coating that is cracking, flaking, chipping, peeling, or otherwise damaged or delaminating from the substrate of a building component.

E 1605, E06

deterioration—a permanent impairment of the physical properties. (see also **degradation**)

D 1695, D01

determinability, n—a quantitative measure of the variability associated with the same operator in a given laboratory obtaining successive determined values using the same apparatus for a series of operations leading to a single result; it is defined as that difference between two such single determined values as would be exceeded in the long run in only one case in 20 in the normal and correct operation of the test method.

D 4175, D02

determination, n—the process of carrying out the series of operations specified in the test method whereby a single value is obtained.

D 4175, D02

determination, n—the application of the complete measurement procedure to one piece, specimen or object to produce one numerical measured value to be used to form an average or median.

F 538, F09

determination value, n—the numerical quantity calculated by means of the test method equation from the measurement values obtained as directed in a test method. (See also **observation**.)

D 123, D13

deterministic design, n—design based on the physical and mechanical properties of the materials, elements, and structures involved (compare **probabilistic design**).

E 631, E06

detonation—an extremely rapid and violent chemical reaction causing the production of a large volume of gas. (ISRM)

D 653, D18

detonation—an explosion in which the flame or reaction front propagates at a supersonic speed into the unburned medium, such that the pressure increases occur in the form of shock waves.

D 5681, D34

detonation meter, n—for *knock testing*, the signal conditioning instrumentation that accepts the electrical signal from the detonation pickup and provides an output signal for display.

D 4175, D02

detonation pickup, n—for *knock testing*, a magnetostrictive-type transducer that threads into the engine cylinder and is exposed to combustion chamber pressure to provide an electrical signal that is proportional to the rate-of-change of cylinder pressure.

D 4175, D02

developed footprint length [L], n—the maximum footprint dimension in the circumferential direction of the tire, under stated conditions of measurement.

F 538, F09

developed footprint width [L], n—the maximum lateral dimension of a tire footprint under stated conditions of measurement.

F 538, F09

developed length, L_N—bottom contour length as measured from the ski tip to the ski tail, commonly called the material length.

F 472, F27

developed length, LN—the bottom contour length from the snowboard tip to the snowboard tail, sometimes called the material length.

F 1107, F27

developer, n—*of an ASTM test method*, the assigned ASTM group, working under the supervision of its governing subcommittee and main committee, that formats the test method in accordance with the Form and Style for ASTM Standards, and continually refines the test method.

D 4175, D02

developer, n—*of a test procedure*, an individual or organization that selects the test apparatus and operating conditions.

D 4175, D02

developer—a material that is applied to the test surface to accelerate bleedout and to enhance the contrast of indications.

E 1316, E07

developer—the material or combination of materials that renders visible a latent electrostatic image when brought into intimate contact with it. Electrostatic developers can be either liquid or dry and can consist of a toner and a carrier.

F 335, F05

developer, n—acidic materials which react with leuco dyes to form color.

F 1623, F05

developer, aqueous—a suspension of developer particles in water.

E 1316, E07

developer, dry powder—a fine free-flowing powder used as supplied.

E 1316, E07

developer, liquid film—a suspension of developer particles in a vehicle which leaves a resin/polymer film on the test surface after drying.

E 1316, E07

developer, non-aqueous—developer particles suspended in a non-aqueous vehicle prior to application.

E 1316, E07

developer roller—(also magnetic roller or mag roller), a cylinder built into the copier toner cartridge or printer toner cartridge intended to present correctly charged toner from the toner reservoir to the charged areas of the photoreceptor.

F 335, F05

developer, soluble—a developer completely soluble in its carrier, not a suspension of powder in a liquid, which dries to an absorptive coating.

E 1316, E07

developing time—the elapsed time between the application of the developer and the examination of the part.

E 1316, E07

development—the process of converting a latent electrostatic image into a visible image.

F 335, F05

deviation—*in protective coatings*, a departure of a characteristic from established procedures or from specified requirements.

D 4538, D33

deviation, n—the difference between a measurement or quasi-measurement and its stated value or intended level.

E 456, E11

deviation, n—departure from an approved instruction or established standard.

E 2363, E55

deviation (X-ray)—the angle between the diffracted beam and the transmitted incident beam. It is equal to twice the Bragg angle θ .

E 7, E04

deviator of stress (strain)—the stress (strain) tensor obtained by subtracting the mean of the normal stress (strain) components of a stress (strain) tensor from each normal stress (strain) component. (ISRM)

D 653, D18

deviator stress, Δ, σ (FL⁻²)—the difference between the major and minor principal stresses in a triaxial test.

D 653, D18

device, n—“an instrument, apparatus, implement, machine, contrivance, implant, *in vitro* reagent, or other similar or related article...intended for use in the diagnosis of disease or other conditions, or in the cure, mitigation, treatment, or prevention of disease, in man or other animals...which does not achieve its primary

device, *n*

intended purposes through chemical action within or on the body of man or other animals and which is not dependent upon being metabolized for the achievement of its primary intended purposes." Devices are "intended to affect the structure or any function of the body." **F 2312, F04**

devitrification—crystallization of glass. **C 162, C14**

devitrification—a surface defect manifested by loss of gloss as a result of crystallization. **C 286, B08**

devitrification—crystallization of an amorphous substance. **E 7, E04**

devitrification—crystallization of an amorphous substance, (E 7, E04). **E 1142, E37**

devulcanization, n—destruction of the chemical crosslinks in a vulcanized rubber. **D 1566, D11**

dew, n—water vapor that has condensed onto a surface near the ground because of radiational cooling of that surface to a temperature that is below the dew point of the air surrounding the surface. **D 1356, D22**

dewatering, v—a physical process which removes sufficient water from a sludge, FGD material, or ponded ash and FGD solids so that its physical form is changed from essentially that of a fluid to that of a damp solid. **E 2201, E50**

dew cell, dew probe, n—an instrument that measures the temperature at which a saturated salt solution (usually of lithium chloride) is in equilibrium with the water vapor in moist air. **D 1356, D22**

dewetting—a condition that results when molten solder has coated a surface and then receded leaving irregular-shaped mounds of solder separated by areas covered with a thin film but base metal is not exposed. **B 846, B05**

dew-/frost-point hygrometer—See **hygrometer**. **D 1356, D22**

dewired, n—the absence of exposed wire on the perimeter of the tire chips. Belt wire typically remains in the chip, but is embedded in the chip. **D 5681, D34**

dew point, n—the temperature below which condensation of water vapor begins to take place when the atmosphere is cooled. **D 123, D13**

dew point—the temperature at any given pressure at which liquid initially condenses from a gas or vapor. It is specifically applied to the temperature at which water vapor starts to condense from a gas mixture (**water dew point**), or at which hydrocarbons start to condense (**hydrocarbon dew point**). **D 4150, D03**

dew point, n—the temperature below which condensation of water vapor begins to take place when the atmosphere is cooled. **D4920, D13**

dew point—the temperature to which water vapor must be reduced to obtain saturation vapor pressure, that is, 100 % relative humidity.

NOTE—As air is cooled, the amount of water vapor that it can hold decreases. If air is cooled sufficiently, the actual water vapor pressure becomes equal to the saturation water-vapor pressure, and any further cooling beyond this point will normally result in the condensation of moisture. **E 41, G03**

dewpoint temperature, n—the temperature at which condensation of water vapor in a space begins for a given state of humidity and pressure as the vapor temperature is reduced; the temperature corresponding to saturation (100 % relative humidity) for a given absolute humidity at constant pressure. **C 168, C16**

dew-point temperature—See **temperature**. **D 1356, D22**

dew-point temperature—the temperature (above 0°C) to which a gas or vapor must be cooled at constant pressure and constant water-vapor composition in order for saturation to occur. **D 2864, D27**

dew probe—See **dew cell**. **D 1356, D22**

dextrins—high molecular weight sugars, intermediates obtained in the conversion of starch to fermentable sugar. **E 1705, E48**

dezincification—a type of corrosion found with some copper-zinc alloys which occurs by solution of a small region and immediate redeposition of the copper in a spongy porous form, thus giving the impression of selective removal of zinc from the alloy. **E 7, E04**

dezincification—See **parting**; specific to copper-zinc alloys.

G 15, G01

DGS (distance gain size-German AVG)—distance amplitude curves permitting prediction of reflector size compared to the response from a back surface reflection. **E 1316, E07**

D head—nail head with semi-circular rim and head segment omitted during heading, with omitted segment reaching from rim to shank projection, to allow tight collating of nails in strip form. **F 592, F16**

diagnostic verifier, n—a device that automatically evaluates the quality of a film master or a printed code by comparing the observed information to a standard for the printed symbol. **F 1294, F05**

diagonal—in hardness testing, a line joining two opposite corners of a diamond pyramid indentation. **E 7, E04**

diagonal bracing—See **loading**. **D 996, D10**

diagonal elements, n—in *bispectral photometry*, elements of a bispectral matrix for which irradiation and viewing wavelengths are equal. **E 284, E12**

diagonal fluorescence, n—in *bispectral photometry*, the contribution of fluorescence to diagonal values of a bispectral radiance factor matrix, due to the finite range of actual irradiation and viewing wavelengths when nominal irradiation and viewing wavelengths are equal ($\mu = \lambda$). **E 284, E12**

diagonal wear, n—a type of irregular wear characterized by an increased wear rate region or band oriented transversely (from shoulder to shoulder) at some non-90° angle with respect to the circumferential centerline of the tread band. **F 538, F09**

dial—a numerically calibrated part used to align the tumblers and operate the lock. **F 471, F12**

dial and ring (spy-resistant)—a dial and ring designed to restrict the unauthorized observation of combination dialing. **F 471, F12**

dial indicator reading, n—for the *CFR engine*, a numerical indication of cylinder height, in thousandths of an inch, indexed to a basic setting at a prescribed compression pressure when the engine is motored. **D 4175, D02**

dial shield—a shroud to shield the dial from unauthorized observation of combination dialing. **F 471, F12**

dialysis—a separation process dependent on different diffusion rates of solutes across a permeable membrane without an applied hydraulic driving force. It is a process in which transport is driven primarily by concentration differences, rather than by pressure or electrical potential differences, across the thickness of a membrane. **D 6161, D19**

dialysis permeability coefficient—permeability coefficient on a transmembrane driving force expressed in terms of the concentration difference of a given component. **D 6161, D19**

diamagnetic material—a material whose relative permeability is less than unity.

NOTE—The intrinsic induction, B_i , is oppositely directly to the applied magnetizing force H . **A 340, A06**

diamagnetic material—a material whose relative permeability is less than unity.

NOTE—The intrinsic induction B_i is oppositely directed to the applied magnetizing force H . **E 1316, E07**

diameter:

arithmetic mean diameter—that diameter located at the centroid of the distribution of size.

equivalent diameter (sphere)—the diameter of a theoretical sphere of a material which under identical physical conditions yields the same value of the particular fineness characteristic as the actual irregularly shaped dispersed particle of the same material.

median diameter—that diameter at which the area under the curve of size versus frequency is divided into two equal parts. **C 242, C21**

diameter, n—the largest outside dimension of the glass as measured with a ring gage. **E 344, E20**

diameter—length of longest straight line through center of largest cross section of head. **F 547, F16**

diameter—length of longest straight line through center of cross section of wire from which nail is formed. Diameter of pointed nail is that immediately below the grip marks. Diameter of nail with roll-threaded shank is that of wire or nail prior to being threaded. In the case of fluted, roll-grooved, and twisted nails, formed diameter refers to crest diameter. Diameter does not include coating except cladding. (See **thread-crest diameter**.) **F 547, F16**

diameter, n—specified size diameters shall be measured across the center line of the packaged coil with a tolerance of ± 2 in.; installed diameters are always less than the packaged diameter of the coil. **F 1379, F14**

diameter, average fiber—See **average fiber diameter**. **D 4845, D13**

diameter, sedimentation—the diameter of a hypothetical sphere of the same specific gravity and the same settling velocity as the given particle in the same fluid. **D 4410, D19**

diamond, n—in *zippers*, the wedge-shaped portion of a slider between the throats. **D 123, D13**

diamond, n—the wedge-shaped portion of a slider between the throats. **D 2050, D13**

diamond—the opening formed by the woven wires in chain link fence fabric. **F 552, F14**

diamond core bit—non-percussion drill bit, usually utilizing a hollow cylindrical pipe or tube with a diamond-impregnated matrix at the end that is used to drill in the base material. **E 2265, E06**

diamond count—the number of diamond openings from one edge of fabric to the other. The count of a given fabric shall begin at the first completed diamond at one edge and continue to the unfinished (half) or full opening at the other edge. **F 552, F14**

diamond head—square head of trapezoidal longitudinal section, with flat upper and bearing surfaces and bearing surface larger than upper surface. **F 547, F16**

diamond paste, n—diamond dust dispersed in a paste or slurry for use as a grinding or polishing compound. **C 1145, C28**

diamond point—symmetrical point having four approximately equal bevelled planes forming a pyramid; its length measured along cut edge of point. Usually applied unless otherwise specified. **F 547, F16**

diamond sawn—a surface with a very low-relief pattern of linear and/or curved grooves, produced by diamond saw blades (either circular, belt, or gang). **C 119, C18**

diamond tool, n—any tool in which the working area is inset with diamonds or diamond dust. **C 1145, C28**

diamond wheel, n—a bonded grinding wheel in which the abrasive grains are crushed and sized natural or synthetic diamonds. **C 1145, C28**

diaphragm—a porous or permeable membrane separating anode and cathode compartments of an electrolytic cell from each other or from an intermediate compartment. **B 374, B08**

diaphragm nail—stout, bright or galvanized, regular-stock-steel or hardened-steel, helically threaded, $1\frac{1}{2}$ by 0.135 to $2\frac{1}{2}$ by 0.148-in. nails with flat slightly countersunk $\frac{3}{16}$ -in. head and medium diamond point. **F 547, F16**

diaspore clay, n—a rock consisting essentially of diaspore bonded by fireclay. **C 71, C08**

diatom—single cell marine animal having a coating consisting principally of silica. **D 6161, D19**

diatomaceous earth—See **diatomite**. **C 242, C21**

diatomaceous earth (DE) filtration—filtration using an amorphous, lightweight siliceous earth medium occurring naturally as the fossil remains of diatoms. **D 6161, D19**

diatomaceous silica, n—insulation composed principally of diatomaceous earth with or without binders, and which usually contains reinforcing fibers. **C 168, C16**

diatomite (diatomaceous earth)—amorphous lightweight siliceous material having the theoretical formula $\text{SiO}_2 \cdot n\text{H}_2\text{O}$, occurring

naturally as the fossil remains of tiny plants termed diatoms; also known as *kiesel-guhr*, *tripolite*, and *infusorial earth*. **C 242, C21**

dice—the more or less cubical fracture of tempered glass. **C 162, C14**

dicyclopentadiene resin, n—a resin produced by the thermal polymerization of a concentrated dicyclopentadiene stream. **D 6440, D01**

die, n—a member of the compacting tool set forming the cavity in which the powder is compacted or a P/M compact is repressed. **B 243, B09**

die body, n—the stationary or fixed part of a die. **B 243, B09**

die casting, n—a casting process in which molten metal is injected under high velocity and pressure into a metal die and solidified; also, a product produced by such a process. Alternately known as pressure die casting. **B 899, B02**

die cut—See **container**. **D 996, D10**

die insert, n—a removable liner or part of a die body. **B 243, B09**

dielectric, n—a medium in which it is possible to maintain an electric field with little supply of energy from outside sources. **D 1711, D09**

dielectric—a medium in which it is possible to maintain an electric field with little supply of energy from outside sources. The energy required to produce the electric field is recoverable, in whole or in part. A vacuum, as well as any insulating material is a dielectric. **D 2864, D27**

dielectric, adj—pertaining to the appearance of those materials for which the first surface reflectance is characteristic of the illuminant; compare **metal-like**. **E 284, E12**

dielectric breakdown—a threshold effect in a dielectric medium where, at some electric field strength across the medium, bound electrons become unbound and travel through the medium as a current. In solid media, the region of the current path is permanently damaged. The unit of measurement is usually volts per unit of thickness. **D 5077, D10**

dielectric breakdown voltage—the potential difference at which electrical failure occurs in an electrical insulating material or insulation structure, under prescribed test conditions. **D 2864, D27**

dielectric breakdown voltage (electric breakdown voltage), n—the potential difference at which dielectric failure occurs under prescribed conditions, in an electrical insulating material located between two electrodes. (See also Test Method D 149, Appendix X1.) **D 1711, D09**

dielectric constant—see **relative permittivity**. **D 1711, D09**

dielectric constant—See **dielectric constant, relative** (especially Note 2). (See also **permittivity** (especially Note 2).) **D 2864, D27**

dielectric constant—a measure of the ability of a material to store electrical energy in the presence of an electrostatic field. **D 7099, D18**

dielectric constant—see **permittivity, relative**. **E 1142, E37**

dielectric constant, absolute—the same as **permittivity**. **D 2864, D27**

dielectric constant, relative—the same as **permittivity, relative**. **D 2864, D27**

dielectric dissipation factor, D—the ratio of the loss factor, ϵ'' , to the absolute permittivity, ϵ' , or

$$D = \epsilon''/\epsilon'$$

E 1142, E37

dielectric failure—the failure of an element in a dielectric circuit that exists when the insulating element becomes conducting. This event may take the form of a gradual increase in current exceeding a specified value, but it usually takes the form of an almost instantaneous charge transfer accompanied by collapse of the insulating properties and partial or complete localized destruction of the dielectric medium. In the case of liquids and gases the failure may be self-healing. **D 2864, D27**

dielectric failure (under test), n—an event that is evidenced by an increase in conductance in the dielectric under test limiting the electric field that can be sustained. **D 1711, D09**

dielectric loss angle—the angle whose tangent is the dissipation factor or $\arctan \epsilon''/\epsilon'$. **E 1142, E37**

dielectric printing process—a nonimpact printing technique in which specially treated paper consisting of a conductive base layer coated with a nonconductive thermoplastic material is used to hold an electric charge usually applied directly by a set of electrode styli. The electric charge corresponds to the latent image of the original. Following the charging step, the paper is imaged by a toner system similar to that of electrostatic copying devices. This technique is sometimes called electrographic, and is currently employed on general purpose nonimpact printers, plotting and facsimile devices. **F 909, F05**

dielectric strength, *n*—the voltage gradient at which dielectric failure of the insulating material occurs under specific conditions of test. **D 1711, D09**

dielectric strength—a property of an insulating material described by the average voltage gradient at which electric breakdown occurs under specific conditions of test. **D 2864, D27**

dielectric thermal analysis, (*DETA or DEA*), *n*—a technique in which the dielectric constant (permittivity, or capacitance) and dielectric loss (conductance) of a substance under oscillating electric field are measured as a function of temperature or time while the substance is subjected to a controlled-temperature program in a specified atmosphere. (*ICTAC*) **E 473, E37**

dielectric withstand voltage—the maximum voltage a dielectric can withstand in a membrane switch without a visual change from a voltage discharge or specified change of insulation resistance, or both. **F 2112, F01**

die lubricant, *n*—a lubricant applied to the walls of the die and to the punches to facilitate the pressing and ejection of the compact. **B 243, B09**

die marks—See **grip marks**. **F 547, F16**

diene polymer, *n*—a polymer formed from one or more monomer species, at least one of which is a diolefin. **D 1566, D11**

diene rubber, *n*—polymer having unsaturated carbon in the main chain, derived from butadiene or a substituted butadiene. **D 1566, D11**

die-parting line—a lengthwise flash or depression on the surface of a pultruded plastic part.

NOTE—The die-parting line is associated with the area where separate pieces of the die join together to form the cavity. **D 3918, D20**

diesel fuel oil, *n*—any petroleum liquid suitable for the generation of power by combustion in compression ignition (diesel) engines. **D 4175, D02**

diesel index, *n*—an approximation of the cetane number (the ignition performance) of diesel fuel, calculated from the density and the aniline point. (No longer widely used for distillate fuels but applicable to some blended distillate residual fuels (see also **cetane index**)). **D 4175, D02**

die set, *n*—the parts of a press that hold and locate the die in proper relation to the punches. **B 243, B09**

die swell, *n*—difference between the dimensions of the cross section of an extrudate and the corresponding dimensions of the die orifice by which the extrudate is formed. **D 1566, D11**

dietary accumulation—the net accumulation of a substance by an organism as a result of ingestion in the diet. **E 943, E47**

die-wall lubricant, *n*—synonymous with **die lubricant**. **B 243, B09**

difference absorption spectrum—a plot of the difference between two absorbances or between any function of two absorbances, against wavelength or any function of wavelength. **E 131, E13**

difference limen, *n*—See **threshold, difference**. **E 253, E18**

differentia, *n*—a characteristic that distinguishes one species of a genus from all other species of that genus. **E 1992, E02**

differential, *adj*—pertaining to a difference in measured or measurable quantities usually between a substance and some reference or standard material. **E 473, E37**

differential (acoustic emission) amplitude distribution $f(V)$ —see **distribution, differential (acoustic emission) amplitude $f(V)$** . **E 1316, E07**

differential (acoustic emission) threshold crossing distribution $f_{\lambda}(V)$ —see **distribution, differential (acoustic emission) threshold crossing**. **E 1316, E07**

differential aeration cell (oxygen concentration cell)—a concentration cell caused by differences in oxygen concentration along the surface of a metal in an electrolyte. (See **concentration cell**.) **G 15, G01**

differential blackbody—an apparatus for establishing two parallel isothermal planar zones of different temperatures, and with effective emissivities of 1.0. (E 1213) **E 1316, E07**

differential coils—two or more coils electrically connected in series opposition such that any electric or magnetic condition, or both, that is not common to the areas of a specimen being electromagnetically tested will produce an unbalance in the system and thereby yield an indication. **E 1316, E07**

differential curve: (1) in thermal analysis—a curve resulting from the differential method of thermal analysis when the difference in temperature ($\theta - \theta'$) between a specimen and a neutral body is plotted against the temperature of the latter.

(2) *in dilatometry*—a curve produced by plotting against the temperature the difference in changes of length or volume between a body of known expansivity and a body (specimen) of unknown expansivity. **E 7, E04**

differential dyeing behavior, *n*—of cotton, the tendency of cotton fibers to absorb and retain selectively varying proportions of different dyes from a binary dye bath. **D 123, D13**

differential dyeing behavior, *n*—of cotton, the tendency of cotton fibers to absorb and retain selectively varying proportions of different dyes from a binary dye bath. **D 7139, D13**

differential heating, *n*—heating that intentionally produces a temperature gradient within a steel object such that, after cooling, a desired stress distribution or variation in properties is present within the object. **A 941, A01**

differential heat of adsorption—the heat evolved during the adsorption of an incremental quantity of adsorbate at a given level of adsorption. **D 2652, D28**

differential interference contrast illumination—a microscopical technique employing a beam-splitting double-quartz prism; that is a modified Wollaston prism placed ahead of the objective with a polarizer and analyzer in the 90° crossed positions. The two light beams are made to coincide at the focal plane of the objective, thus rendering height differences visible as variations in color. The prism can be moved, shifting the interference image through the range of Newtonian colors. **E 7, E04**

differential leak detector—a leak detector employing two similar gage tubes in a bridge circuit with a trap which is selective for the tracer gas between the system and one of the tubes. **E 1316, E07**

differentially coated sheet, *n*—metallic coated sheet with specified difference in weight (mass) of metallic coating between the two surfaces. **A 902, A05**

differential measurements—in electromagnetic testing, measurements made in which the imbalance in the system is measured using differential coils in contrast to absolute and comparative measurements. (See also **differential coils**.) **E 1316, E07**

differential Pirani gage—a leak detecting device employing two similar Pirani tubes as arms of a Wheatstone bridge. **E 1316, E07**

differential pressure (ΔP , dP)—the difference in pressure between two points. **D 6161, D19**

differential price escalation rate—the expected percent difference between the rate of increase assumed for a given item of cost (such as energy), and the general rate of inflation. **E 631, E06**

differential price escalation rate, *n*—the expected percent difference between the rate of increase assumed for a given item of cost (such as energy), and the general rate of inflation. **E 833, E06**

differential readout—in electromagnetic testing, the signal output of differential coils. (See also **differential coils**.) **E 1316, E07**

differential scanning calorimeter (DSC), *n*—a device which is capable of heating a test specimen and a reference at a controlled rate and of automatically measuring the difference in heat flow between the specimen and the reference both to the required sensitivity and precision. **F 2005, F04**

differential scanning calorimetry (DSC), *n*—A technique in which the heat flow difference into a substance and a reference material is measured as a function of temperature while the substance and reference material are subjected to a controlled-temperature program. (ICTAC)

NOTE—The record is the differential scanning calorimetric or DSC curve. Two modes, power compensation differential scanning calorimetry, and heat flux differential scanning calorimetry can be distinguished, depending on the method of measurement used. **E 473, E37**

differential scanning calorimetry (DSC), *n*—a technique in which the difference in energy inputs into a substance and a reference material is measured as a function of temperature, while the substance and the reference material are subjected to a controlled temperature program. **E 1445, E27**

differential scanning calorimetry (DSC), *n*—a technique in which the difference in heat flow into or out of a substance and an inert reference is measured as a function of temperature while the substance and the reference material are subjected to a controlled temperature program.

F 2005, F04

differential settlement—settlement that varies in rate or amount, or both, from place to place across a structure. **D 653, D18**

differential shrinkage, *n*—in *zippers*, the difference in longitudinal dimensional change between the zipper tape and the fabric to which the zipper is attached. **D 123, D13**

differential signal—in electromagnetic testing, an output signal that is proportional to the rate of change of the input signal.

E 1316, E07

differential system—an electromagnetic testing system that uses coil assemblies and associated electronics to detect an electric or magnetic condition, or both, that is not common to the areas of the specimen being tested. (See also **differential coils**.) **E 1316, E07**

differential thermal analysis (DTA), *n*—A technique in which the temperature difference between the substance and a reference material is measured as a function of temperature, while the substance and reference material are subjected to a controlled-temperature program. (ICTAC)

NOTE—The term *quantitative differential thermal analysis* covers those uses of DTA where the equipment is designed to produce quantitative results. **E 473, E37**

differential thermal analysis (DTA), *n*—a technique in which the temperature difference between a substance and reference material is measured as a function of temperature while the substance and the reference material are subjected to a controlled temperature program. **E 1445, E27**

differential thermocouple—two thermocouples placed in series opposition (bucking). **E 7, E04**

differential thermocouple—see **differential thermopile**. **E 1142, E37**

differential thermopile—a number of temperature sensors connected in series-opposing and arranged so that there is an increase in output signal for a given temperature difference between alternate junctions maintained at a reference temperature and the measured temperature. **E 1142, E37**

differential titration—determination of the concentration of two or more species in one sample by titration with a reagent containing a species that reacts with both sample species. In order to obtain distinct end-point breaks, the formation constants or solubility products of the two species formed must differ by several orders of magnitude. **D 4127, D19**

diffraction—a change in the direction of propagation of sound energy in the neighborhood of a boundary discontinuity, such as the edge of a reflective or absorptive surface. **C 634, E33**

diffraction:—(1) a modification which radiation undergoes, as in passing by the edge of opaque bodies or through narrow slits, in

which the rays appear to be deflected.

(2) coherent scattering of X-radiation by the atoms of a crystal which necessarily results in beams in characteristic directions. Sometimes called reflection.

(3) the scattering of electrons, by any crystalline material, through discrete angles depending only on the lattice spacings of the material and the velocity of the electrons. **E 7, E04**

diffraction—the spreading or bending of waves as they pass through an aperture or around the edge of a barrier. **E 1316, E07**

diffraction grating—an artificially produced periodic array of scattering centers capable of producing a pattern of diffracted energy, such as accurately ruled lines on a plane surface. **E 7, E04**

diffraction pattern (X-rays)—the spatial arrangement and relative intensities of diffracted beams. **E 7, E04**

diffraction ring—the diffraction pattern produced by a given set of planes from randomly oriented crystalline material. (See also **Debye ring**.) **E 7, E04**

diffuse, *adj*—in *optical propagation*, transmission or reflection of flux with diffusion. **E 284, E12**

diffuse, *adj*—referring to radiometric quantities, indicates that the flux propagates in many directions, as opposed to direct beam which refers to collimated flux. When referring to solar irradiance, it is the global irradiance less the direct beam irradiance. When referring to reflectance, it is the directional hemispherical reflectance less the specular reflectance.

NOTE—Diffuse has been used in the past to refer to hemispherical collection (including the specular component) or irradiation, with equal radiance for all directions over a hemisphere. This use is deprecated in favor of the more precise term hemispherical.

E 772, E44

diffuse indications—indications that are not clearly defined as, for example, indications of subsurface defects. **E 1316, E07**

diffuse porous wood—certain hardwoods in which the pores exhibit little or no variation in size or distribution throughout the growth ring, only decreasing slightly in size, gradually toward the outer border of the ring. **D 9, D07**

diffuser, *n*—*forgas*, a device for dispersing gas into a fluid. **D 4175, D02**

diffuser, *n*—*forgas*, a device for dispersing gas into a liquid. (Test Method D 892). **D 4175, D02**

diffuser, *n*—device used to alter the spatial distribution of flux by diffusion. **E 284, E12**

diffuse reflectance, ρ_d , *n*—the ratio of the reflected flux to the incident flux, where the reflection is at all angles within the hemisphere bounded by the plane of measurement except in the direction of the specular reflection angle. **E 284, E12**

diffuse reflectance factor, R_d , *n*—the ratio of the flux reflected at all angles within the hemisphere bounded by the plane of measurement except in the direction of the specular reflection angle, to the flux reflected from the perfect reflecting diffuser under the same geometric and spectral conditions of measurement. **E 284, E12**

diffuse reflection, *n*—process by which incident flux is distributed by reflection over a wide range of angles. **D 2946, C17**

diffuse reflection—reflection in which the flux is scattered in many directions by diffusion at or below the surface, (see Terminology E 284). **E 131, E13**

diffuse reflection, *n*—reflection in which flux is scattered in many directions by diffusion at or below the surface. See **diffusion**. **E 284, E12**

diffuse reflection, *n*—diffusion by reflection in which, on the macroscopic scale, there is no regular reflection. **E 349, E21**

diffuse reflection, *n*—the component of reflected light that emanates uniformly in all directions from the reflecting surface. **F 1294, F05**

diffuse sound field—the sound in a region where the intensity is the same in all directions and at every point. **C 634, E33**

diffuse transmission, *n*—transmission in which diffusion occurs, independently, on a macroscopic scale, of the laws of refraction.

E 284, E12

diffuse transmission, n

diffuse transmission, n —transmission in which diffusion occurs independently, on the macroscopic scale, of the laws of refraction.

E 349, E21

diffuse transmittance, T_D, n —the ratio of the flux transmitted by a specimen to the incident flux, the transmitted flux being measured at all forward angles except the regular transmission angle.

E 284, E12

diffusion—(1) spreading of a constituent in a gas, liquid, or solid tending to make the composition of all parts uniform; (2) the spontaneous movement of atoms or molecules to new sites within a material.

B 374, B08

diffusion, n —change of the angular distribution of a beam of radiant flux by a transmitting material or a reflecting surface such that flux incident in one direction is continuously distributed in many directions, the process not conforming (on a macroscopic scale) to the laws of Fresnel (regular) reflection and refraction and there being no change in frequency (wavelength) of the monochromatic components of the flux.

E 284, E12

diffusion, n —change of the spatial distribution of a beam of radiation when it is deviated in many directions by a surface or a medium.

E 349, E21

diffusion—in leak testing, the flow of the gas through a substance in which the gas actually migrates through the crystal lattice of the substance rather than through a geometrical leak (molecular diameters versus hole dimension).

E 1316, E07

diffusion—the movement of a material such as a gas or liquid, in the body of a plastic.

F 412, F17

diffusion-alloyed powder, n —a partially alloyed powder produced by means of a diffusion anneal.

B 243, B09

diffusion coating, n —any process whereby a base metal is either coated with another metal and heated to a sufficient temperature in a suitable environment, or exposed to a gaseous or liquid medium containing the other metal, thereby causing diffusion of the coating or other metal into the base metal, with a resultant change in the composition and properties of its surface.

A 941, A01

diffusion coating—an alloy coating produced by applying heat to one or more coatings deposited on a basis metal.

B 374, B08

diffusion cycle—specific time and temperature to acquire a depth of diffusion and composition.

B 374, B08

diffusion limited current density—the current density, often referred to as limiting current density, that corresponds to the maximum transfer rate that a particular species can sustain due to the limitation of diffusion.

G 15, G01

diffusion, molecular—See **molecular diffusion**.

D 1356, D22

diffusion-transfer process—a rapid photographic process in which a negative image is produced at one location, with unused imaging materials then diffusing across a thin fluid layer to produce a positive image on a receptor sheet.

E 7, E04

diffusion treatment (or coating)—(1) process of producing a surface layer (diffusion layer) by diffusion of another metal or non-metal into the surface of the basis material.

B 374, B08

(2) in electroplating, heat treatment applied to a work piece to achieve alloying or intermetallic compound formation between two or more coatings on a basis material.

B 374, B08

diffusion zone—the zone of viable composition at the junction between two different materials, such as in welds or between the surface layer and the core of clad materials or bearings, in which interdiffusion between the various components has taken place.

E 7, E04

diffusivity, thermal, n —the ratio of thermal conductivity of a substance to the product of its density and specific heat. (In SI units: $(W/(m \cdot K))/((kg/m^3) \cdot (J/(kg \cdot K))) = m^2/s$.) (In inch-pound units: $(Btu/(hr \cdot ft) F)/((lb/ft^3)(Btu/(lb \cdot F))) = ft^2/hr$)

C 168, C16

digestate—an acidified aqueous solution that results from digestion of the sample.

E 631, E06

digestate—an acidified aqueous solution produced by digestion.

E 1605, E06

digester—a bioreactor in which anaerobic bacteria are used to

decompose biomass or organic wastes into methane and carbon dioxide.

E 1705, E48

digestion—the sample preparation process that will solubilize (extract) targeted analytes present in the sample and results in an acidified aqueous solution called the digestate.

E 631, E06

digestion—a high temperature sample preparation process that solubilizes targeted analytes that may be present in the sample, and results in an acidified aqueous solution called the digestate.

E 1605, E06

digital—the representation of data or physical quantities in the form of discrete codes, such as numerical characters, rather than a continuous stream.

E 1316, E07

digital counter reading, n —for the CFR engine, a numerical indication of cylinder height, indexed to a basic setting at a prescribed compression pressure when the engine is motored.

D 4175, D02

digital detector array—an electronic device which converts ionizing or penetrating radiation into a discrete array of analog signals that are subsequently digitized and transferred to a computer for display as a digital image corresponding to the radiologic dose pattern incident upon the input region of the device.

E 1316, E07

digital image—an image composed of discrete pixels each of which is characterized by a digitally represented luminance level.

E 1316, E07

digital image acquisition system—a system of electronic components which, by either directly detecting radiation or converting analog radiation detection information, creates an image of the spatial radiation intensity map comprised of an array of discrete digital intensity values (see **pixel**).

E 1316, E07

digital image enhancement—any operation used for the purpose of enhancing some aspect of the original image.

E 1316, E07

digital image processing system—a system which uses algorithms to process digital image data.

E 1316, E07

digital pH/mV meter—an instrument with digital display of millivolts or pH units. Less operator error is associated with digital instruments since there is no need for interpolation and no risk of confusing scales.

D 4127, D19

digitization—the conversion of an analog signal to digital values using an analog-to-digital converter “sampling” or “digital sampling.”

E 131, E13

digitization noise—the noise generated in an interferogram through the use of an analog-to-digital converter whose least significant bit represents a value comparable to, or greater than, the peak-to-peak noise level in the analog data.

E 131, E13

digitize (for radiology)—the act of converting an analog image or signal to a digital presentation.

E 1316, E07

digs—deep, short scratches.

C 162, C14

di-hydrated or double hydrated lime—dolomitic lime which has been hydrated under greater than atmospheric pressure and contains less than 8 % unhydrated oxides.

C 51, C07

dike, n —an embankment or ridge of either natural or synthetic materials used to contain or hold a liquid, slurry, sludge, or other material in ponds.

E 2201, E50

dilatancy—property of volume increase under loading. (ISRM)

D 653, D18

dilatancy—the expansion of cohesionless soils when subject to shearing deformation.

D 653, D18

dilation crack—a tensile fracture in a frozen material caused by surface extension due to doming, slope or embankment movement, or toppling.

D 7099, D18

dilation crack ice—ice that forms in dilation cracks.

D 7099, D18

dilatometer—the instrument used in dilatometry for measuring lengths or volume changes.

E 7, E04

dilatometric softening point—the temperature at which the viscous sag of the glass specimen exactly counteracts the expansion as thermal expansion measurements proceed during heating.

C 162, C14

dilatometry—the measurement of length or volume changes of a

- substance undergoing a change in temperature, pressure, or state. See Practice E 80. E 7, E04
- dilatometry, *n***—see **Thermodilatometry**. E 473, E37
- diluent, *n***—a liquid additive, whose function is to reduce the concentration of solids and viscosity of an adhesive. D 907, D14
- diluent**—a gas, liquid, or solid used to reduce the concentration of an active ingredient in the formulation or application of a pesticide. E 609, E35
- diluent**—a gas, liquid, or solid used to reduce the concentration of an active ingredient in the formulation or application of a pesticide (see Definitions E 609). E 1102, E35
- dilution factor**—the ratio of the volume of a diluted solution to the volume of original solution containing the same quantity of solute as the diluted solution. E 131, E13
- dilution factor, *f, n***—the proportion of solvent increase made to reduce the concentration and thus the absorbance of a solute, expressed by the ratio of the volume of the diluted solution to the volume of original solution containing the same quantity of solute as the diluted solution. D 4175, D02
- dimensional change, *n***—a generic term for changes in length or width of a specimen subjected to specified conditions. D 123, D13
- dimensional change, *n***—*in pressing and finishing of garments*, the change in dimensions of a fabric caused by pressing and finishing during garment manufacture. D 123, D13
- dimensional change, *n***—a generic term for changes in length or width of a specimen subjected to specified conditions. D 4850, D13
- dimensional change, *n***—*in pressing and finishing of garments*, the change in dimensions of a fabric caused by pressing and finishing during garment manufacture. D 7022, D13
- dimensional change in boiling water (felt), *n***—the change in length and width with any associated change in thickness produced by immersion in boiling water under specified conditions. D 123, D13
- dimensional change in boiling water (felt), *n***—the change in length and width with any associated change in thickness produced by immersion in boiling water under specified conditions. D 4845, D13
- dimensional change of a compact, *n***—the difference, at room temperature, between the size of the sintered specimen and the die size. B 243, B09
- dimensional stability, *n***—the ability of a material to retain its length and width dimensions under specified conditions. D 123, D13
- dimensional stability, *n***—the ability of a material to retain its length and width dimensions under specified conditions. D 4850, D13
- dimensional stability, *n***—the ability of a resilient flooring to retain its original dimensions during the service life of the product. F 141, F06
- dimensional stabilization**—treatment of wood to reduce swelling and shrinking caused by changes in its moisture content. D 9, D07
- dimension ratio**—the average specified diameter of a pipe divided by the minimum specified wall thickness. F 412, F17
- dimensions, *n***—*in packaging*, the measurement of length, width (or diameter), and depth of **containers**, expressed in that order; it should be stated as “inside” or “outside.” D 996, D10
- dimension stone**—natural stone that has been selected and fabricated to specific sizes or shapes. C 119, C18
- dimple**—a shallow depression in the porcelain enamel, sometimes a defect. C 286, B08
- DIN**—abbreviation for Deutsches Institut für Normung (the German Standards Body). D 4175, D02
- DIN color system, *n***—color order system developed for the Deutsche Industrie Normung (German Standardization Institute) to provide equality of visual spacing of colors in specified series, based on the attributes hue, saturation, and relative darkness degree. E 284, E12
- dinnerware**—ceramic whiteware made in a given pattern and in a full line of articles comprising a dinner service. C 242, C21
- dip, *n***—a chemical composition that is applied to a textile cord or fabric to improve its adhesion to rubber or other elastomer. D 123, D13
- dip, *n***—a chemical composition that is applied to a textile cord or fabric to improve its adhesion to rubber or other elastomer. D 6477, D13
- dip application**—application by direct immersion. E 1102, E35
- dip encapsulation** (a type of conformal coating), *n*—an embedding process in which the insulating material is applied by immersion and without the use of an outer container. D 1711, D09
- dipentene, *n***—chemically defined as the optically inactive form of the monocyclic terpene hydrocarbon limonene.
- chemically processed dipentene, *n**—recovered as a product or a by-product in connection with the chemical treatment and conversion of other terpenes.
- destructively distilled dipentene, *n**—from the lighter portions of the oil recovered during the destructive distillation of pine wood.
- steam-distilled dipentene, *n**—fractionated from the crude oleoresinous extract during the processing of related steam-distilled wood naval stores.
- sulfate dipentene, *n**—from the crude condensate of the vapors generated in the digestion of wood in the sulfate paper pulp process. D 804, D01
- diphase metal cleaner**—a composition which produces two phases in the cleaning tank, namely, a solvent layer and an aqueous layer, which cleans by solvent action and emulsification. D 459, D12
- dipole relaxation time, γ** —the exponential decay time required for the electric polarization of any point of a suitably charged dielectric to fall from its original value to $1/e$ of that value, due to the loss of dipole orientation. E 1142, E37
- dipped**—dipped in bath of molten zinc for coating purposes, with excess zinc removed; resulting in coating essentially free from blisters, lumps, gritty areas, acid spots, dross warts, and flux. F 547, F16
- dip pick-up, *n***—*in glass cords*, the amount of dip solids present as supplied. D 123, D13
- dip pick-up, *n***—*in a textile cord or fabric*, the amount of dip or dip components present after processing, including drying, as determined by prescribed methods, and expressed as a percentage of the mass of the oven-dried dip-free material. D 123, D13
- dip pick-up, *n***—the amount of dip or dip components present in a textile cord or fabric after processing, expressed as a percentage of the mass of the oven-dried dip-free material. D 6477, D13
- dipping**—the process of coating a metal shape by immersion in slip, removal, and draining. In dry process enameling, the method of coating by immersing the heated metal shape for a short time in powdered frit. C 286, B08
- dipping (latex), *n***—a process in which a layer of rubber is deposited on a mold or form as a result of immersion in a bath of compounded latex. D 1566, D11
- dipping weight*—see **pick-up**. C 286, B08
- DIP switch**—dual in-line package switch. F 1457, F05
- dip tube**—tubing connecting the lower portion of the container or dispenser with the valve. D 3064, D10
- dip tube, *n***—a tube which provides passage of the product from the container to the pump system. D 6655, D10
- direct bonded basic brick, *n***—a fired refractory in which the grains are joined predominantly by a solid state diffusion mechanism. C 71, C08
- direct cabling technology, *n***—a single-step manufacturing system that produces a twist-balanced cabled yarn (2 fold) from twistless single yarns. D 123, D13
- direct cabling technology, *n***—a single-step manufacturing systems that produces a twist-balanced cabled yarn (2 fold) from twistless single yarns. D 4849, D13

direct contact magnetization

direct contact magnetization—a technique of magnetizing in which the current is passed through a part via prods or contact heads.

E 1316, E07

direct detection of mycoplasma—detection of mycoplasma by cultivation in culture media.

E 1705, E48

direct development—see **positive development**.

F 335, F05

directed application—an application to a restricted area such as a row, bed, or at the base of plants.

E 609, E35

directed application—an application to a restricted area such as a row, bed, or at the base of plants (see Definitions).

E 1102, E35

direct electrophotographic copying process—an electrophotographic copying process in which the photoconductor is an integral part of the final copy.

F 335, F05

direct exposure imaging—in the direct exposure imaging method, the conversion screen and image recorder are simultaneously exposed to the neutron beam.

E 1316, E07

direct fire—a method of maturing porcelain enamel wherein the products of combustion come in contact with the ware.

C 286, B08

direct-fired furnace—a melting furnace having neither recuperator nor regenerator.

C 162, C14

direct incident cause, *n*—the mechanical or thermodynamic event, such as breakage of a component or near-adiabatic compression, the physicochemical property, such as heat of combustion, the procedure, such as a valve opening rate, or any departure(s) from the intended state of any of these items, that leads directly to an incident (see *incident*).

G 126, G04

directional, *adj*—(1) so designed that performance depends on direction or is restricted in direction; more effective in some directions than others.

(2) referring to a beam, beam in which the flux measured is confined to directions that differ moderately from the centroid direction or axis of the beam. (E 179)

E 284, E12

directional—over an infinitesimal element of solid angle in a given direction. For properties, a solid angle small enough that the property does not vary within the solid angle may be considered an element of solid angle. Indicated by the symbols θ , Φ , where θ is the angle between the given direction and the normal to the sample surface, and ϕ is the azimuth angle of the direction measured counter-clockwise from a reference mark on the sample. See **radiometric properties and quantities**.

E 772, E44

directional emissivity of a thermal radiator, *n*—ratio of the thermal radiance of the radiator in a given direction to that of a full radiator at the same temperature. Symbol: $\epsilon(\theta, \phi)$; $\epsilon(\theta, \phi) = L_{e,th}(\theta, \phi)/L_e(\epsilon = 1)$.

E 349, E21

directionality, *n*—(1) *perceived*, the degree to which the appearance of a surface changes as the surface is rotated in its own plane, under fixed conditions of illumination and viewing.

(2) *measured*—(scattering indicatrix, azimuthally nonisotropic)—difference in pattern of near-specular and semidiffusely scattered light, dependent upon the azimuthal angles of the incident and viewing beams.

E 284, E12

direction change—a change in the orientation of the principal dimension or of the support of adjoining units of the roofing system.

D 1079, D08

direction of lay—the lateral direction, designated as left-hand or right-hand, in which the wires of a member or units of a conductor run over the top of the member or conductor as they recede from an observer looking along the axis of the member or conductor.

B 354, B01

direction of lay, *n*—the helical disposition of the components of a strand or cord

D 123, D13

direction of lay, *n*—the helical disposition of the components of a strand or cord.

D 6477, D13

direction of slippage, *n*—at the seam line of movement parallel to either the filling or the warp on a woven fabric in which minimum force is required to produce yarn slippage.

D 123, D13

direction of slippage, *n*—at the seam, the line of movement parallel

to either the filling or the warp on a woven fabric in which minimum force is required to produce yarn slippage.

direction of twist, *n*—the right or left direction of the helix formed in a twisted strand as indicated by superimposition of the capital letter "S" or "Z."

D 123, D13

direction of twist, *n*—the right or left direction of the helix formed in a twisted strand as indicated by superimposition of the capital letter "S" or "Z."

D 4849, D13

direction of twist, *n*—see **direction of lay**.

D 6477, D13

directly applied fire resistive coating, *n*—materials that are normally sprayed onto substrates to provide fire-resistive protection of the substrates.

E 176, E05

direct material—material that may become an integral part or used up or expended in making a finished product. Examples are steel used to make an automobile and the wood to make furniture for the production of commercial items. Direct materials are charged to work-in-progress as part of inventory cost.

E 2135, E53

direct measurement—determination of sample concentration or activity by directly relating the electrode potential to the level of the species being measured. The level can be read from a calibration curve or the log scale of a selective ion meter.

D 4127, D19

direct-measuring bed-load sampler—a device which physically collects and holds bed load.

D 4410, D19

direct medical control—the process of providing immediate physician orders to EMS personnel through direct communication (also known as on-line medical control).

F 1177, F30

direct memory access, *n*—an input/output facility which allows transfers directly in or out of main storage without passing through the processors general registers. (See DMA.)

F 1457, F05

direct-on—see **cover coat**.

C 286, B08

director, *n*—optical components, such as mirrors, lenses, gratings, or other objects, such as ceilings or walls, that direct radiant flux from a source to a specimen to be observed or measured.

E 284, E12

direct oxygen service, *n*—service in contact with oxygen-enriched atmosphere during normal operations.

G 126, G04

direct print—a photographic print of an original negative.

E 7, E04

direct quenching, *n*—in *thermomechanical processing*, quenching immediately following the final hot deformation.

A 941, A01

direct quenching, *n*—in *thermochemical processing*, quenching immediately following the thermochemical treatment.

A 941, A01

direct-reading XRF—see **XRF direct-reading analyzer**.

E 631, E06

direct reduced iron, *n*—iron ores that have been reduced to essentially metallic iron by heat and reducing agents, but without melting, and processed into suitable shapes (typically pellets) for use as a charge material in a melting operation.

A 644, A04

direct shear test—a shear test in which soil or rock under an applied normal load is stressed to failure by moving one section of the sample or sample container (shear box) relative to the other section.

D 653, D18

direct sound field—the sound that arrives directly from a source without reflection.

C 634, E33

direct thermal imaging product—paper, film, or other substrate upon which a coating is applied; the imaging components consist of a color former, a developer, a sensitizer and antioxidants which react to form an image when heated from a thermal printhead.

F 1623, F05

direct thermal paper, *n*—paper coated with a heat-reactive coating, which changes from a colorless form to an intense colored state upon contact with a thermal printhead.

F 1623, F05

direct thermal product, *n*—substrate coated with a heat-sensitive formulation for the purpose of creating an image when heat is applied from a thermal printhead.

F 1623, F05

direct-use facility, *n*—a facility which uses geothermal energy for purposes other than the generation of electricity (e.g., space heating, greenhouses, bathing, and industrial processes).

E 957, E44

- direct viewing**—a view that is not redefined by optical or electronic means. **E 1316, E07**
- direct weathering, *n***—a technique of weathering in which the test specimens are exposed to all prevailing elements of the atmosphere. **G 113, G03**
- direct yarn numbering system, *n***—a system that expresses the linear density of yarn in mass per unit length. **D 123, D13**
- direct yarn numbering system, *n***—a system that expresses the linear density of yarn in mass per unit length. **D 4849, D13**
- dirt**—a small particle of foreign material imbedded in the surface of flat glass sheets. **C 162, C14**
- dirt, *n***—*general term*, any undesirable, extraneous, or contamination material visible in transmitted or reflected light in or on pulp, paper, or paperboard. **D 1968, D06**
- dirt, *n***—*quantitative term*, any undesirable, extraneous, or contaminating material in or on pulp, paper or paperboard, that has marked contrasting color to the rest of the sheet when viewed at more than one angle by reflected light, and that has an equivalent black area of 0.04 mm² or more. See **dirt, equivalent black area of a dirt speck (EBA)**. **D 1968, D06**
- dirt, *n***—*equivalent black area of a dirt speck (EBA)*, the area of the black spot on the white background of the TAPPI Standard Dirt Chart that makes the same visual impression on its background as does the dirt speck on the particular background in which it is embedded. **D 1968, D06**
- dirt**—*in paper*, refers to the presence of relatively nonreflective foreign particles embedded in the sheet. The size and lack of reflectance of the particles may be such that they will be mistaken for inked areas by an optical scanner. **F 149, F05**
- dirt, *n***—*when referenced for scanning purposes*, the presence of non-reflective foreign particles embedded in a substrate. **F 1294, F05**
- dirt (for coatings)* —see **soil**. **D 16, D01**
- dirt pick-up, *n***—*in building construction*, soiling caused by a foreign material other than micro-organism growth that is deposited on, adhered to, or embedded into a sealant, coating, or membrane. **C 717, C24**
- dirt receptacle first vacuum cleaner system, *n***—a vacuum cleaner construction in which the dirt laden air is passed through a dirt receptacle (bag type filter, bagless filter, or other type of dirt separator). The separated air is then pulled through the fan (bypass) or fan and motor (flow through) and expelled from the cleaner. This type of construction is sometimes referred to as clean air or indirect system. **F 395, F11**
- dirt resistance, *n*** (*for coatings*)—the ability of a coating to resist soiling by foreign material, other than microorganisms, deposited on or embedded in the dried coating. **D 16, D01**
- disbond**—an area within a bonded interface between two adherents in which an adhesive or cohesive failure has occurred. It may occur at any time during the life of the structure and may arise from a wide variety of causes. It is sometimes used to describe an area of separation between two laminae in the finished laminate (the term “delamination” is preferred). **D 3878, D30**
- discarded tires, *n***—a worn or damaged tire that has been removed from a vehicle. **D 5681, D34**
- discharge**—see **hazardous waste discharge**. **E 631, E06**
- discharge, *n***—the release of any solid, liquid or gas waste stream or any constituent thereof to the environment. **E 2201, E50**
- discharge capacity, thermal**—the amount of heat that can be removed from a storage device during a period of time and for a specific set of values for the initial and final temperatures of the storage device, the temperature of the entering fluid, and the mass flow rate of fluid through the storage system. **E 772, E44**
- discharged area development (DAD)**—a process in electrostatic copying where the photoconductive element is charged with a charge of the same sign as that of the toner. A light source is used to discharge only those areas that are to receive toner to form the image. In the development process, the charged background areas repel the like charged toner to the discharged areas on the photoconductor. **F 335, F05**
- discharge pressure**—in leak testing, same as **forepressure**. **E 1316, E07**
- discharge test time**—the duration of a single transient test in which energy is removed from the storage device. **E 772, E44**
- discharge, triggered capacitor, *n***—a series of electrical discharges from capacitors initiated by a separate means and extinguished when the voltage across the analytical gap falls to a value that no longer is sufficient to maintain it. **E 135, E01**
- discharge tube leak indicator**—a glass tube attached to a system being leak tested, with the glass tube having electrodes attached to a source of high-frequency high voltage, such as a Tesla coil or induction coil, so that changes in the color of the electrical discharge can be observed when a suitable tracer gas (methane, carbon dioxide, alcohol) flows through the leak. **E 1316, E07**
- discharge velocity, *v, q*** (LT⁻¹)—rate of discharge of water through a porous medium per unit of total area perpendicular to the direction of flow. **D 653, D18**
- discharge (water)**—the volume of water flowing through a cross-section in a unit of time, including sediment or other solids that may be dissolved in or mixed with the water; usually cubic feet per second (ft³/s), or cubic metres per second (m³/s). **D 4410, D19**
- discipline, *n***—one of the specific types or categories of lead-based paint activities defined in applicable Federal, state, or local regulations for which individuals may receive training from accredited training programs and become certified. **E 1605, E06**
- disclosure examinations over sexual history, *n***—A clinical polygraph examination intended to explore pre-conviction “lifetime” sexual behavioral histories and activities which include the disclosure of additional victims, sexual education sources, victimization, exposure and utilization of pornography, the onset of masturbation, paraphilias, sexual deviance and therapeutic issues. It is a utility-designed multiple-issue polygraph test, subject to the successive hurdles decision approach. **E 2035, E52**
- discoloration**—a streak or other pattern on the surface that causes a noticeable change of color from the rest of the pultruded surface. **D 3918, D20**
- discontinuity, *n***—a lack of continuity or cohesion; an intentional or unintentional interruption in the physical structure or configuration of a material or component. **E 1316, E07**
- discontinuity surface**—any surface across which some property of a rock mass is discontinuous. This includes fracture surfaces, weakness planes, and bedding planes, but the term should not be restricted only to mechanical continuity. (ISRM) **D 653, D18**
- discontinuous fiber**—a polycrystalline or amorphous fiber that is discontinuous within the sample or component or that has one or both ends inside of the stress field under consideration. The minimum diameter of a discontinuous fiber is not limited, but the maximum diameter may not exceed 0.25 mm (0.010 in.). **D 3878, D30**
- discontinuous fiber-reinforced composite, *n***—a ceramic matrix composite material reinforced by chopped fibers. **C 1145, C28**
- discontinuous permafrost**—permafrost occurring in some areas beneath the ground surface throughout a geographic region where other areas are free of permafrost. **D 7099, D18**
- discontinuous permafrost zone**—a major subdivision of a permafrost region in which permafrost occurs in some areas beneath the ground surface while other areas are free of permafrost; (1) in North American usage: 30 to 80 % of area underlain by permafrost; (2) in Russian usage: 3 to 80 % of area underlain by permafrost. **D 7099, D18**
- discontinuous stringer**—three or more Type B or C inclusions aligned in a plane parallel to the hot working axis and offset by no more than 15 μm with a separation of less than 40 μm (0.0016 in.) between the two nearest neighbor inclusions (see Practices E 45 and E 1122). **E 7, E04**
- discontinuous yielding, *n***—a hesitation or fluctuation of force

discontinuous yielding, *n*

observed at the onset of plastic deformation, due to localized yielding. E 6, E28

discounted payback (DPB) period—the time required for the cumulative benefits from an investment to pay back the investment cost and other accrued costs considering the time value of money. E 631, E06

discounted payback (DPB) period, *n*—the time required for the cumulative benefits from an investment to pay back the investment cost and other accrued costs considering the time value of money. E 833, E06

discount factor—a multiplicative number (calculated from a discount formula for a given discount rate and interest period) that is used to convert costs and benefits occurring at different times to a common time. E 631, E06

discount factor, *n*—a multiplicative number (calculated from a discount formula for a given discount rate and interest period) that is used to convert costs and benefits occurring at different times to a common time. E 833, E06

discounting—a technique for converting cash flows that occur over time to equivalent amounts at a common time. E 631, E06

discounting, *n*—a technique for converting cash flows that occur over time to equivalent amounts at a common time. E 833, E06

discount rate—the rate of interest reflecting the investor's time value of money, used to determine discount factors for converting benefits and costs occurring at different times to a base time. E 631, E06

discount rate, *n*—the rate of interest reflecting the investor's time value of money, used to determine discount factors for converting benefits and costs occurring at different times to a base time. E 833, E06

discrepancies incident to shipment—all deficiencies incident to shipment of property to or from an organization's facility whereby differences exist between the property purported to have been shipped and property actually received. Such deficiencies include loss, damage, destruction, improper status and condition coding, errors in identity or classification, and improper consignment. E 2135, E53

discrete bar code, *n*—a bar code symbol in which the intercharacter space is not part of the code and is allowed to vary dimensionally within wider tolerances than those specified for bars and spaces. An example would be Code 39. F 1294, F05

discrete bispectral radiance factor, $B(\mu, \lambda)$, *n*—the matrix defined for specified irradiation and viewing bandpass functions, and viewing-wavelength sampling interval ($\Delta\lambda$) as follows:

$$B(\mu, \lambda) = \bar{b}_\lambda(\mu) \cdot \Delta\lambda$$

where:

$\bar{b}_\lambda(\mu)$ = the average bispectral radiance factor of the specimen, as weighted by the specified irradiation and viewing bandpass functions. E 284, E12

discrete depth sample, *n*—sample obtained from a defined level within the liquid being sampled. D 5681, D34

discrete sample, *n*—one or more units taken from a material that consists of separately identifiable units. (Compare to **bulk sample**.) D 123, D13

discrete throughput method—the method whereby average throughput is calculated as the average of a number of discrete throughput measurements conducted during a test period. D 5681, D34

discrete variate, *n*—a variate that is a measurement based on a scale that has a limited or finite number of steps; such as a count, a rating scale, or a ratio of successes to total observations. D 123, D13

discrimination, *n*—the process of qualitatively or quantitatively differentiating among stimuli. E 253, E18

discrimination test, *n*—any method to determine if differences among stimuli are perceptible. For example: triangle tests, duo-trio tests, paired comparison tests, etc. E 253, E18

disequilibrium permafrost—permafrost that is not in thermal equi-

librium with the existing mean annual surface or sea-bottom temperature and the geothermal heat flux. D 7099, D18

dish (cross or transverse bow)—the departure from flatness across the full width of the strip in the form of a single arc, excluding burrs. B 846, B05

dished head—See **cup head**. F 547, F16

dish grinder, *n*—a grinding machine equipped with a dish-shaped abrasive wheel as a grinding mechanism. C 1145, C28

dishload—a dishrack (see **dishwashing machine, commercial: dishrack**), loaded with ten 9 in. plates of a specified weight, used to put a thermal load in the dishwasher during the washing energy test. F 1827, F26

dish rack—a peg type, polypropylene, or other noncorrosive material rack designed to hold tableware in place during washing. F 1827, F26

dishwashing machine, commercial—machines that uniformly wash, rinse, and sanitize kitchen ware. The machines shall be capable of removing physical soil from properly racked and prescraped tableware, and sanitizing multiple-use tableware. F 1827, F26

dishwater inlet—incoming water to dishwater. F 1827, F26

dishwater inlet temperature—the temperature of the incoming water to dishwater, measured at the dishwater inlet connection. See **dishwashing machine, commercial** and **dishwasher inlet**. F 1827, F26

dish wheel, *n*—dish-shaped abrasive grinding wheel. C 1145, C28

disinfectants—physical and chemical agents used for inactivating or destroying microorganisms. F 1600, F20

disinfection—the process of killing organisms in a water supply or distribution system by means of heat, chemicals, or UV light. D 6161, D19

disinfection, *n*—the destruction or reduction of pathogenic and other kinds of microorganisms by thermal or chemical means (for example, alcohol, antibiotics, germicides). F 2312, F04

disinfectant—an agent that kills, inactivates, or repels organisms in or on plants, animals, or inanimate objects. E 609, E35

disintegration, *n*—the reduction of massive material to powder. B 243, B09

disk—a round, commercially flat solid blank made from a flat rolled product. B 846, B05

disk feeder, *n*—a rotating disk beneath the opening of a bin which delivers material from the bin at a specified rate by controlling the rate of rotation of the disk and the size of the gate opening of the bin. C 1145, C28

disk grinder, *n*—a grinding machine equipped with a large abrasive disk as the work mechanism. C 1145, C28

disk wheel, *n*—a bonded abrasive wheel mounted on a plate so that grinding may be done on the side of the wheel. C 1145, C28

disordered structure—the crystal structure of a solid solution in which the atoms of different elements are randomly distributed with respect to the available lattice sites. E 7, E04

dispatch life support—the knowledge, procedures, and skills used by trained emergency medical dispatchers in guiding care by means of post-dispatch (pre-arrival) instruction to callers. F 1177, F30

dispenser—commercial equipment designed to deliver a beverage or food product. F 1827, F26

dispersant, *n*—*inengine oil*, an additive that reduces deposits on oil-wetted engine surfaces primarily through suspension of particles. D 4175, D02

dispersant—a material that inhibits the agglomeration of suspended particles by electrostatic or steric stabilization. E 609, E35

dispersant—the material, usually an organic solvent, in a liquid developer system that conveys toner particles, but does not itself become a part of the image in a finished print. (See also **carrier**.) F 335, F05

dispersed system—in laboratory analysis of grain sizes, an initial condition whereby the particles begin to settle from a stirred mixture; when stirring stops, each particle settles independently of other particles. D 4410, D19

dispersing agent—a material that increases the stability of a suspension of particles in a liquid medium. **B 374, B08**

dispersing agent—a material that increases the stability of a suspension of particles in a liquid medium. **D 459, D12**

dispersing agent—*in grouting*, an addition or admixture that promotes dispersion of particulate grout ingredients by reduction of interparticle attraction. **D 653, D18**

dispersing agent—see **deflocculating agent**. **D 653, D18**

dispersing agent (latex), *n*—a surface-active substance used to facilitate the suspension of solid compounding materials in a liquid medium and to stabilize the dispersion thereby produced. **D 1566, D11**

dispersion—the variation of refractive index with wavelength of light. See related term **Abbévalue**. **C 162, C14**

dispersion—*in a fine particle suspension*, the condition which results when a stable suspension of particles is achieved by physical or chemical means in which no evidence of reflocculation or re-agglomeration of the particles is observed. **C 242, C21**

dispersion—the phenomenon of varying speed of transmission of waves, depending on their frequency. (ISRM) **D 653, D18**

dispersion, *n*—a two-phase system in which one phase is suspended in a liquid. **D 907, D14**

dispersion, *n*—the most general term for a system consisting of particulate matter suspended in a fluid. **D 1356, D22**

dispersion, *n*—a system of particles distributed in a solid, liquid, or gas. **E 1620, E29**

dispersion, *n*—the spread of values of a frequency distribution about an average (in statistics). (Quantitative measures of dispersion include range, variance, standard deviation, mean deviation, and relative span.) **E 1620, E29**

dispersion coating—a coating consisting of particles of one material contained in a matrix of another metal or nonmetal. **B 374, B08**

dispersion coating—*in flexible barrier materials, (1)* a process of applying a material, suspended or dispersed in a vehicle, to a surface in such a way that a continuous, coalesced, adherent layer results when the vehicle liquid (usually water) is evaporated. (2) Also, the product resulting from such a process. **F 17, F02**

dispersion coating—See Terminology F 17. **F 1327, F02**

dispersion staining, *n*—the color effects produced when a transparent object, immersed in a liquid having a refractive index near that of the object is viewed under the microscope by a transmitted light and precise-aperture control. **D 1129, D19**

dispersion-strengthened material, *n*—a material consisting of a metal and finely dispersed, substantially insoluble, metallic or nonmetallic phase. **B 243, B09**

dispersion (the act of), *n*—application of shearing forces to distribute one or more compounding materials uniformly throughout the mass of a continuum of material. **D 1566, D11**

dispersoid, *n*—the particles of a dispersion. **D 1356, D22**

dispersoid—in metallography, finely divided particles of relatively insoluble constituents which can be seen in the microstructure of certain alloys. **E 7, E04**

displacement—a change in position of a material point. (ISRM) **D 653, D18**

displacement, *n*—*in packaging*, the volume occupied by a container, calculated from its outside dimensions. (Compare **cube**.) **D 996, D10**

displacement—movement of anchor relative to the structural member. **E 2265, E06**

displacement-controlled expansion anchor—a post-installed anchor that derives its holding strength by expansion against the side of the drilled hole through movement of an internal plug in the sleeve or through movement of the sleeve over an expansion element (plug). Once set, the anchor does not expand further under load. **E 2265, E06**

displacement dose (D_d)—the quotient of $d \bar{\epsilon}_d$ by dm , where $d \bar{\epsilon}_d$ is that part of the mean energy imparted by radiation to matter which

produces atomic displacements (that is, excluding the part that produces ionization and excitation of electrons) in a volume element of mass dm .

$$D_d = d \bar{\epsilon}_d / dm$$

Unit: $J \cdot kg^{-1}$

E 170, E10

displacement grouting—injection of grout into a formation in such a manner as to move the formation; it may be controlled or uncontrolled. See also **penetration grouting**. **D 653, D18**

displacements per atom (dpa)—the mean number of times each atom of a solid is displaced from its lattice site during an exposure to displacing radiation, as calculated following standard procedures (see **displacement dose**). **E 170, E10**

displayed temperature range, *n*—temperature range in degrees Celsius or Fahrenheit that can be shown by an *IR thermometer*. **E 344, E20**

disposal facility—facility or part of a facility at which hazardous waste is intentionally placed into or on any land or water, and at which waste will remain contained after closure. **E 631, E06**

disposal facility, *n*—a facility or part of a facility at which waste is intentionally placed into or on any land or water, and at which waste will remain after closure. **E 2201, E50**

dispose, *v*—to discard, abandon, or manage as waste. **D 5681, D34**

dispute, *n*—when there is a question as to product quality because a test value obtained falls outside the acceptance limit. **D 4175, D02**

dissipation constant, δ , *n*—the ratio of the change in energy dissipated per unit time (power) in a thermistor, $\Delta \dot{Q} = \dot{Q}_2 - \dot{Q}_1$, to the resultant temperature change of the thermistor, $\Delta t = t_2 - t_1$.

$$\delta = \frac{\Delta \dot{Q}}{\Delta t}$$

The dimensions of the dissipation constant are $W/^\circ C$. For this specification, t_1 is in the range from 20 to 38 $^\circ C$ and $\Delta t = 10^\circ C$.

E 344, E20

dissipation factor—see **tan delta**. **D 4092, D20**

dissipation factor—see **tangent delta**. **E 1142, E37**

dissipation factor, *D*—the ratio of the loss index to its relative permittivity or

$$D = \kappa''/\kappa'$$

It is also the tangent of its loss angle, δ , or the cotangent of its phase angle, θ . The dissipation factor is related to the power factor, *PF*, by the following equation:

$$D = PF/\sqrt{1 - (PF)^2}$$

D 2864, D27

dissipation factor, dielectric—same as **dissipation factor**.

D 2864, D27

dissipation factor (loss tangent) (tan δ), *D, n*—the ratio of the loss index to its relative permittivity or

$$D = \kappa''/\kappa'$$

It is also the tangent of its loss angle, δ , or the cotangent of its phase angle, θ . **D 1711, D09**

dissipation factor, magnetic, D_m —the tangent of the hysteresis angle that is equal to the ratio of the core loss current, I_c , to the magnetizing current, I_m . Thus:

$$D_m = \tan \beta = \cot \gamma = I_c/I_m = \omega L_1/R_1 = I/Q_m$$

NOTE—This dissipation factor is also given by the ratio of the energy dissipated in the core per cycle of a periodic *SCM* excitation (hysteresis and eddy current heat loss) to 2π times the maximum energy stored in the core. **A 340, A06**

dissociated ammonia, *n*—a reducing gas produced by the thermal decomposition of anhydrous ammonia over a catalyst, resulting in

dissociated ammonia, *n*

a gas of 75 % hydrogen and 25 % nitrogen. Synonymous with **cracked ammonia**. **B 243, B09**

dissociation—as applied to heterogeneous equilibria, the transformation of one phase into two, or more, new phases, all of different composition. **E 7, E04**

dissociation—as applied to heterogeneous equilibria, the transformation of one phase into two or more new phases, all of different composition. (E 7, E04). **E 1142, E37**

dissociation—in leak testing, the breakdown of a substance into two or more constituents.

NOTE—Dissociation is sometimes referred to as cracking.

E 1316, E07

dissociation constant—a number indicating the extent to which a substance dissociates in solution. [For a simple two-species complex *AB*, the constant is given by the product of the molar concentrations of *A* and of *B* divided by the molar concentrations of the undissociated species *AB*. For example, with hydrofluoric acid:

$$([H^+][F^-])/([HF]) = K = 6.7 \times 10^{-4} \text{ at } 25^\circ\text{C}$$

The smaller the value of *K*, the less the complex is dissociated. *K* varies with temperature, ionic strength, and the nature of the solvent.] **D 4127, D19**

dissociation pressure—at a designated temperature, the pressure at which a phase will transform into two, or more new phases, of different composition. **E 7, E04**

dissolved gas—natural gas held in solution in reservoir liquids at the prevailing temperature and pressure of the reservoir. **D 4150, D03**

dissolved load—the part of the stream load that is carried as dissolved solids. **D 4410, D19**

dissolved matter, *n*—that matter, exclusive of gases, which is dispersed in water to give a single homogeneous liquid phase. **D 1129, D19**

dissolved solids—the mass of constituents in a filtered water sample. For operational purposes, the filter pore is usually 0.00045 mm. **D 4410, D19**

dissolved solids—the residual material remaining after filtering the suspended material from a solution and evaporating the solution to a dry state at a specified temperature. That matter, exclusive of gases, which is dissolved in water to give a single homogeneous liquid phase. **D 6161, D19**

dissolving pulps—see **pulps, dissolving**. **D 1695, D01**

distal end—the working end, comprised of two jaws, that is furthest from the surgeon when in use. **F 921, F04**

distal end—the working end, comprised of two blades, that is furthest from the surgeon when in use. **F 1078, F04**

distance amplitude compensation (electronic)—the compensation or change in receiver amplification necessary to provide equal amplitude on the display of the ultrasonic flaw detector for reflectors of equal area which are located at different depths in the material. **E 1316, E07**

distance amplitude response curve—a curve showing the relationship between the different distances and the amplitudes of ultrasonic response from targets of equal size in an ultrasonic response from targets of equal size in an ultrasonic transmitting medium. (E 127) **E 1316, E07**

distance constant (*L, m*), *n*—the distance the air flows past a rotating anemometer during the time it takes the cup wheel or propeller to reach $(1 - 1/e)$ or 63 % of the equilibrium speed after a step change in wind speed. **D 1356, D22**

distance linearity range—the range of horizontal deflection in which a constant relationship exists between the incremental horizontal displacement of vertical indications on the A-scan presentation and the incremental time required for reflected waves to pass through a known length in a uniform transmission medium. (E 494) **E 1316, E07**

distillate—the overhead product of distillation such as ethanol liquid from the top of a beer still. **E 1705, E48**

distillation—the process of condensing steam from boiling water on a cool surface. **D 6161, D19**

distillation—the act of vaporizing and condensing a liquid in sequential steps to effect separation from a liquid mixture. **E 1705, E48**

distillation pressure, *n*—the pressure measured as close as possible to the point where the vapor temperature is taken, normally at the top of the condenser. **D 4175, D02**

distillation residue, *n*—that portion of the sample remaining after distillation using specified procedures. **D 4175, D02**

distillation temperature, *n*—in *column distillation*, the temperature of the saturated vapor measured just above the top of the fractionating column. (Synonym—*head temperature, vapor temperature*.) **D 4175, D02**

distillers grains—the insoluble solids that have been separated from the stillage bottoms or beer. Moisture content may range from 60 to 85 %, depending upon the level of dewatering during separation. **E 1705, E48**

distinctness of image—degree of clarity exhibited by images reflected from a surface. **D 2825, D21**

distinctness-of-image gloss, *n*—the sharpness with which image outlines are reflected by the surface of an object. **D 16, D01**

distinctness-of-image gloss, *n*—aspect of gloss characterized by the sharpness of images of objects produced by reflection at a surface. **E 284, E12**

distinctness of (reflected) image—see **distinctness-of-image gloss**. **E 284, E12**

distorted—physically changed from the natural and original shape, caused by stress of any type. **F 819, F18**

distorted image, *n*—a character, symbol, line drawing, or halftone that is deformed in shape or is vague and lacking a definite outline. **F 1457, F05**

distortion, *n*—infabrics, a general term for a visible defect in the texture of a fabric. **D 123, D13**

distortion, *n*—intextile battings, defects such as holes, lumps, or thin areas caused by movement of fibers. **D 123, D13**

distortion—a change in shape of a solid body. (ISRM) **D 653, D18**

distortion, *n*—infabrics, a general term for a visible defect in the texture of a fabric. **D 4850, D13**

distortion, *n*—intextile battings, defects such as holes, lumps, or thin areas caused by movement of fibers. **D 7022, D13**

distortion—an aberration of lens systems where axial and marginal magnifications are unequal.

(1) *barrel distortion*—the distortion in the image which occurs when the magnification of the image in the center of the field is greater than in the edge of the field. This is also called negative distortion.

(2) *pincushion distortion*—the distortion in the image which results when the magnification in the center of the field is less than it is at the edge of the field. This is also called positive distortion. **E 7, E04**

distortion, *n*—optical, a defect in an image-forming system whereby the image is not the shape of an ideal image of the object. For example, a straight pole, viewed through a window having nonplanar surfaces, may appear to have bends in it. **E 284, E12**

distortion—the rate of change of angular deviation across the transparency, usually characterized by grid-line slope, resulting in the non-linear mapping of objects viewed through the transparency. **F 2429, F07**

distortion factor, *df*—a numerical measure of the distortion in any ac nonsinusoidal waveform. For example, if by Fourier analysis or direct measurement E_1, E_2, E_3 , and so forth are the effective values of the pure sinusoidal harmonic components of a distorted voltage waveform, then the distortion factor is the ratio of the root mean square of the second and all higher harmonic components to the fundamental component.

$$df = [E_2^2 + E_3^2 + E_4^2 + \dots]^{1/2} E_1$$

NOTE—There are no dc components (E_0) in the distortion factor.

A 340, A06

distortion, harmonic—the departure of any periodically varying waveform from a pure sinusoidal waveform.

NOTE—The distorted waveform that is symmetrical about the zero amplitude axis and is most frequently encountered in magnetic testing contains only the odd harmonic components, that is fundamental, 3rd harmonic, 5th harmonic, and so forth. Nonsymmetrical distorted waveforms must contain some even harmonic components, in addition to the fundamental and, perhaps, some odd harmonic components.

A 340, A06

distributed impact test, *n*—in *impingement erosion testing*, an apparatus or method that produces a spatial distribution of impacts by liquid or solid bodies over an exposed surface of a specimen.

G 40, G02

distribution—the thicknesses of the walls of a glass article over its entire area.

C 162, C14

distribution, amplitude, cumulative (acoustic emission) $F(V)$ —the number of acoustic emission events with signals that exceed an arbitrary amplitude as a function of amplitude V .

E 1316, E07

distribution, differential (acoustic emission) amplitude $f(V)$ —the number of acoustic emission events with signal amplitudes between amplitudes of V and $V + \Delta V$ as a function of the amplitude V . $f(V)$ is the absolute value of the derivative of the cumulative amplitude distribution $F(V)$.

E 1316, E07

distribution, differential (acoustic emission) threshold crossing $f_t(V)$ —the number of times the acoustic emission signal waveform has a peak between thresholds V and $V + \Delta V$ as a function of the threshold V . $f_t(V)$ is the absolute value of the derivative of the cumulative threshold crossing distribution $F_t(V)$.

E 1316, E07

distribution, logarithmic (acoustic emission) amplitude $g(V)$ —the number of acoustic emission events with signal amplitudes between V and αV (where α is a constant multiplier) as a function of the amplitude. This is a variant of the differential amplitude distribution, appropriate for logarithmically windowed data.

E 1316, E07

distribution reinforcement—reinforcement, typically running 90° to the main or circumferential reinforcement, intended to disperse concentrated loads to larger areas of a structural member.

C 822, C13

distribution subsystem—that portion of the solar system from the storage device to the point of ultimate use.

E 772, E44

distribution-system pressure difference—the pressure difference across the exterior air-distribution envelope, expressed in pascals (inches of water, pounds-force per square foot, or inches of mercury).

E 631, E06

distribution temperature, *n*—of a source, temperature, usually expressed in kelvins, of the full radiator having a relative spectral power distribution in the visible region approximately the same as that of the source.

E 284, E12

distribution, threshold crossing, cumulative (acoustic emission) $F_t(V)$ —the number of times the acoustic emission signal exceeds an arbitrary threshold as a function of the threshold voltage (V).

E 1316, E07

distribution tube (Type D)—a seamless or welded copper tube known as copper distribution tube (Type D).

B 846, B05

distributor, *n*—any person who furthers the marketing of a device from the original manufacturer to the person who makes final delivery or sale to the ultimate consumer or user but who does not repackage or otherwise change the container, wrapper, or labeling of the device or device package.

E 344, E20

distributor—person or organization who purchases fasteners for the purpose of reselling them. A distributor may or may not alter the fasteners prior to resale. (Significant alterations and insignificant alterations are defined separately.)

F 1789, F16

disturbed sample—any plastic mortar test sample which is taken at some time after mixing and bulk sampling, that is further remixed or molded immediately prior to test, or both.

C 1180, C12

diurnal, *adj*—recurring daily.

D 1356, D22

dive computer, *n*—a microprocessor-based electronic instrument that provides data based on a specific decompression model.

F 1549, F32

dive profile, *n*—the depth/time history of a dive that typically consists of bottom time, maximum depth, and surface interval.

F 1549, F32

divergence loss—that part of transmitted energy lost due to spreading of wave rays in accordance with the geometry of the system.

D 653, D18

divergent bevel point—points sheared obliquely to staple-leg axis, with beveled face in opposite direction on each leg, across thick leg side leading from lower to upper thick face; designed to lead staple legs into opposite directions perpendicular to staple plane during driving.

F 592, F16

divergent chisel point—chisel point with beveled point faces at angle to staple crown in plane perpendicular to staple crown axis; designed to lead staple legs into opposite directions perpendicular to staple plane during driving.

F 592, F16

divergent point—See **divergent bevel point**.

F 592, F16

diversion mode—placement of a boom to redirect the movement of a floating substance.

F 818, F20

divided cell—a cell containing a diaphragm or other means for physically separating the anolyte from the catholyte.

B 374, B08

divider, *n*—a device, made of various materials, that separates the space within a container into two or more spaces, cells, compartments, or layers.

D 996, D10

division, *n*—in *sample preparation*, a process which divides a sample into two or more subsamples without changing the composition.

E 135, E01

divorced eutectic—a structure in which the components of an eutectic appear to be entirely separate.

E 7, E04

d-limonene, *n*—a purified optically active terpene hydrocarbon recovered from by-products of the citrus industry.

D 804, D01

D-load—the supporting strength of a pipe loaded under three-edge-bearing test conditions expressed in pounds per linear foot per foot of inside diameter or horizontal span, or expressed in newtons per linear metre per millimetre of inside diameter or horizontal span.

C 822, C13

D-load, 0.01-in. (0.3-mm) crack—the maximum three-edge-bearing test load supported by a concrete pipe before a crack having a width of 0.01 in. (0.3 mm) occurs, measured at close intervals, throughout a continuous length of 1 ft (300 mm) or more measured parallel to the longitudinal axis of pipe barrel expressed as D-load.

C 822, C13

D-load ultimate (D_u)—the maximum three-edge-bearing test load supported by a pipe, expressed as D-load.

C 822, C13

DMA—abbreviation for **direct memory access**.

F 1457, F05

2D matrix symbols—see **matrix symbols**.

F 1294, F05

DNA fluorochrome stain—staining of DNA specifically by the use of bisbenzamide fluorochrome stain or other DNA fluorochromes of comparable quality and performance, such as DAPI (4',6-diamidino-2-phenyl-indole-2HCl)-Serva 18860.

E 1705, E48

D_{Np} , D_{Lp} , D_{Ap} , D_{Vp} —diameters such that the cumulative number of particles, (N), length of diameter, (L), surface area, (A), or volume, (V), from zero diameter to these respective diameters is the fraction, (f), of the corresponding sum for the total distribution.

Example:

$D_{V0.5}$ is the volume median diameter; that is, 50 % of the total volume of liquid is in drops of smaller diameter and 50 % is in drops of larger diameter.

E 1620, E29

doctor blade, *n*—A scraper mechanism that regulates the dimensional thickness of adhesive on the spreader rolls or on the surface being coated. (*Synonyms:* **doctor knife; doctor bar**.)

D 907, D14

doctor blade—(also known as a charging blade), a component that imparts an electrical charge to toner by means of the triboelectric effect and/or controls the amount of toner delivered to the developer roller.

F 335, F05

doctor blade streaks, n

doctor blade streaks, n—lines in the image or non-image areas of a gravure print caused by a defect of the doctor blade. **D 6488, D01**

doctor roll, n—a revolving roller mechanism resulting in a wiping action for regulating the adhesive supplied to the spreader roll. **D 907, D14**

doctor roller—see **doctor roll**. **D 907, D14**

doctor streak, n—*in printed cloth*, a wavy white or colored streak in the warp direction of printed cloth caused by a defective doctor blade. **D 123, D13**

doctor streak, n—*in printed cloth*, a wavy white or colored streak in the warp direction of printed cloth caused by a defective doctor blade. **D 3990, D13**

document—a form designed as input to a document reader. **F 149, F05**

documentary characteristic, n—any historic, stylistic, iconographic, technological, intellectual, aesthetic, or religious data pertaining to an object under consideration for conservation. **D 123, D13**

documentary characteristic, n—any historic, stylistic, iconographic, technological, intellectual, aesthetic, or religious data pertaining to an object under consideration for conservation. **D 5038, D13**

documentary standard, n—document, arrived at by open consensus procedures, specifying necessary details of a method of measurement, definitions of terms, or other practical matters to be standardized. (Compare **physical standard**.) **E 284, E12**

documentation, n—the record of information (historic, stylistic, iconographic, technological, intellectual, aesthetic, scientific, or spiritual) about any object of cultural or natural heritage. **D 123, D13**

documentation, n—the recording, in a permanent format, of information derived from conservation activities. **D 5038, D13**

document glass—{archaic} an ultraviolet absorbing glass used for protecting documents. **C 162, C14**

document reader—a scanning device that scans one to five lines of data in fixed locations on a document at a single pass. Generally, re-scanning of a portion of the document is not possible, one direction of the scan being provided by movement of the form past the reading head. The forms used generally don't exceed 8 to $\frac{3}{4}$ in. in width by 4 to $\frac{1}{4}$ in. in depth. Also see **page reader**. **F 149, F05**

doeskin—commercial term for white leather from sheep or lambskin, tanned with alum or formaldehyde or both. **D 1517, D31**

doffing tube, n—a component of an open-end spinning machine, which is an extension to the navel and is used to guide the withdrawn yarn en route to the take-up rollers. (See also **navel**) **D 123, D13**

doffing tube, n—a component of an open-end spinning machine which is an extension to the navel and is used to guide the withdrawn yarn en route to the take-up rollers. (See also **navel**.) **D 3888, D13**

doghhouse—a protrusion in or near the back wall through which batch is introduced into the melter. **C 162, C14**

dolly, n—a low platform or structure mounted on wheels or casters, designed primarily for moving bulky loads for short distances. (Compare **pallet**.) **D 996, D10**

doloma-carbon refractory, n—a refractory brick manufactured predominantly from a mixture of refractory-grade doloma and 2 to 20 weight percent carbonaceous materials, with resin, tar, pitch or a combination of these materials as the bonding agent; the refractory-grade doloma may be either dead-burned dolomite, synthetic doloma, fused doloma or combinations of these materials, and the carbonaceous material may be either graphite, carbon black, or a combination of these materials. **C 71, C08**

doloma, fused, n—refractory-grade material consisting predominantly of lime and magnesia which has solidified from a fused or molten state. **C 71, C08**

doloma-magnesia refractory, n—a refractory, which may be burned or unburned, manufactured predominantly of a mixture of refractory-grade doloma and refractory-grade magnesia in which the refractory-grade doloma predominates by weight. **C 71, C08**

doloma refractory, n—a refractory manufactured predominantly of dead-burned dolomite, synthetic doloma, fused doloma or combinations of these materials. **C 71, C08**

doloma, refractory-grade, n—a dead-burned or fused refractory material consisting predominately of lime and magnesia; the three principal types are dolomite, dead-burned; doloma, synthetic; and doloma, fused. **C 71, C08**

doloma, synthetic, n—a refractory-grade doloma which has been derived from blending magnesia and lime or dolomite and dead-burning to form a dense, hydration-resistant material; and having a MgO content of 30 % to 80 % and maximum CaO content of 70 %. **C 71, C08**

dolomite, n—a carbonate rock consisting predominantly of magnesium carbonate ($MgCO_3$) and calcium carbonate ($CaCO_3$) in approximately an equal molecular ratio. **C 71, C08**

dolomite—a sedimentary carbonate rock (a variety of limestone) that consists largely or entirely of the mineral dolomite. **C 119, C18**

dolomite—a double carbonate of lime and magnesium having the general formula $CaCO_3 \cdot MgCO_3$. See also **limestone**. **C 162, C14**

dolomite—the double carbonate of lime and magnesia having the general formula $CaCO_3 \cdot MgCO_3$. **C 242, C21**

dolomite, dead-burned, n—a refractory grade doloma which is obtained by burning dolomite above 1450°C long enough to form a dense hydration-resistant material composed primarily of lime and magnesia. **C 71, C08**

dolomitic—indicates the presence of 35 to 46 % magnesium carbonate ($MgCO_3$) in the limestone from which the material was formed. **C 51, C07**

dolomitic limestone—see **limestone**. **C 51, C07**

domain, n—*as used in Test Method D 5061*, a region of anisotropy in a carbon form that is distinctively marked by its isochromatic boundary and cleavage. **D 121, D05**

domains, ferromagnetic—magnetized regions, either macroscopic or microscopic in size, within ferromagnetic materials. Each domain, in itself, is magnetized to intrinsic saturation at all times, and this saturation induction is unidirectional within the domain. **A 340, A06**

domain wall—a boundary region between two adjacent domains within which the orientation of the magnetic moment of one domain changes into a different orientation of the magnetic moment in the other domain. **A 340, A06**

dome, n—in reinforced plastics, an end of a filament-wound cylindrical container. **D 883, D20**

dominant wavelength, n—the wavelength of a spectrally pure light that, when added to a reference achromatic (white) light, will produce a combination that matches the color of a specimen light. **E 284, E12**

Donaldson radiance factor, $D(\mu, \lambda)$, n—in *bispectral photometry*, a special case of the discrete bispectral radiance factor, for which the specified irradiation and viewing bandpass functions are perfectly rectangular, with bandwidth equal to irradiation and viewing-wavelength sampling interval. **E 284, E12**

Donnan exclusion—reduction in concentration of mobile ions within an ion exchange membrane due to the presence of fixed ions of the same sign as the mobile ions. **D 6161, D19**

donor—relatively colorless material capable of generating color when transferred to a reactive receptor surface. **F 549, F05**

donor, n—a living or deceased organism who is the source of cells or tissues, or both, for research or further processing for transplantation in accordance with established medical criteria and procedures. **F 2312, F04**

donut fryer—see *specialty fryer*. **F 1827, F26**

door, n—usually swinging or sliding barrier by which an entry is closed and opened. **E 631, E06**

door—combination nose and closure for nose-loading stapler. **F 592, F16**

door—the movable barrier that permits access to the cavity for placement or removal of food, and whose function is to prevent

- emission of energy from the passage or opening that provides access to the cavity. **F 1827, F26**
- DOP**, *n*—dioctyl phthalate (di-2-ethylhexyl phthalate). **D 1356, D22**
- dope**—slang for mold lubricant. **C 162, C14**
- dope**, *n*—a composition, usually a cellulosic lacquer, for application on textiles and leathers. **D 16, D01**
- dope**—a composition, usually a cellulose lacquer, for application on textiles and leathers. Also a very viscous crude reaction product, as acetylation dope. **D 1695, D01**
- dope**, *vt*—in this specification, to add potassium, silicon and aluminum compounds to the alloy powders during the preparation to produce a ductile wire. See NASA CR-72884. **E 344, E20**
- doping**—the addition of foreign species into a photoconductive material to modify its semiconductor properties such as light sensitivity, response times, and dark conductivity. **F 335, F05**
- Doppler bubble detector**, *n*—a device that uses the Doppler Effect to monitor specific areas of the circulatory system and detect the presence of bubbles as a measure of decompression stress. **F 1549, F32**
- doré bead**, *n*—a gold and silver alloy bead which results from cupellation. **E 135, E01**
- dormant oil**—a horticultural spray oil applied during the dormant phase of the targeted plant. (See **horticulturalspray oil**.) **E 1519, E35**
- dosage**—the quantity of substance applied per unit weight or volume of the fluid being treated. **D 2652, D28**
- dose**—number of beam particles per unit area that impinge on the specimen. Alternatively, the dose may be defined as the charge per unit area that impinges on the specimen.
- rate*—number of beam particles per unit area per second that impinge on the specimen. Alternatively, the dose rate may be defined as the current per unit area that impinges on the specimen. **E 673, E42**
- dose, dosage**—the quantity of substance applied per unit treated or applied to or entering an organism. **E 609, E35**
- dosimeter**—a device that, when irradiated, exhibits a quantifiable change in some property of the device that can be related to absorbed dose in a given material using appropriate analytical instrumentation and techniques. **E 170, E10**
- dosimetry system**—a system used for determining absorbed dose, consisting of dosimeters, measurement instruments and their associated reference standards, and procedures for the system's use. **E 170, E10**
- dot distortion**, *n*—an undesired change in shape of halftone dots during plate making or printing operations, or both. **D 6488, D01**
- dot doubling**, *n*—the unintentional printing of two images slightly out of register from a single form. **D 6488, D01**
- dote*—See **decay**. **D 9, D07**
- dot gain**, *n*—the increase in halftone dot size in relation to the dots on the lithographic film; it is the arithmetic difference between the dot area on the original film and dot area on the printed sheet. **D 6488, D01**
- dot loss**, *n*—the total or partial loss of the smallest dots on the sheets, usually in the areas of 25 % screen or less. **D 6488, D01**
- dot matrix**—a method of character generation in which each character is formed by a pattern of dots selected from a grid or matrix. **F 909, F05**
- dot slur**, *n*—dot gain that occurs in a pronounced direction and is not symmetrical. **D 6488, D01**
- double-action pressing**, *n*—a method by which a powder is pressed in a die between opposing moving punches. **B 243, B09**
- double aging**, *n*—employment of two different aging treatments, in sequence, to control the type of precipitate formed from a supersaturated alloy matrix in order to obtain the desired properties. **A 941, A01**
- double amplitude**—total or peak to peak excursion. **D 653, D18**
- double boiling system**—a series of mixtures characterized by the vaporization of a liquid phase in one temperature (or pressure) range and the vaporization of another liquid phase within another temperature (or pressure) range; for example, a salt and water mixture which boils with the expulsion of water at moderately elevated temperature and then at higher temperature the molten salt itself boils to produce salt vapor. **E 7, E04**
- double bow**, *n*—two fabric bows, arcing in the same direction, as in a flattened *M* or *W* depending on the viewing angle. (Compare **double reverse bow and double bow**) **D 123, D13**
- double bow**, *n*—two fabric bows, arcing in the same direction, as in a flattened *M* or *W* depending on the viewing angle. (See also **bow**) (Compare **double reverse bow**) **D 3990, D13**
- double bow**, *n*—two fabric bows, arcing in the same direction, as in a flattened *M* or *W* depending on the viewing angle. (Compare **double reverse bow and double bow**.) **D 4850, D13**
- double braid**, *n*—*in rope*, a braided construction consisting of two hollow braided ropes, one inside the other. **D 123, D13**
- double-cavity mold**—see **multiple cavity mold**. **C 162, C14**
- double-cavity process**—see **multiple cavity process**. **C 162, C14**
- double coil**, *n*—a configuration where a smaller diameter coil is placed inside a larger diameter coil. The assembled rolls may be either concertina style or helical style. **F 1379, F14**
- double crest**—crest having two ridges separated by slight depression. **F 547, F16**
- double draining**—a defect evidenced by flowing of the slip on the ware, which occurs after it appears that draining has been completed. **C 286, B08**
- double-dressed**—as applied to chamois skins, with the grain removed and buffed or sueded on both surfaces. **D 1517, D31**
- double drive gate**—a gate comprised of two gate leaves which is used to close a gate opening through which vehicles are intended to pass. While often referring to a swing gate (that is, double swing gate), the gate may be any double leaf gate intended for vehicular (that is, slide gate or others). See specifications F 654, F 900, and F 1184. **F 552, F14**
- double, duplex, dual head**—thick flat head to be struck by hammer, with a second head, flange, or collar spaced slightly below to act as bearing head to prevent nail head from sinking into material into which nail is driven and to facilitate withdrawal after temporary use of nail. On double and duplex heads, the first and second heads are flat; whereas the second head of dual head is a cone head. **F 547, F16**
- double-face ware**—ware that has a finish coat on both surfaces. **C 286, B08**
- double fold**, *n*—*of paper*, one complete oscillation of the paper test specimen, during which it is folded first forward, then backward about the same base. **D 1968, D06**
- double glazing**—insulated glazing that incorporates two panes separated by an air gap. **C 162, C14**
- double glazing unit**—two panes of glass separated by a permanently sealed cavity. **C 162, C14**
- double-gob process*—See **double-cavity process**. **C 162, C14**
- double-headed, duplex-head, dual-head, nail**—bright or coated, regular-stock-steel, 1¾ by 0.113 to 4 by 0.207-in. nails with double ⅜ to ⅞-in. head, medium diamond point, and ¼ to ⅞-in. distance between head to be struck by hammer and bearing head. Length of nails measured from bearing surface of head. **F 547, F16**
- double hooked bow**, *n*—one hooked bow at each side of the fabric that are in opposite directions. (See also **hooked bow**) **D 123, D13**
- double hooked bow**, *n*—one hooked bow at each side of the fabric that arc in opposite directions. (See also **hooked bow**) **D 3990, D13**
- double hooked bow**, *n*—one hooked bow at each side of the fabric that arc in opposite directions. (See also **hooked bow**.) **D 4850, D13**
- double island canopy**—used for all types of cooking equipment mounted back to back in an island configuration. See **canopy**. **F 1827, F26**

double-junction reference electrode

- double-junction reference electrode**—a reference electrode that utilizes two separate filling solutions: an inner solution to provide a constant level of the ion sensed by the reference element and an outer filling solution that provides a low-junction potential liquid junction with the sample solution. The liquid junction potential between the inner and outer solutions is constant but not necessarily zero. **D 4127, D19**
- double liners, n**—a combination of two synthetic and/or natural buffers acting independently to separate waste from underlying soil and ground water. **E 2201, E50**
- double loop ties, n**—twistable ties used to secure the barbed tape at the tie point (also known as *bag ties*). **F 1379, F14**
- double melting system**—a series of mixtures which, with rising temperature, first develops a liquid phase that is totally converted to vapor before a second liquid phase appears; for example, a salt and water mixture which, upon heating, first melts to an aqueous solution of the salt, the water then boils away and the salt residue itself melts. **E 7, E04**
- double modulation, n**—a technique in which a modulated signal is further varied by a second means. **E 131, E13**
- double-pass internal reflection element**—an internal reflection element in which the radiant power transverses the length of the optical element twice, entering and leaving via the same end. **E 131, E13**
- double pick, n**—in woven fabrics, two picks wrongly placed in the same shed. (See also *mispick*. Compare *jerk-in*.) **D 123, D13**
- double pick, n**—in woven fabrics, two picks wrongly placed in the same shed. (See also *mispick*) (Compare *jerk-in*) **D 3990, D13**
- double pour**—to apply two layers of aggregate and bitumen to a built-up roof. **D 1079, D08**
- double press-double sinter, n**—to repress and sinter a previously presintered or sintered compact. **B 243, B09**
- double reverse bow, n**—two fabric bows arcing in opposite directions. (See also *bow*. Compare *double bow*.) **D 123, D13**
- double reverse bow, n**—two fabric bows arcing in opposite directions. (See also *bow*) (Compare *double bow*) **D 3990, D13**
- double reverse bow, n**—two fabric bows arcing in opposite directions. (See also *bow*. Compare *double bow*.) **D 4850, D13**
- doubleers, n**—an extra piece of facing attached to strength or stiffen the panel or to distribute the load more widely to the core. **C 274, D30**
- double salt**—a compound of two salts that crystallize together in a definite proportion. **B 374, B08**
- double sampling, n**—a form of multi-phase sampling, in which there are only two phases. See *phase*. **E 1402, E11**
- double shoulder**—the fore part of the hide cut off at right angles to the backbone line at the break of the fore flank, with the belly cut off and the head cut off behind the horn holes. **D 1517, D31**
- double-sided griddle**—equipment for cooking food by direct contact with two hot surfaces. See *griddle*. **F 1827, F26**
- double spread, n**—see *double spread* under *spread*. **D 907, D14**
- double spread adhesive, n**—an application of adhesive to both adherends or as two layers on one adherend. **D 907, D14**
- double-stitched seam-finish, n**—a finish for the raw edges of a plain seam, in which another row of machine stitching is made through both seam allowances placed together. **D 123, D13**
- double-stroke, n**—in *flex and abrasion testing*, an abrasion cycle that forward and one backward motion. **D 123, D13**
- double-stroke, n**—in *flex and abrasion testing*, an abrasion cycle that consists of one forward and one backward motion. **D 4850, D13**
- double tempering, n**—a treatment in which a quench-hardened steel object is given two complete tempering cycles at substantially the same temperature for the purpose of ensuring completion of the tempering reaction and promoting stability of the resultant microstructure. **A 941, A01**
- doublet (in characteristic X-ray spectra)**—a separation of characteristic radiation into subspecies of slightly different wavelength. **E 7, E04**
- doublet injector**—an impinging jet atomizer in which there are two colliding liquid jets. **E 1620, E29**
- double welt seam, n**—a complex seam formed on the inside of the object, with one trimmed raw seam edge enclosed and two rows of stitching visible on the face side. (Compare *welt seam*.) **D 123, D13**
- double-welt seam, n**—in home sewing, a complex seam formed on the inside of the product, in which one trimmed seam allowance is enclosed and two rows of stitching are visible on the face side. (Compare *welt seam*. Syn. *mock flat-felledseam*.) **D 4965, D13**
- doubling, n**—a printing defect in offset printing products (and other indirect printing processes) that manifests itself as a doubled or multiple (shadow-like) contour of the image elements. **D 6488, D01**
- doughnuts, hickies, n**—round voids in a solid print with ink in the center. **D 6488, D01**
- dough (rubber), n**—a paste-like mass of smooth texture, consisting of a rubber mix and solvent; it is used for spreading. **D 1566, D11**
- down, n**—the fine, soft plumage of waterfowl, consisting of light, fluffy filaments having at least two barbs attached; that is, barbs growing from the quill point but without a quill shaft. **D 123, D13**
- down, n**—the fine, soft plumage of waterfowl, consisting of light, fluffy filaments having at least two barbs attached; that is, barbs growing from the quill point but without a quill shaft. **D 7022, D13**
- down discharge**—makeup air method is used when spot cooling of the cooking staff is desired to help relieve the effects of severe radiant heat generated from equipment such as charbroilers. The makeup air must be heated or cooled, or both, depending on the climate. **F 1827, F26**
- down draw**—process of continuously drawing glass downward from an orifice. **C 162, C14**
- down fibers, n**—detached barbs from down; plumules and detached barbs from the basal end of waterfowl feather quill shafts that are indistinguishable from the barbs of down. **D 123, D13**
- down fibers, n**—detached barbs from down; plumules and detached barbs from the basal end of waterfowl feather quill shafts that are indistinguishable from the barbs of down. **D 7022, D13**
- download, v**—to transfer data from the host to a server, in this case a printer. **F 1457, F05**
- down, nestling, n**—a down not fully developed with a sheath and with soft barbs emanating from the sheath. **D 123, D13**
- down, nestling, n**—a down not fully developed with a sheath and with soft barbs emanating from the sheath. **D 7022, D13**
- downstream**—side of a membrane from which permeate emerges. **D 6161, D19**
- down-tank**—the direction in a melter from the batch feeding end toward the exit. **C 162, C14**
- (dP/dt)_{ex}, n**—the maximum rate of pressure rise during the course of a single deflagration. **E 1445, E27**
- (dP/dt)_{max}, n**—maximum value for the rate of pressure increase per unit time reached during the course of a deflagration for the optimum concentration of the dust tested. It is determined by a series of tests over a large range of concentrations. It is reported in bar/s. **E 1445, E27**
- draft**—minimum vertical depth of the membrane below the water line. **F 818, F20**
- drag**—the resistance to shrinkage of the foot or base of a ceramic article during drying or firing as a result of friction with the setter, slab, or sagger on which it rests. **C 242, C21**
- drag, n**—the resistance of the foot or base of a ceramic article to shrinkage during firing time due to friction with the slab or sagger on which it rests. **C 1145, C28**
- drag**—physical resistance to spreading of a polish. **D 2825, D21**
- dragade**—{archaic} see *drag ladle*. **C 162, C14**
- drag bit**—a noncoring or full-hole boring bit, which scrapes its way through relatively soft strata. (ISRM) **D 653, D18**
- dragging**—a fringe effect attached to the trailing edge of the developed electrostatic image. (See also *tailing*.) **F 335, F05**

- drag-in**—the water or solution that adheres to the objects introduced into a bath. **B 374, B08**
- drag ladle**—{archaic} to produce cullet by ladling glass from the melt into water. **C 162, C14**
- drag-out**—the solution that adheres to the objects removed from a bath. **B 374, B08**
- drag out, *n***—excessive ink around shadow areas of the image usually associated with excessively deep etches on less absorbent substrate. **D 6488, D01**
- dragout**—the carryout or loss of penetrant materials as a result of their adherence to the test pieces. **E 1316, E07**
- drag stroke, *n***—a stroke resulting from incomplete lifting of the pen. **E 2195, E30**
- drain**—a means for intercepting, conveying, and removing water. **D 653, D18**
- drainage, *n***—of an insulating varnish, a measure of the variation in thickness from top to bottom of a varnish film obtained on the surface of a vertically dipped coated panel after a specified time and temperature. **D 1711, D09**
- drainage basin**—See **watershed**. **D 4410, D19**
- drainage blanket, *n***—a uniform layer of permeable material such as sand, crushed stone, or bottom ash/boiler slag installed with properly designed filter media at the base of a structural fill to maintain the fill in a drained condition. **E 2201, E50**
- drainage course**—See **percolation layer**. **C 717, C24**
- drainage curtain**—in *grouting*, a row of open holes drilled parallel to and downstream from the grout curtain of a dam for the purpose of reducing uplift pressures. **D 653, D18**
- drainage gallery**—in *grouting*, an opening or passageway from which grout holes or drainage curtain holes, or both, are drilled. See also **grout gallery**. **D 653, D18**
- drainage hole**—an opening in a construction provided for the escape of unwanted liquid, as in a retaining wall. Compare **vent hole, weep hole**. **E 631, E06**
- drainage loss**—oil accumulating and pooling against the boom skirt and escaping with the flow of water down and along the skirt. **F 818, F20**
- drainage mat, *n***—component used in some EIFS-clad drainage wall assemblies, a corrosion resistive material used as a spacer to provide a drainage path between the EIFS and the weather resistive barrier. **E 2110, E06**
- drain and dry mode, *n***—the effect from being sprayed, dipped, or brushed with a fluid lubricant and the excess material draining from the surface leaving behind a thin film that remains wet and must act as a lubricant on its own, without benefit of recirculation or continuous supply. **D 4175, D02**
- drainback solar energy system**—see **solar energy system, drainback**. **E 772, E44**
- drain casting**—See **drain casting** under **casting**. **C 242, C21**
- draindown solar energy system**—see **solar energy system, draindown**. **E 772, E44**
- draining**—in *ceramic manufacture*, the process of removing excess slip from dipped or cast items by gravity flow. **C 242, C21**
- draining**—the part of the dipping or flowcoating process in which the excess slip flows from suitably positioned ware. **C 286, B08**
- drain line**—a nonuniform thickness of coating appearing as a line or streak in dipped or flow-coated ware. **C 286, B08**
- drains**—a piping system used to collect and carry off surface and ground water. **C 896, C04**
- drain tile**—pipe for collecting and conveying surface and subsurface water from an area. **C 822, C13**
- drain time**—time required for porcelain enamel slip applied by dipping, slushing, or flow coating to complete movement across the surfaces of a coated part. **C 286, B08**
- drain time**—that portion of the dwell time during which the excess penetrant or emulsifier drains from the part. **E 1316, E07**
- DRAM**—dynamic random access memory. **F 1457, F05**
- draw**—See **pull**. **C 162, C14**
- draw, *n***—a term used in sample selection. See **step**. **E 1402, E11**
- draw-back, *n***—a weave distortion characterized by tight and slack places in the same warp yarn. **D 123, D13**
- draw-back, *n***—a weave distortion characterized by tight and slack places in the same warp yarn. (*Syn.* hitch-back) **D 3990, D13**
- draw bar**—a refractory member submerged in molten glass that defines the position of the sheet in a drawing process. **C 162, C14**
- drawdown (L)**—vertical distance the free water elevation is lowered or the pressure head is reduced due to the removal of free water. **D 653, D18**
- draw gang**—{archaic} people employed to cut and handle glass as it comes from the lehr. **C 162, C14**
- drawing, *n***—in *textile processing*, the process of stretching or attenuating a material to increase the length per unit mass. **D 123, D13**
- drawing, *n***—in *textile processing*, the process of stretching or attenuating a material to increase the length per unit mass. **D 4849, D13**
- drawing, *n***—an architectural, structural, mechanical, or electrical plan, elevation, or section indicating in isometric perspective or in axonometric perspective the detailed location, dimension, quantity, or extent of material, product, or member to be furnished. Compare **shop drawing, working drawing**. **E 631, E06**
- drawing, *n***—(dessin): **E 631, E06**
- drawing, *n*** (dessin):
*record set drawing (as-built drawing), *n** (dessin de l'ouvrage fini (dessin d'après exécution))—construction drawing revised to show changes made during the construction process, usually based on marked-up prints, drawings, and other data furnished by the contractor.
*working drawing, *n** (dessin d'exécution)—detail drawing, usually produced by a draftsman under direction of an architect, engineer, or other designer showing the form, quantity, and relationship of construction elements and materials and indicating their location, identification, grades, dimensions, and connections. **E 1480, E06**
- drawings, *n***—in *pipe laying*, drawings prepared by the purchaser to show the location and details for the construction of the pipeline and appurtenances. **C 1154, C17**
- drawings, *n***—for *pipe laying*, illustrations (such as drawings, sketches, graphs, or photographs) on paper, film, diskettes, magnetic tape or other media, blueprints, layouts, designs, figures, portrayals, pictures, charts, maps, images, patterns, diagrams, representations, and plans supplied by the purchaser to show the location and details for the construction of the pipeline and appurtenances. **D 2946, C17**
- drawing stock**—the as-rolled or extruded section, normally round, made from any of a variety of manufacturing processes, intended as feed stock for subsequent drawing operations. **B 354, B01**
- drawn glass**—glass made by a continuous drawing operation. **C 162, C14**
- drawn grain**—shrunken, shriveled, or wrinkled grain surface of leather. **D 1517, D31**
- drawn stress relieved (DSR)**—a thermal treatment of a cold-drawn tubular product to improve ductility without significantly affecting its tensile strength or microstructure. **B 846, B05**
- draw ratio (DR), *n***—the relation of the final length per unit mass to original length per unit mass of a material resulting from drawing. **D 123, D13**
- draw ratio (DR), *n***—the relation of the final length per unit mass to original length per unit mass of a material resulting from drawing. **D 4849, D13**
- draw texturing, *n***—for *processing thermoplastic fibers*, the simultaneous or sequential process of drawing and imparting crimp, thus producing increased molecular orientation and increased bulk. **D 123, D13**

draw texturing, n

draw texturing, n—for processing thermoplastic fibers, the simultaneous or sequential process of drawing and imparting crimp, thus producing increased molecular orientation and increased bulk.

D 4849, D13

d-RDF—abbreviation for densified refuse-derived fuel. **E 856, D34**

dredge, dredging—in dryprocess enameling, (1) the application of dry, powdered frit to hot ware by sifting.

(2) The sieve used to apply powdered porcelain enamel frit to the ware.

C 286, B08

dress career apparel, n—career apparel which is not generally subject to abusive wear and for which appearance is a more important attribute than durability. (See also **careerapparel, vocational career apparel**)

D 123, D13

dress career apparel, n—career apparel which is not generally subject to abusive wear and for which appearance is a more important attribute than durability. (See also **careerapparel, vocational career apparel**.)

D 7022, D13

dressed crude mica, n—crude mica from which the dirt and rock have been mainly removed.

D 1711, D09

dressed size—See **lumber**.

D 9, D07

dressed stone—See **cut stone, finished stone**.

C 119, C18

dress glove, n—a covering for the hand, often extending part way up the arm, worn primarily for formal or dress occasions.

D 123, D13

dress glove, n—a covering for the hand, often extending part way up the arm, worn primarily for formal or dress occasions.

D 7022, D13

dressings, n—(1) the process of restoring the efficiency of an abrasive grinding wheel by removal of dulled grains; (2) reshaping the faces of grinding wheels to special contours.

C 1145, C28

dressings, n—any of various materials utilized for covering and protecting a wound.

F 2312, F04

dress shirt, n—for boys, a shirt made with a specific collar size or numerical size and designed to be worn with a tie and jacket.

D 123, D13

dress shirt, n—for men, a shirt made with a specific collar size and sleeve length where appropriate, and designed to be worn with a tie and jacket.

D 123, D13

dress shirt, n—for boys, a shirt made with a specific collar size or numerical size and designed to be worn with a tie and jacket.

D 7022, D13

dress shirt, n—for men, a shirt made with a specific collar size and sleeve length where appropriate, and designed to be worn with a tie and jacket.

D 7022, D13

drier, n—an additive that accelerates the drying of an oil, paint, printing ink, or varnish.

D 16, D01

drift—this is the slow nonrandom change with time in the potential (emf) of an ion-selective electrode cell assembly maintained in a solution of constant composition and temperature.

D 4127, D19

drift—in electron optics, motion of the electron beam or image due to current, voltage or specimen instabilities or charging of a projection such as dirt in or near the electron beam.

E 7, E04

drift—The physical movement of an agrochemical through the air at the time of application or soon thereafter to any non or off target site. Drift shall not include movement to non or off-target sites caused by erosion, migration, volatility or wind blown soil particles that occur after application unless specifically advertised on the label.

E 609, E35

drift—the movement of chemicals outside the intended target by air mass transport or diffusion.

E 1102, E35

drift—in leak testing, the relatively slow change in the background output level of the leak detector due to the electronics rather than a change in the level of the tracer gas.

E 1316, E07

drift—the relatively slow change in baseline output due to instrument performance taken to be the maximum deviation between any two points within a specified time period.

E 2161, E37

drift control agent—a material used in liquid spray mixtures to reduce spray drift.

E 1519, E35

drift reduction agent—See **drift control agent**.

E 1519, E35

drill—a machine or piece of equipment designed to penetrate earth or rock formations, or both.

D 653, D18

drill—electric-, hydraulic-, or air-powered tool for boring holes into the base material, using rotary action, often supplemented by percussion or hammering.

E 2265, E06

drillability—index value of the resistance of a rock to drilling.

(ISRM)

D 653, D18

drill bit—solid-shaft, carbide-tipped bit, usually with spiral flutes, used to drill holes in the base material.

E 2265, E06

drill carriage; jumbo—a movable platform, stage, or frame that incorporates several rock drills and usually travels on the tunnel track; used for heavy drilling work in large tunnels.

(ISRM)

D 653, D18

drill cuttings—fragments or particles of soil or rock, with or without free water, created by the drilling process.

D 653, D18

drill-drive test—test in which a self-drilling screw is driven into and through a test plate, under specified test conditions, to determine drilling and thread forming performance characteristics of the screw.

F 1789, F16

drill hole, n—a point that is part of a pattern piece that is not part of any line.

D 6963, D13

drilling fluid—a fluid (liquid or gas) that may be used in drilling operations in remove cuttings from the borehole, to clean and cool the drill bit, and to maintain the integrity of the borehole during drilling.

D 653, D18

drilling pattern—the number, position, depth, and angle of the blastholes forming the complete round in the face of a tunnel or sinking pit.

(ISRM)

D 653, D18

drill mud—in grouting, a dense fluid or slurry used in rotary drilling; to prevent caving of the bore hole walls, as a circulation medium to carry cuttings away from the bit and out of the hole, and to seal fractures or permeable formations, or both, preventing loss of circulation fluid.

D 653, D18

dripping—in testing thermal protective material, a response evidenced by flowing of the fiber polymer.

F 1494, F23

drips—in protective coatings, the small drops of coating that collect on the edge of the coated work.

D 4538, D33

drive cam—a cam that actuates the tumblers by a drive pin and is gated to retract or accept a locking mechanism.

F 471, F12

drive nail, drive screw—terms applied to helically threaded nails, twisted nails, and annularly threaded shoe nail. (See **nail, thread**.)

F 547, F16

drive pin—a protrusion on or through a drive cam or tumbler which drives or turns the next tumbler.

F 471, F12

driver—tool component that pushes fastener from the driving chamber of the tool into the members being assembled.

F 592, F16

drive test—test in which a tapping screw is driven into a test plate hole to determine thread forming and thread cutting performance characteristics.

F 1789, F16

driving coefficient [nd], n—the ratio of the driving force to the normal force.

F 538, F09

driving coefficient, peak[nd], n—the maximum value of the driving coefficient.

F 538, F09

driving force, [F], n—of a tire, the positive longitudinal force resulting from the application of driving torque.

F 538, F09

driving torque [ML²/T²], n—of a wheel, the positive wheel torque.

F 538, F09

drop, n—in bodymeasurements, the difference between the chest girth and the waist girth.

D 123, D13

drop, n—that part of a bedcovering that hangs perpendicular to the floor.

D 123, D13

drop, n—that part of a bedcovering that hangs perpendicular to the floor.

D 7023, D13

drop, n—a single liquid particle having a generally spheroidal shape.

E 1620, E29

drop bar—component of a double gate latch assembly (sometimes called **drop rod**) (see Specification F 900).

F 552, F14

- drop cap**—the cover of a railing post or newel that is exposed to view, usually below the stair stringer or floor. **E 631, E06**
- drop cap**—See **railing systems**. **E 631, E06**
- drop cap**—the cover of a railing post or newel that is exposed to view, usually below the stair stringer or floor. **E 1481, E06**
- droplet, n**—a small liquid particle of such size and density as to fall under still conditions but which may remain suspended under turbulent conditions. **D 1356, D22**
- droplet, n**—see **drop**; also a small drop. **E 1620, E29**
- drop, liquid, n**—see **liquid drop**. **G 40, G02**
- drop melting point of petroleum wax, n**—the temperature at which material becomes sufficiently fluid to drop from the thermometer used in making the determination under definite prescribed conditions. **D 4175, D02**
- drop out colors**—See **reflective ink**. **F 149, F05**
- drop out ink**—See **reflective ink**. **F 149, F05**
- dropped stitch, n**—*in knitted fabrics*, an unknitted stitch. **D 123, D13**
- dropped stitch, n**—*in knitted fabrics*, an unknitted stitch. **D 3990, D13**
- dropping**—{archaic} forming by heating in a mold without the use of pressure. **C 162, C14**
- dropping point, n**—a numerical value assigned to a grease composition representing the corrected temperature at which the first drop of material falls from the test cup and reaches the bottom of the test tube. **D 4175, D02**
- drop size, n**—the diameter of a liquid drop if it is approximately spherical; otherwise, the approximate shape and appropriate dimensions must be described. **G 40, G02**
- drop test**—See **package testing**. **D 996, D10**
- drop throat**—See **submerged throat**. **C 162, C14**
- drop weight, n**—that weight which is raised to a selected height and released. This weight does not impact the sample directly; rather it strikes another stationary weight that is in contact with the sample. **E 1445, E27**
- drop-weight tear test (DWTT)**—a test of plain-carbon or low-alloy pipe steels over the temperature range where the fracture changes from a brittle to a ductile mode. The mode can be determined from the appearance of propagating fractures. **E 1823, E08**
- dress**—a mixture of metal oxide and metal on the surface of a float bath. **C 162, C14**
- drug, n**—“articles intended for use in the diagnosis, cure, mitigation, treatment, or prevention of disease in man or other animals.” Drugs are “intended to affect the structure or any function of the body of man or other animals.” **F 2312, F04**
- drug product, n**—a drug product is a finished dosage form (for example, tablets, capsule, or solution) that contains a drug substance, generally, but not necessarily, in association with one or more other ingredients. **E 2363, E55**
- drug therapy, n**—is the delivery of drug(s) that stimulate a specific physiologic (metabolic) response. Drug therapy technologies can be applied in tissue engineering to generate TEMPs. **F 2312, F04**
- drum, n**—(1) a cylindrical **shipping container** having straight sides, and flat, convex or embossed ends, designed for storage and shipment as an unsupported outer package that may be shipped without boxing or crating. It may be made of metal, or of plywood, or of fiber with wooden, metal or fiber ends. Drums are also made of rubber or plastics (Compare **barrel**.); (2) in set-up paper boxes, a shell or tube with paper or cellophane head, used for powder box. (See **divider**.) **D 996, D10**
- drum**—implies any drum, barrel, or non-bulk container of 5 to 110 U.S. gal (19 to 416 L) capacity. **D 5681, D34**
- drum**—a container (typically, but not necessarily, holding 55 gal [208 L] of liquid) that may have been used to store hazardous substances or petroleum products. **D 5681, D34**
- drum dryer, n**—a heated, rotating drum in which tumbling or cascading raw materials are dried. **C 1145, C28**
- drum dyeing**—the application of dyestuffs to leather by immersion of the leather in a revolving drum containing the dyestuff solution, as contrasted with table dyeing. **D 1517, D31**
- drumhead leather**—see **parchment**. **D 1517, D31**
- drum printer**—a type of printer that employs a rotating cylinder or drum, the outer surface of which contains fully formed characters. As the drum rotates in front of the paper form, hammers are caused to strike the back of the form synchronized in such a way as to produce the desired character in their proper position. **F 909, F05**
- drunken forest**—a group of trees leaning in random directions in a permafrost region; usually associated with thermokarst topography. **D 7099, D18**
- dry, v**—to change the physical state of an adhesive on an adherend or between adherends by the loss of solvent constituents by evaporation or absorption, or both. **D 907, D14**
- dry, v**—*in in-planttextile floor covering cleaning*, suspend textile floor covering in a heated room until dry. **D 5253, D13**
- dry, adj**—a condition which does not exceed the equivalent of 50 % relative humidity at 22 °C. **E 344, E20**
- dry, v**—to develop the ultimate properties of a wet-state material solely by evaporation of volatile ingredients. **E 2110, E06**
- dry, ash-free**—the test data calculated to a theoretical base of no moisture or ash associated with the sample. **E 856, D34**
- dry, ash-free basis**—See **dry, ash-free basis** under **reporting bases**. **D 121, D05**
- dry ash-free basis, n**—test data calculated to a theoretical base of no moisture or ash associated with the sample. **D 5681, D34**
- dry basis**—See **dry basis** under **reporting bases**. **D 121, D05**
- dry basis**—exclusive of any moisture which may be present. **D 2652, D28**
- dry basis, n**—test data calculated to a theoretical base of no moisture associated with the sample. **D 5681, D34**
- dry basis**—the test data calculated to a theoretical base of no moisture associated with the sample. **E 856, D34**
- dry basis moisture content**—of biomass fuels, the ratio of the weight of the water in a sample to the weight of the dry material. It is expressed as a percent. **E 1705, E48**
- dry-blend, n**—a dry compound prepared without fluxing or addition of solvent (also called powder blend). **D 883, D20**
- dry-blend, n**—a free-flowing dry compound prepared without fluxing or addition of solvent (also called powder blend). (D20) **F 412, F17**
- dry bond adhesive, n**—Synonym for **contact adhesive**. **D 907, D14**
- dry bright polish**—a polish that dries to a gloss without buffing. **D 2825, D21**
- dry-bulb temperature**—temperature of the air as indicated by an accurate thermometer, corrected for radiation if significant. **D 9, D07**
- dry-bulb temperature**—See **temperature**. **D 1356, D22**
- dry-bulb temperature, n**—the temperature of the ambient air; for example, the temperature that is measured by the dry-bulb thermometer of a psychrometer. **G 113, G03**
- dry carrier toner**—dry powdered toner mixed with bead or granular particles as a carrier to form a developer. **F 335, F05**
- dry-cast, adj**—manufacturing concrete products using low frequency, high amplitude vibration to consolidate concrete of stiff or extremely dry consistency in a form. **C 1209, C15**
- dry chop**—dried fiber glass strand which has been chopped. See **chopped fiber** and **wet chop**. **C 162, C14**
- drycleanable button, n**—a button that can be solvent-cleaned without damage such as dissolving or loss of finish. (See **dry-cleaning, finish**.) **D 123, D13**
- drycleaning, n**—*in the care of textiles*, the cleaning of consumer textiel products with organic solvents such as petroleum solvent or perchloroethylene. **D 123, D13**
- dry cleaning**—under **cleaning**, see **dry cleaning**. **D 459, D12**
- drycleaning, n**—*in the care of textiles*, the cleaning of consumer textile products with organic solvents such as a petroleum solvent or perchloroethylene. **D 3136, D13**

dry cleaning, n

dry cleaning, n—in *textile floor covering cleaning*, a deprecated term.

See the preferred term, **dry extraction cleaning**. D 5253, D13

dry-cleaning detergent—a formulated composition added to the solvent bath in dry-cleaning operations to improve cleaning.

D 459, D12

dry-cleaning detergent—under **detergent**, see *dry-cleaning detergent*.

D 459, D12

dry cockle, n—a wave pattern which is apparent after ink drying.

F 1857, F05

dry coke—See *dry coke* under **coke**.

D 121, D05

dry crock—same as wet crock without using water.

D 2825, D21

dry density—the mass of a unit volume of dried material.

D 7099, D18

dry deposition—See **deposition**.

D 1356, D22

dry edging—rough edges and corners of glazed ceramic ware caused by insufficient glaze coating.

C 242, C21

dryer—a kiln or chamber, or machine through which the green veneers are passed to remove excess moisture.

D 1038, D07

dry extraction clean, v—in *cleaning upholstered furniture and textile floor coverings*, brush an absorbent compound into the fabric, allow to dry, and remove by suction, following manufacturer's instructions.

D 5253, D13

dry extraction cleaning, n—a method in which an absorbent compound is dispersed over the surface of a textile product by hand or machine, thoroughly brushed through the pile, allowed to dry, and removed by suction.

D 123, D13

dry felt—(1) see felt;

(2) a felt which has not been saturated with bitumen.

D 1079, D08

dry fiber—a condition in which fibers are not fully encapsulated by resin during pultrusion.

D 3918, D20

dry-film thickness, n—the thickness of a cured film, coating, or membrane.

C 717, C24

dry fly ash, n—fly ash that has been collected by particulate removal equipment such as electrostatic precipitators, Baghouses, mechanical collectors, or fabric filters.

E 2201, E50

dry foam extraction cleaning, n—a process by which a highly aerated, low moisture content shampoo is brushed through the textile floor covering pile or applied to the surface of upholstery.

D 123, D13

dry foam extraction cleaning, n—a process by which a highly aerated, low moisture content shampoo is brushed through the textile floor covering pile or applied to the surface of upholstery.

D 5253, D13

dry frozen ground—frozen ground with a very low total water content, consisting almost completely of interfacial water, and not cemented by ice.

D 7099, D18

dry gage (drigage) v.—to form cullet by running a stream of molten glass into a water bath. (See synonymous term **frit**, v.)

C 162, C14

dry gas—natural gas containing little or no water vapor.

D 4150, D03

dry impingement—See **impingement**.

D 1356, D22

dry in, n—a situation where the cells in the anilox cylinder become partly or completely filled with dry ink.

D 6488, D01

drying—removal by evaporation, of uncombined water or other volatile substance from a ceramic raw material or product, usually expedited by low-temperature heating.

C 242, C21

drying—See **seasoning**.

D 9, D07

drying, n—process of developing, solely by evaporation of volatile ingredients, ultimate properties of a finish or other material over a specified period of time. Compare **curing**.

E 631, E06

drying crack—a defect characterized by a fissure in the bisque.

C 286, B08

drying in, n—the accumulation of dried ink in the cells of the cylinder.

D 6488, D01

drying oil, n—an oil that possesses to a marked degree the property of readily taking up oxygen from the air and changing to a relatively hard, tough, elastic substance when exposed in a thin film to the air.

D 16, D01

drying oven, n—a closed unit in which specimens are dried by heating.

C 1145, C28

drying oven—an oven used for increasing the evaporation rate of rinse water or an aqueous developer vehicle from test parts.

E 1316, E07

drying room yellowing, n—a yellowish cast on linoleum resultant from the oxidation process that will go away with light exposure. Without continued light exposure, the cast may reappear.

F 141, F06

drying shrinkage, n—the contraction of a moist body during the drying process, expressed as linear percent of the original length or volume percent of the original volume.

C 1145, C28

drying shrinkage, n—in this test method, the change in linear dimension of the test specimen due to drying from a saturated condition to an equilibrium weight and length under specified accelerated drying conditions.

C 1209, C15

drying temperature, n—the temperature to which an adhesive or an assembly is subjected to dry the adhesive.

D 907, D14

drying time, n—the period of time during which an adhesive or an assembly is allowed to dry, with or without the application of heat or pressure, or both.

D 907, D14

drying time—the time required for a cleaned, rinsed or wet developed part to dry.

E 1316, E07

drying, vacuum, n—the technique of expediting the removal of moisture from a material or body by the use of a vacuum in conjunction with a conventional drying system.

C 1145, C28

dry method—magnetic particle inspection in which the ferromagnetic particles employed are in the dry powder form.

E 1316, E07

dry milling—the grinding of porcelain enamel materials without a liquid vehicle.

C 286, B08

dry milling, n—the process of reducing the particle size of a substance by milling without the use of a liquid medium.

C 1145, C28

dry mix—See *dry process* under **process**.

C 242, C21

dry objective—any microscopical objective designed for use without immersion liquids.

E 7, E04

dry occupancy—an occupied space below the plaza deck system in which the computed or anticipated relative humidity is below 30 %.

C 717, C24

dry pack—a cement-sand mix with minimal water content used to fill small openings or repair imperfections in concrete.

D 653, D18

dry permafrost—perennially frozen soil or rock without ice, or with an ice content lower than the pore volume, so that it does not yield excess water on thawing.

D 7099, D18

dry pickling—a method of curing skins from wool sheep with sodium sulfate and sodium chloride.

D 1517, D31

dry point, n—in *batch distillation*, the temperature observed at the instant the last drop of liquid evaporates from the lowest point in the flask.

D 4175, D02

dry point temperature—the temperature observed immediately after the liquid just disappears from the bottom of the flask during a distillation test.

D 4790, D16

dry powder—finely divided ferromagnetic particles suitably selected and prepared for magnetic particle inspection.

E 1316, E07

dry pressing—See *dry pressing* under **pressing**.

C 242, C21

dry process—See *dry process* under **process**.

C 242, C21

dry process enameling—a porcelain enameling process in which the metal article is heated to a temperature above the maturing temperature of the coating (usually 1600 to 1750°F, (approximately 870 to 955°C)), the coating materials applied to the hot metal as a dry powder, and fired.

C 286, B08

dry salting—a method of curing hides in which the hides are first greensalted and then dried.

D 1517, D31

dry scraping—of *coatings*, method of removing dried, often deteriorated, paint film using a blade or similar tool.

E 631, E06

dry screening, n—the process of separating small sizes of granular or powdered solids from coarser particles by passing them through a screen of desired mesh size while in the dry state.

C 1145, C28

dry sieving—for the purpose of Test Method D 4749, the test method for the sieving of coal after the sample has been airdried under prescribed conditions; this is generally used when testing with coal particles larger than 600 μm (No. 30 U.S.A. Standard Sieve Series.) **D 121, D05**

dry solid film lubricants, *n*—dry coatings consisting of lubricating powders in a solid matrix bonded to one or both surfaces to be lubricated. **D 4175, D02**

dry solvent, *n*—any organic solvent used to dissolve another material. (See **solvent**.) **D 123, D13**

dry solvent, *n*—any organic solvent used to dissolve another material. See **solvent**. **D 5253, D13**

dry-spot, *n*—an imperfection in reinforced plastics, an area of incomplete surface film where the reinforcement has not been wetted with resin. **D 883, D20**

dry spray—a defect confined to sprayed ware manifesting itself in the fired porcelain enamel as a rough, sandy texture. **C 286, B08**

dry spray—in protective coatings, a rough, powdery, non-coherent film produced when an atomized coating partially dries before reaching the surface. **D 4538, D33**

dry strength, *n*—see **bond strength**. **D 907, D14**

dry strength—See **strength, dry**. **E 631, E06**

dry strength—See **strength, dry**. **E 1749, E06**

dry tack, *n*—see **dry tack under tack**. **D 907, D14**

dry technique—in magnetic particle examination, the examination technique in which the ferromagnetic particles are applied in the dry powder form. **E 1316, E07**

dry time—the time that a copy must reside in the copy tray before it appears to be dry. **F 335, F05**

dry time, *n*—a measure of the rate of ink absorption into a substrate to the point at which no image transfer, smear, or surface damage occurs when in contact with another surface. **F 1857, F05**

dry toner, *n*—the material in a dry developer system which when deposited on a substrate by the field of an electrostatic charge pattern, becomes the visible record. **F 1457, F05**

dry unit weight (dry density)—see **unit weight**. **D 653, D18**

drywall nail—See **gypsum-wallboard nail**. **F 547, F16**

dry weight—the weight per unit area of the bisque. **C 286, B08**

dry weight—a term is usually applied to the mass of the oven-dry material, but it is ambiguous unless the method of drying is specified. **D 1695, D01**

DSC—abbreviation for **data stream compatibility**. **F 1457, F05**

2D stacked symbols—see **multi-row symbols**. **F 1294, F05**

DT—in viscometry, abbreviation for degree of thickening. **D 4175, D02**

D2T2,, *n*—abbreviation for **dye diffusion thermal transfer**. **F 1623, F05**

DTA (DSC) curve, *n*—a record of a thermal analysis where the temperature difference (ΔT) or the energy change (Δq) is plotted on the ordinate and temperature or time is plotted on the abscissa. **E 1445, E27**

DTE—abbreviation for **data terminal equipment**. **F 1457, F05**

DTR—abbreviation for **data terminal ready**. **F 1457, F05**

2D (two-dimensional) symbol, *n*—a machine-readable symbol that must be examined both vertically and horizontally to read the entire message. Two-dimensional symbols may be of two types: matrix symbols and multi-row symbols. **F 1294, F05**

dual-drum mixer, *n*—a mixer consisting of a long drum containing two compartments separated by a bulkhead with a swinging chute extending through the unit. **C 1145, C28**

dual-head nail—See **double-headed nail**. **F 547, F16**

dual in-line package switch, *n*—a device used to direct the signal line to or from one component or another. (See **DIP switch**.) **F 1457, F05**

dual metal, *n*—two metals of different composition that are fusion bonded at all interfacial surfaces by casting metal of one composition against metal of a second composition. **A 644, A04**

dual orifice nozzle—a swirl chamber atomizer containing a primary injector and a concentric annular secondary injector, each injector comprising a separate orifice and set of tangential slots. The nozzle is normally operated only with the primary injector at low flow rates, with secondary liquid introduced at a specified pressure. (This definition applies to devices used in the gas turbine industry.) **E 1620, E29**

dual ovenable—terms describing a food packaging container used to prepare food in either a conventional oven or a microwave oven. **F 1479, F02**

dual search unit—a search unit containing two elements, one a transmitter, the other a receiver. **E 1316, E07**

dubbing, (dubbin)—a mixture, primarily oils and fats, used for restoring fatty matter to military footwear in the field. **D 1517, D31**

duck, *n*—a compact, firm, heavy, plain-weave cotton fabric, mass per square yard 6 to 50 oz. (See also **flat duck**, and **plied yarn duck**) **D 123, D13**

duck, *n*—a compact, firm, heavy, plain-weave cotton fabric, mass per square yard 6 to 50 oz. (See also **flat duck**, and **plied yarn duck**.) **D 4850, D13**

duckbill point—end of wire flattened to thin elliptical cross section having sharp periphery, in appearance somewhat like bill of duck, to facilitate clinching at predetermined point, slight transverse depression may be formed across point. **F 547, F16**

duct, *n*—as related to heating ventilating, air conditioning or exhaust systems, a passageway made of sheet metal or other suitable material used for conveying air or other gases. **E 176, E05**

ductile—the ability of a material to deform plastically before fracturing. **F 2078, F07**

ductile erosion behavior, *n*—erosion behavior having characteristic properties that can be associated with ductile fracture of the exposed solid surface; that is, considerable plastic deformation precedes or accompanies material loss from the surface which can occur by gouging or tearing or by eventual embrittlement through work hardening that leads to crack formation. (See also **brittle erosion behavior**.) **G 40, G02**

ductile failure—a pipe failure mode which exhibits material deformation (stretching, elongation, or necking down) in the area of the break. **F 412, F17**

ductile fracture, *n*—fracture that occurs with appreciable plastic deformation of the material. **A 644, A04**

ductile fracture area, *n*—The fraction or percent of the fracture surface that formed by ductile fracture. (When observed with no or low magnification, ductile fracture appears grayer and duller than brittle fracture.) **A 644, A04**

ductile iron, *n*—a cast iron that has been treated in the liquid state so as to cause substantially all of its graphitic carbon to occur as spheroids or nodules in the as-cast condition. **A 644, A04**

ductility—the ability of a material to deform plastically without fracturing. **B 374, B08**

ductility—condition in which material can sustain permanent deformation without losing its ability to resist load. (ISRM) **D 653, D18**

ductility, *n*—the ability of a material to deform plastically before fracturing. **E 6, E28**

ductility of externally threaded fasteners—ability of a fastener to deform before it fractures. Machined test specimens made from a fastener allow the measurement of elongation and reduction of area which are criteria used to evaluate the specimen. However, since yielding and fracture normally occur in the screw threads, these are impractical for the actual fastener. Hardness and the wedge tensile test are ductility indicators for the actual fastener. The lower the ratio of its specified minimum yield strength to its specified minimum tensile strength, the greater the fastener ductility. **F 1789, F16**

duct insulation supplementary materials, *n*—as related to fire testing, components, including tapes and sealants used for transverse joints as well as fitting covers that are intermittently spaced, as needed, within the duct insulation system, as well as adhesives

duct insulation supplementary materials, *n*

used to bond the insulation to the duct substrate and that do not cover the duct continuously for an extended length. **E 176, E05**

duct insulation system, *n*—*as related to fire testing*, system intended to insulate and cover, continuously for an extended length, the outside surface of a duct; the system shall have an insulation core, with or without a covering or vapor retarder facing which includes longitudinal closure systems (if used) and perhaps other duct insulation supplementary materials such as adhesives, fasteners, or tapes (if used). **E 176, E05**

duct lining, *n*—material such as an insulation, coating or film, including adhesive, used to line the inside surface of a duct. **E 176, E05**

dullness—a lack of normal pultruded surface gloss or shine.

NOTE—This condition can be caused by insufficient cure locally or in large areas, resulting in the dull band created on a pultruded part within the die when the pultrusion process is interrupted briefly (see **stop mark**). **D 3918, D20**

dull point—end of point rounded in contrast to being sharp. **F 547, F16**

dumbbell specimen (rubber), *n*—a flat specimen having a narrow straight central portion of essentially uniform cross section with enlarged ends. **D 1566, D11**

dumet, *n*—round, copper-coated 42 % nickel-iron wire intended primarily for sealing to soft glass. Also known as CuNiFe in some communities. **E 344, E20**

dummy—a mechanical device, operated by the blower's feet, for wetting, raising, opening and closing the paste mold in mouth-blowing glassware. **C 162, C14**

dummy microphone—a microphone substitute which has electrical characteristics identical to a functional microphone, but which has essentially no sensitivity to incident sound pressure. **C 634, E33**

dummy (or dummy cathode)—a cathode in a plating solution that is not to be made use of after plating. Often used for removal or decomposition of impurities. **B 374, B08**

dummy specimen, *n*—a noncombustible (as defined by 46 CFR 164.009) specimen used for standardizing the operating condition of the equipment, roughly 20 mm in thickness with a density of $750 \pm 100 \text{ kg/m}^3$. **E 176, E05**

dummy specimen, *n*—a noncombustible insulating board used for stabilizing the operating condition of the equipment, mounted in the apparatus in the position of the specimen and removed only when a test specimen is to be inserted. It shall be roughly $20 \pm 5 \text{ mm}$ in thickness with a density of $750 \pm 100 \text{ kg/m}^3$. **E 176, E05**

dummy specimen—Use **blank sample**. **E 631, E06**

dunes (stream)—bed forms of coarse sediment, generally transverse to the direction of flow, with a triangular profile having a gentle upstream slope. Dunes advance downstream by the movement of sediment along the upstream slope and by the deposition of sediment on the steep downstream slope. Dunes move downstream at low velocities compared to the stream flow velocity. **D 4410, D19**

dunnage—See **loading**. **D 996, D10**

dunnage—lumber or other material used to brace and secure cargo to prevent damage. **E 2135, E53**

dunting—the cracking that occurs in fired ceramic bodies as a result of thermally induced stresses. **C 242, C21**

duo-trio test, *n*—a method of discrimination testing comprised of two coded samples and one identified reference. One of the coded samples and the reference are identical. The assessor is asked to select which of the two coded samples is different from the reference or which of the two coded samples is the same as the reference. **E 253, E18**

duple nozzle—see **dual orifice nozzle**. **E 1620, E29**

duplex channel, *n*—a data transmission system capable of transmitting in both directions at once. **F 1457, F05**

duplex coating—See **composite plate**. **B 374, B08**

duplex copy—a sheet with copied images on both sides. **F 335, F05**

duplex dwelling—See **dwelling**. **E 631, E06**

duplex dwelling—one of a pair of **dwelling units**, generally joined by a common floor/ceiling. **E 631, E06**

duplex grain size—the simultaneous presence of two grain sizes, in substantial amounts, with one grain size appreciably larger than the other. (Synonymous with **mixed grain size**.) **E 7, E04**

duplex-head nail—See **double-headed nail**. **F 547, F16**

duplexing—*in a copy system*, the process by which images are placed on both sides of the copy sheet. **F 335, F05**

duplex microstructure—a two-phase structure. **E 7, E04**

duplex nozzle—a swirl chamber atomizer comprising a single discharge orifice and two sets of tangential slots, each with a separately controlled liquid supply. The smaller (primary) slots supply liquid at low flow rates, and both sets (primary and secondary) are utilized as flow increases. **E 1620, E29**

duplex wire, *n*—a matched pair of parallel, solid thermoelements, individually insulated (double wrap or braid) with insulating fibers and a fiber braid of the same material overall. **E 344, E20**

duplicate, *n*—*in experimenting or testing*, one of two or more runs with the same specified experimental or test conditions but with each experimental or test condition not being established independently of all previous runs. (Compare **replicate**.) **D 123, D13**

duplicate, *vt*—*in experimenting or testing*, to repeat a run so as to produce a duplicate. (Compare **replicate**.) **D 123, D13**

duplicate analysis—paired determinations on the same sample performed by one analyst at essentially the same time. **E 856, D34**

duplicate analysis, *n*—paired determinations on the same sample performed by one analyst at essentially the same time. **D 5681, D34**

duplicates—two independent determinations performed by one analyst at essentially the same time. **E 1547, E15**

duplicate sample, *n*—one of two (2) representative portions taken from the same sample or sample source. **D 1129, D19**

duplicate sample—a second portion of a homogenized sample carried through sample digestion. Analysis results for these samples are used to provide information on the precision of the homogenization process. **E 631, E06**

durability—the measure of the ability of dimension stone to endure and to maintain its essential and distinctive characteristics of strength, resistance to decay, and appearance. Durability is based on the length of time that a stone can maintain its innate characteristics in use. This time will vary depending on the environment, the use, and the finish of the stone in question (for example, outdoor versus indoor use). **C 119, C18**

durability—See **chemical durability**. **C 162, C14**

durability—*in building construction*, a general term for resistance to deleterious change of an installed sealant, coating or membrane. **C 717, C24**

durability, *n*—the property of an article of being resistant to physical or chemical damage, or both, under the usual conditions of service, and of being useful over extended periods of time and use. **C 1145, C28**

durability, *n*—the ability of a material to resist weathering action, chemical attack, abrasion, and other conditions of service. **C 1180, C12**

durability—a general term for permanence or resistance to deterioration. Frequently used to refer to the degree of resistance of a species of wood to attack by wood-destroying fungi under conditions that favor such attack. In this connection the term "decay resistance" is more specific. **D 9, D07**

durability, *n*—a relative term indicating degree of permanency. It may be applied to individual protective, decorative, or functional properties, for example, "the durability of gloss," but if used in a general way, for example, "the excellent durability of a paint," implies the ability of the described coating to retain, to the

indicated degree, all the properties required for the continued service of the coating. **D 16, D01**

durability, *n*—as related to adhesive joints, the endurance of joint strength relative to the required service conditions. **D 907, D14**

durability—(1) as applied to wood, its lasting qualities or permanence in service with particular reference to decay.
(2) as applied to the glue bond, its resistance to deterioration related to exposure conditions. (See also **delamination**.)
D 1038, D07

durability, *n*—of paper, the capacity of paper or paperboard to resist the effects of wear in performance situations. **D 1968, D06**

durability, *n*—for pile yarn floor coverings, a property of a pile yarn floor covering describing the ability to maintain specific physical properties or product integrity without deterioration after a significant amount of time or a significant extended stress. **D 5684, D13**

durability, *n*—the capability of a **building**, assembly, **component**, product, or construction to maintain **serviceability** over at least a specified time. **E 631, E06**

durability—the measure of the ability of a material or structure to endure and maintain its essential and distinctive characteristics of strength, resistance to decay, and appearance, with relation to a specific environment of use. **E 631, E06**

durability—See **building performance**. **E 631, E06**

durability—See **building performance**. **E 1480, E06**

durability—the quality of a component to perform as designed for its design life. **E 1705, E48**

durability—the measure of the ability of a material or structure to endure and maintain its essential and distinctive characteristics of strength, resistance to decay, and appearance, with relation to a specific environment of use. **E 1749, E06**

durability, *n*—the capability of a building assembly, component, product, or construction to maintain serviceability over not less than a specified time. **E 2110, E06**

durability, *n*—in weathering, a measure of the retention of original condition and function of a material after exposure to a specified set of conditions. **G 113, G03**

durability "D" cracking, *n*—closely spaced crescent-shaped hairline cracking pattern that initiates adjacent to joints, cracks, or free edges, first manifesting itself at the intersection of joints, cracks, or free edges; dark coloring of the cracking pattern and surrounding area often exists with "D" cracking. **E 867, E17**

durability "D" cracking, *n*—closely spaced crescent-shaped hairline cracking pattern that initiates adjacent to joints, cracks, or free edges, first manifesting itself at the intersection of joints, cracks or free edges; dark coloring of the cracking pattern and surrounding area often exists with "D" cracking. **E 1778, E17**

durability limit, *n*—see the preferred term, **service life**. **C 717, C24**

durable-press, *adj*—having the ability to retain substantially the initial shape, flat seams, pressed-in creases, and unwrinkled appearance during use and after laundering or drycleaning. (See **wash and wear**.) **D 123, D13**

durable-press, *adj*—having the ability to retain substantially the initial shape, flat seams, pressed-in creases, and unwrinkled appearance during use and after laundering or drycleaning. (See **wash and wear**.) **D 4850, D13**

duration of load—the duration of stress or the time during which a load acts on a member. In wood, a design consideration for modifying allowable stresses, based on the accumulated loadings anticipated in the life of a structure. **D 9, D07**

durometer—(1) an instrument for measuring the hardness of rubber-like materials. (2) a term used to identify the relative hardness of rubber-like materials, for example "low durometer" (relatively soft) or "high durometer" (relatively hard). **C 717, C24**

durometer, *n*—an instrument for measuring indentation hardness. **D 883, D20**

durometer, *n*—an instrument for measuring the indentation hardness of rubber. **D 1566, D11**

durometer—an instrument for measuring hardness, that is, the

resistance to the penetration (without puncturing) of the indenter into the surface of rubber or other shoe material. **F 869, F08**

durometer hardness—an arbitrary numerical value which measures the resistance to indentation of the blunt indenter point of the durometer. The value may be taken immediately or after a very short specified time. **F 869, F08**

dust, *n*—a general term, depending upon application, applied to solid particles predominantly larger than colloidal and capable of temporary suspension in air or other gases.

dust loading, *n*—an engineering term for **dust concentration**, usually applied to the contents of collection ducts and the emissions from stacks.

carpet-embedded dust, *n*—soil and other particulate matter, approximately 5- μ m equivalent aerodynamic diameter and larger, embedded in carpet pile and normally removable by household vacuum cleaners.

surface dust, *n*—soil and other particulate matter, approximately 5- μ m equivalent aerodynamic diameter and larger, adhering to floor surfaces and normally removable by household vacuum cleaners. **D 1356, D22**

dust—an imprecise term referring to particulates capable of temporary suspension in air or other gases; also, particles smaller than an arbitrarily selected size. **D 2652, D28**

dust binder, *n*—a light application of bituminous material for the express purpose of laying and bonding loose dust. **D 8, D04**

dust coat—a relatively thin, sprayed coating of slip. **C 286, B08**

dust concentration, *n*—the mass of dust divided by the internal volume of the test chamber. **E 1445, E27**

dustfall—See **particle fall** under **particle**. **D 1356, D22**

dusting—(1) In dry-process enameling, see **dredging**.
(2) A spraying defect characterized by a piling up of almost dry slip in confined areas.
(3) The removal of extraneous material from the bisque before firing.
(4) See **dry spray**. **C 286, B08**

dusting, *n*—the application of a powder to a rubber surface, generally to prevent adhesion to another surface. **D 1566, D11**

dusting—the developer/toner particles deposited in and around the machine on other than the electrostatic copy. **F 335, F05**

dust-lead hazard, *n*—surface dust in a building that contains, or is presumed to contain, a mass-per-area concentration of lead equal to or exceeding limits set in regulations promulgated by authorities having jurisdiction. **E 1605, E06**

dust loading—See **dust**. **D 1356, D22**

dust pressing, *n*—the process of forming ceramic bodies of 1.5 % or less water content by pressing in a mold. **C 1145, C28**

dust ruffle, *n*—a fabric which (1) lies flat over the box spring under the mattress on a bed, and (2) has a pleated, tucked, or gather drop to the floor. **D 123, D13**

dust ruffle, *n*—a fabric which (1) lies flat over the box spring under the mattress on a bed, and (2) has a pleated, tucked, or gathered drop to the floor. **D 7023, D13**

dust wipe sample—a settled dust sample collected on a moistened disposable towel. **E 631, E06**

dust-wipe sample—a sample of surface dust collected on a wipe. **E 1605, E06**

dutchman—a thin wedge of leather or fiberboard inserted between the insole and outsole of a shoe, or between the lifts of a built-up heel, to throw the foot inward or outward and to correct foot posture. **F 869, F08**

Dutch or Scotch method, *n*—in shingles, a method of application for roofing shingles which are rectangular in shape and lap at the top and one side to form either a square or rectangular pattern. **C 1154, C17**

Dutch or Scotch method—method of application for asbestos-cement roofing shingles which are rectangular in shape and lap at the top and one side to form either a square or rectangular pattern. **D 2946, C17**

duty cycle

duty cycle—the ratio of switch closed time to total cycle time.

F 2112, F01

dwarf width—a condition in which the crosswise (of the direction of pultrusion) dimension of a flat surface of the part is less than that the die normally would yield for a particular composite.

NOTE—This condition is usually caused by a partial blockage of the pultrusion die cavity caused by “build-up” or particles of the composite adhering to the cavity surface. This condition is commonly called a “lost edge” when the flat surface has a free edge that is altered by the build-up.

D 3918, D20

dwelling—structure or portion thereof used for residential habitation.
D 5681, D34

dwelling, n—a building designed or occupied as the living quarters for one or more families or households.
E 631, E06

dwelling, n (logement)—building designed or occupied as the living quarters for one or more families or households.
E 1480, E06

dwelling unit—a unit providing complete independent living facilities for one or more persons, including permanent provisions for living, sleeping, eating, cooking, and sanitation. (See also **house**.)
E 631, E06

dwelling unit—unit providing complete independent living facilities for one or more persons, including permanent provisions for living, sleeping, eating, cooking, and sanitation.
E 1605, E06

dwelling unit, n—a unit providing complete independent living facilities for one or more persons, including permanent provisions for living, sleeping, eating, cooking, and sanitation.
E 2151, E06

dwel mark—a fracture surface marking representing the site of a fracture discontinuity caused by a sudden shift in the stress distribution or by a fracture stopping for some length of time; also known as an arrest line.
C 162, C14

dwel time—the total time that the penetrant or emulsifier is in contact with the test surface, including the time required for application and the drain time.
E 1316, E07

dwel time, n—the duration of time beginning at the instant a tribometer’s test foot is placed upon the surface to be tested, and ending at the instant a shear force is applied to the sensor.
F 1646, F13

dye, n—a colorant added to an engine coolant to give it a distinctive color.
D 4725, D15

dye sensitizing—the incorporation of dye-stuffs into a photoconductive coating to alter its spectral response.
F 335, F05

dye spot—See **dyestain**.
D 3990, D13

dyestain, n—an area of discoloration due to uneven absorption of a colorant.
D 123, D13

dyestain, n—an area of unintended discoloration due to uneven absorption of a colorant.
D 3990, D13

dye streak, n—an unintended stripe in a fabric due to uneven absorption of a colorant.
D 123, D13

dye streak, n—an unintended irregular stripe in a fabric due to uneven absorption of a colorant.
D 3990, D13

dye sublimation, n—an imaging process from thermal dye ribbons, which employ selected organic dyes, and have characteristics different from an imaging process using pigmented materials employed in thermal transfer wax ribbons.
F 1623, F05

dye tracer—*in grouting*, an additive whose primary purpose is to change the color of the grout or water.
D 653, D18

dynamic—exhibiting change or movement.
C 717, C24

dynamic, adj—*in testing*, descriptive of a force or deflection function characterized by an oscillatory or transient condition, as contrasted to a static test.
D 1566, D11

dynamic, adj—*as a modifier of stiffness or modulus*, descriptive of the property measured in a test employing an oscillatory force or motion, usually sinusoidal.
D 1566, D11

dynamic, adj—*in petroleum products*—the condition where the vapor above the test specimen and the test specimen are not in temperature equilibrium at the time that the ignition source is applied.
D 4175, D02

dynamic adsorptive capacity—the quantity of a given component adsorbed per unit of adsorbent from a fluid, or fluid mixture moving through a fixed bed at the breakpoint for that component.
D 2652, D28

dynamic air permeability (DAP), n—*for inflatable restraints*, the dynamic air permeability measured at a single specified pressure differential.
D 6799, D13

dynamical theory—the explanation of diffraction phenomena in terms of dynamical interaction between the incident beam, all scattered waves and the crystal lattice, where the latter is treated as a triply periodic field of potential.
E 7, E04

dynamic coefficient of friction—the ratio of the parallel component of force applied to a moving body that maintains constant relative motion of two surfaces in physical contact one with another, but otherwise unconstrained, to the normal component of the force—usually the force caused by gravity—applied to the body under clean, dry conditions.
C 242, C21

dynamic coefficient of friction (DCOF), n—a coefficient of friction, μ_d , obtained during relative translation between two contacting solid bodies; used interchangeably with *kinetic coefficient of friction*.
F 1646, F13

dynamic fuel level, n—*for knock testing*, test procedure in which the fuel-air ratio for maximum knock intensity for sample and reference fuels is determined using the falling level technique that changes carburetor fuel level from a high or rich mixture condition to a low or lean mixture condition, at a constant rate, causing knock intensity to rise to a maximum and then decrease, thus permitting observation of the maximum knockmeter reading.
D 4175, D02

dynamic hold-up, n—*in column distillation*, the quantity of liquid held up in the column under normal operating conditions.
D 4175, D02

dynamic hold-up, n—the quantity of liquid held up in the column under normal operating conditions.
D 4175, D02

dynamic hydroplaning, n—hydroplaning of pneumatic tires with separation caused by a thick fluid film due principally to the generation of fluid inertial forces.
E 867, E17

dynamic intermediate precision—the precision of the measurement of a characteristic determined under dynamic intermediate precision conditions in which the same equipment moving at operating speed measures the characteristic at the same location repeatedly.
E 867, E17

dynamic leakage measurement—leakage determined by measuring the tracer gas equilibrium partial pressure while the system is actively being pumped.
E 1316, E07

dynamic leak test—a form of leak test in which some of the tracer gas entering through a leak is continually removed for sensing purposes.
E 1316, E07

dynamic load—See **load**.
D 996, D10

dynamic mechanical analysis (DMA), n—a technique in which the storage modulus (elastic response) and loss modulus (viscous response) of a substance under oscillatory load is measured as a function of temperature, time, or frequency of oscillation, while the substance is subjected to a controlled-temperature program in a specified atmosphere. (ICTAC)
E 473, E37

dynamic mechanical measurement—a technique in which either the modulus or damping, or both, of a substance under oscillatory load or displacement is measured as a function of temperature, frequency, or time, or combination thereof.
D 4092, D20

dynamic membrane formation—process in which an active layer is formed on the membrane surface by the deposition of substances contained in the fluid being treated.
D 6161, D19

dynamic modulus—see **complex modulus**.
D 4092, D20

dynamic modulus—see **complex modulus**.
E 1142, E37

dynamic modulus of elasticity—the ratio of stress to strain for a material under dynamic loading conditions.
D 7099, D18

dynamic Poisson’s ratio—the absolute value of the ratio between the linear strain changes, perpendicular to and in the directions of a

given uniaxial stress change, respectively, under dynamic loading conditions. **D 7099**, D18

dynamic random access memory, *n*—RAM that cannot be retained without continuous or regular stimulation. (See **DRAM**.) **F 1457**, F05

dynamic range—the difference, in decibels, between the overload level and the minimum signal level (usually fixed by one or more of the noise levels, low-level distortion, interference, or resolution level) in a system or sensor. **E 1316**, E07

dynamic range—a measure of the capability of a test system to accept input signals of varying magnitudes, given by the ratio of the maximum to minimum input signals which at constant gain will produce distortion-free outputs having discernible changes with incremental variations in input.

NOTE—Dynamic range may be stated as the numerical value of the ratio; however, this is usually expressed in decibels.

NOTE—When the output indications can be related to the size of recognized targets, such as flat-bottomed holes, dynamic range is sometimes expressed in terms of the maximum and minimum hole sizes that can be displayed. **E 1316**, E07

dynamic range (for radiology)—the span of signal intensity which defines the system's range of performance. **E 1316**, E07

dynamic rope (rope systems), *n*—a class of ropes that is used for rescue work and rappelling when greater energy absorption qualities are required, such as in lead climbing or whenever a high fall potential exists. Such ropes are typically certified to UIAA or CE climbing rope standards. **F 1490**, F32

dynamic sensitivity of leak detector—the minimum leak rate that the detector is capable of detecting while the enclosure under test is actively being evacuated continuously under specified conditions. **E 1316**, E07

dynamic tear (DT) energy [J]—the total energy required to fracture standard DT specimens tested in accordance with the provisions of Test Method E 604. **E 1823**, E08

dynamic thermal response curve, *n*—graphical representation of the response characteristic of a thermal printing system over a given range of print energies; the y-axis is optical density and the x-axis

is print energy (watts/dot or millijoules) or energy density (millijoules/square millimetres). **F 1623**, F05

dynamic vehicle tire force [lb(kg)], *n*—the component of time-varying force applied perpendicularly to the road surface by the tire of a moving vehicle. **E 867**, E17

dynamic vulcanizate, *n*—See **thermoplastic vulcanizate**, the preferred term. **D 1566**, D11

dynamic vulcanization, *n*—the process of intimate melt mixing a thermoplastic polymer and a suitable reactive rubbery polymer to generate a thermoplastic elastomer with a chemically cross-linked rubbery phase resulting in properties close to those of a thermoset rubber when compared to the same cross-linked composition. **D 1566**, D11

dynamography—the instrumentation method for recording forces. **F 869**, F08

dynamometer—an elastic calibration device used to verify the indicated forces applied by a fatigue testing system. It shall consist of an instrumented member having mass, stiffness, and end displacements such that the inertial effects of the specimen and its attachments to the testing machine for which the verification of forces is desired are duplicated within 5 %. The instrumentation shall permit an accurate determination of the magnitude of the average strain in a region of the uniform transverse cross section when the dynamometer is subjected to a tensile or compressive force along its longitudinal axis, within 1 % of the true strains. A strain gaged specimen is often used as a dynamometer. **E 1823**, E08

dynamometer dynamic forces [F]—the maximum and minimum forces (or the mean force and the force amplitude) that correspond to the readings obtained from the dynamometer output according to an existing static calibration. Such forces are considered true specimen dynamic forces for the purpose of this terminology. **E 1823**, E08

dynamometer range [F]—the range of forces for which the dynamometer may be used for verification purposes. A dynamometer for use in tension and in compression will have two dynamometer ranges, one in tension and one in compression. **E 1823**, E08

dystetic equilibrium—synonymous with **eutectoid equilibrium**. **E 7**, E04

E

E—modulus of elasticity of flange or web material, depending upon which material is held constant in a transformed section analysis, psi (or MPa) **E 631, E06**

EAN International, *n*—abbreviation for the (European) International Article Numbering Association. **F 1294, F05**

EAN symbology, *n*—symbologies specified by the International Article Numbering Association, EAN International. **F 1294, F05**

ear canal temperature, t_{ec} , *n*—displayed unadjusted temperature measured from the *field of view* of an *IR thermometer* whose *probe* is placed into the auditory canal of a *subject* according to the manufacturer's recommendations. **E 344, E20**

early action, *n*—any remedial plan initiated in advance of a complete or final characterization of a contaminated site. **D 5681, D34**

early stiffening, *n*—rapid loss of plasticity or rapid development of rigidity in freshly mixed hydraulic cement paste, mortar, or concrete.

false set, *n*—with little evolution of heat, which can be dispelled by further mixing without the addition of water.

flash set, *n*—with evolution of considerable heat, which cannot be dispelled by further mixing without the addition of water. **C 219, C01**

earlywood—the less dense, large-celled, part of the growth layer formed first during the annual growth cycle. A synonym is *springwood*. **D 9, D07**

earth—see **soil**. **D 653, D18**

earthenware—a glazed or unglazed nonvitreous ceramic whiteware. **C 242, C21**

earth hummock—a hummock having a core of silty and clayey mineral soil which may show evidence of cryoturbation. **D 7099, D18**

earth material—soil, bedrock, or fill. **D 653, D18**

earth pressure—the pressure or force exerted by soil on any boundary.

Pressure Force	Symbol p P	Unit FL ⁻² F or FL ⁻¹
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active earth pressure, P_A , p_A —the minimum value of earth pressure. This condition exists when a soil mass is permitted to yield sufficiently to cause its internal shearing resistance along a potential failure surface to be completely mobilized.

earth pressure at rest, P_o , p_o —the value of the earth pressure when the soil mass is in its natural state without having been permitted to yield or without having been compressed.

passive earth pressure, P_p , p_p —the maximum value of earth pressure. This condition exists when a soil mass is compressed sufficiently to cause its internal shearing resistance along a potential failure surface to be completely mobilized. **D 653, D18**

ease, *n*—in *garment construction*, the difference between garment measurement and body measurement. **F 1494, F23**

easement, *n*—the curved portion of a rail and handrail forming a transition in the vertical plane between the horizontal and inclined sections of a handrail. **E 631, E06**

easement—See **railing systems**. **E 631, E06**

easement, *n*—the curved portion of a rail and handrail forming a transition in the vertical plane between the horizontal and inclined sections of a handrail. **E 1481, E06**

ease of use—cumulative effect of drag encountered in application or removal, or both, and the amount of time required to achieve the desired finish. **D 2825, D21**

easily oxidized coals, *n*—low rank coals such as subbituminous or lignitic coals. **D 121, D05**

EBCDIC—extended binary code decimal interchange code. **F 1457, F05**

Eberbach—See **micro penetration tester**. **E 7, E04**

EBL—elevated blood level. **E 631, E06**

EBL—See elevated blood lead level. **E 1605, E06**

ebonite, *n*—a hard material made by sulfur vulcanization of rubber, in which the hardness is substantially obtained by the action of the sulfur. **D 1566, D11**

EC₅₀—the concentration of the test candidate in this procedure (volume percent or mg/L) that results in a reduction of respiration rate to 50 % of that observed for the control. **D 5681, D34**

EC50—a statistically or graphically estimated concentration that is expected to cause one or more specified effects in 50 % of a group of organisms under specified conditions. **E 943, E47**

ECA—an abbreviation for *environmentally controlled area*; an area whose temperature and humidity is controlled within specified limits; the presence of grease, dirt, chemical contaminants, etc., are excluded. **E 631, E06**

ECA—an abbreviation for *environmentally controlled area*; an area whose temperature and humidity is controlled within specified limits; the presence of grease, dirt, chemical contaminants, etc., are excluded. **E 1749, E06**

echo—indication of reflected energy. **E 1316, E07**

echo dynamic—amplitude versus time of arrival relationship of ultrasonic signals relative to probe position. **E 1316, E07**

E. coli—one of the members of the coliform bacterium associated with animal and human waste. **D 6161, D19**

ecological impact, *n*—the effect that an activity has on living organisms, their non-living (abiotic) environment, and the ecosystem. **E 2114, E06**

ecological indicator, *n*—a characteristic of an ecosystem that is related to, or derived from, a measure of biotic or abiotic variable, that can provide quantitative information on ecological structure and function. An indicator can contribute to a measure of integrity and sustainability. **E 2114, E06**

economic evaluation methods—a set of economic analysis techniques that consider all relevant costs associated with a project investment during its study period, comprising such techniques as life-cycle cost, benefit-to-cost ratio, savings-to-investment ratio, internal rate of return, and net savings. **E 631, E06**

economic evaluation methods, *n*—a set of economic analysis techniques that consider all relevant costs associated with a project investment during its study period, comprising such techniques as life-cycle cost, benefit-to-cost ratio, savings-to-investment ratio, internal rate of return, and net savings. **E 833, E06**

economic life—that period of time over which an investment is considered to be the least-cost alternative for meeting a particular objective. **E 631, E06**

economic life, *n*—that period of time over which an investment is considered to be the least-cost alternative for meeting a particular objective. **E 833, E06**

ecosystem, *n*—a community of biological organisms and their physical environment, functioning together as an interdependent unit within a defined area. **E 2114, E06**

ecosystem—organisms and the surrounding environment combined in a community that is self-supporting. **F 1600, F20**

ecotoxicity, *n*—the propensity of a material to produce adverse behavioral, biochemical, or physiological effects in non-human organisms or populations. **D 4175, D02**

ecotoxicity, *n*—the propensity of a test material to produce adverse behavioral, biochemical, or physiological effects in non-human organisms or populations. **D 6384, D02**

ED50—a statistically or graphically estimated dose that is expected to cause one or more specified effects in 50 % of a group of organisms under specified conditions. **E 943, E47**

eddy current—an electric current developed in a material as a result of induced voltages developed in the material. **A 340, A06**

eddy current—an electrical current caused to flow in a conductor by the time or space variation, or both, of an applied magnetic field. **E 1316, E07**

eddy current testing—a nondestructive testing method in which eddy current flow is induced in the test object. Changes in the flow caused by variations in the specimen are reflected into a nearby coil, coils, or Hall effect device for subsequent analysis by suitable instrumentation and techniques. **E 1316, E07**

edge—a sharp, narrow, steel surface that is attached throughout the length of the sidecut on the bottom edge of the snowboard. **F 1107, F27**

edge angle—the included angle between two opposite edges of a hardness indenter. **E 7, E04**

edge clearance—the distance between the bottom of a channel of a lock-strip gasket and the edge of material installed in the channel. **C 717, C24**

edge close-outs, n—members placed around the panel sides to protect the sandwich from damage or to attach the panel to a support or another panel. **C 274, D30**

edge closures—structural members framing the periphery of a sandwich panel providing support and a means of attachment to the panel as well as an environmental seal. **E 631, E06**

edge closures—structural members framing the periphery of a sandwich panel providing support and a means of attachment to the panel as well as an environmental seal. **E 1749, E06**

edgecombing, n—for inflatable restraints, the separation of yarns from their normal orthogonal configuration in a woven fabric due to seam stress or similar action near the edge of a cut part. **D 6799, D13**

edge contrast, EC, n—the difference between the space reflectance (R_s) and the adjoining bar reflectance (R_b) as calculated by the equation: $EC = R_s - R_b$. **F 1294, F05**

edge cracking, n—crescent-shaped cracks or fairly continuous cracks that are located within 0.6 m (2 ft) of the pavement edge. **E 867, E17**

edge cracking, n—crescent-shaped cracks or fairly continuous cracks that are located within 0.6 m (2 ft) of the pavement edge. **E 1778, E17**

edge distance—perpendicular distance from the centerline of the anchor to the edge of the structural member in which anchor is installed. **E 2265, E06**

edge distance [L], n—the distance from the edge of a bearing specimen to the center of the hole in the direction of applied force. **E 6, E28**

edge distance ratio, n—the ratio of the edge distance to the pin diameter. **E 6, E28**

edge effect—in electromagnetic testing, the disturbance of the magnetic field and eddy-currents due to the proximity of an abrupt change in specimen geometry (edge). This effect generally results in the masking of discontinuities within the affected region. (This effect is also termed the **end effect**.) **E 1316, E07**

edge effect—an image defect characterized by a low density or poor fill-in of solid areas coupled with a higher density outline. **F 335, F05**

edge irregularity—a variation in the stroke width of a printed character. **F 149, F05**

edge joint—see **joint**. **D 907, D14**

edge (of gypsum board), n—the paper-bound edge as manufactured. **C 11, C11**

edge protector—See **loading**. **D 996, D10**

edge spacer, n—in building construction in glazing, a spacer placed to prevent edge contact and to position laterally a pane of glass or a panel within the supporting frame. **C 717, C24**

edge-stitched seam-finish, n—a finish for the raw edges of a plain seam, in which machine stitching is placed close to the raw edge of each seam allowance. (Compare **zigzaggedseam-finish**.) **D 123, D13**

edge-stitched seam finish, n—in home sewing, a seam finish in

which machine stitching is placed close to the cut edge of each seam allowance. (Compare **zigzagged seam finish**.) **D 4965, D13**

edge stripping—application of felt strips cut to narrower widths than the normal felt-roll width to cover a joint between flashing and built-up roofing. **D 1079, D08**

edge-to-edge symbologies, n—a bar code scheme that can be decoded using edge-to-similar-edge measurements, such as from the start of one bar to the start of another or from the end of one bar to the end of another. Examples are Code 93, Code 128, Code 49 and Code 16K. **F 1294, F05**

edge-tracking, n—a residual, discernible pattern in a roller-applied coating, characterized by trails from either or both ends of the roller. **D 16, D01**

edge trim, n—an accessory to cover exposed ends or edges of gypsum board. **C 11, C11**

edge venting—the practice of providing regularly spaced protected openings at a roof perimeter to relieve water vapor pressure in the insulation. **D 1079, D08**

edgewise compressive strength—a term describing the load carrying capacity of flat sandwich constructions when a compressive load is applied uniformly to each facing, usually defined in terms of developed facing stresses as compared to the yield stress of the facings (see Test Method C 364). **E 631, E06**

edgewise compressive strength—a term describing the load carrying capacity of flat sandwich constructions when a compressive load is applied uniformly to each facing, usually defined in terms of developed facing stresses as compared to the yield stress of the facings (see Test Method C 364). **E 1749, E06**

edging—grinding the edge of flat glass to a desired shape or size. See also **centering**. **C 162, C14**

edging—(1) the process of removing bisque from the edge of a piece of ware to expose the underlying porcelain enamel.
(2) The spraying of special slip onto the edge of the ware. **C 286, B08**

edging brush—a stiff-bristled brush with metal guide, used to remove bisque from edges of ware before the firing operation. **C 286, B08**

EDTA—a term used to designate the compound ethylene diamine tetraacetic acid having the structural formula:

$$\begin{array}{ccccccc} \text{HOOC—CH}_2 & & & & & & \text{CH}_2\text{COOH} \\ & & \vee & & / & & \\ & & & \text{NC}_2\text{H}_4\text{N} & & & \\ & & / & & \vee & & \\ \text{HOOC—CH}_2 & & & & & & \text{CH}_2\text{COOH} \end{array}$$

or any of its salts that may be specified, used as a sequestering agent. **D 459, D12**

effect diameter (effective size), D_{10}, D_e (L)—particle diameter corresponding to 10 % finer on the grain-size curve. **D 653, D18**

effective attenuation length—the average emission function decay length when the emission depth distribution function is sufficiently close to exponential for a given application. **E 673, E42**

effective cadmium cut-off energy (E_c)—the energy at which a specified cadmium container performs like a theoretically perfect filter and, therefore, has the following properties:
(1) for all energies below E_c , no neutron reactions occur, and
(2) for all energies above E_c , neutron reactions occur at the same rate as if the cadmium were not present. **E 170, E10**

effective carriage mass, n—in CRL-type tensile testing machine, the force actually applied to a specimen by the mass of the carriage, plus any added masses. **D 123, D13**

effective carriage mass, n—in CRL-type tensile testing machine, the force actually applied to a specimen by the mass of the carriage, plus any added masses. **D 4849, D13**

effective case depth—perpendicular distance from the surface of a hardened case to the furthest point where a specified level of hardness is maintained. **F 1789, F16**

effective circuit permeability, μ_{eff} —when a magnetic circuit consists of two or more components, each individually homogeneous

effective circuit permeability, μ_{eff}

throughout but having different permeability values, the effective (overall) permeability of the circuit is that value computed in terms of the total magnetomotive force, the total resulting flux, and the geometry of the circuit. **A 340, A06**

effective coefficient of permeability—the coefficient of permeability that characterizes a fill and is the result of combined materials characteristics and construction techniques including compaction, capping, placement of impermeable layers, etc. **D 5681, D34**

effective crack size, a_e [L]—the physical crack size augmented to account for crack-tip plastic deformation. **E 1823, E08**

effective depth penetration (EDP)—in electromagnetic testing, for (a) thickness, the minimum depth beyond which a test system can no longer reliably detect a further increase in specimen thickness, or (b) defects, the limit for reliably detecting metallurgical or mechanical discontinuities by way of conventional continuous wave (CW) eddy current instrumentation and sensors. The EDP point is approximately three times the standard depth of penetration. **E 1316, E07**

effective drainage porosity—see **effective porosity**. **D 653, D18**

effective embedment depth—the overall depth through which the anchor transfers force to or from the surrounding base material, measured from the surface: for adhesive-bonded anchors measured to the deepest point of the anchor; for cast-in-place anchors measured to the upper surface of the direct bearing element; for undercut and sleeve anchors measured to the bottom of the expansion mechanism; for expansion anchors measured to the farthest point of contact between the expansion mechanism and surrounding material. **E 2265, E06**

effective fiber length, n —in *vibroscope test for linear density*, that portion of the fiber free to vibrate between fixed supports or holders. **D 123, D13**

effective fiber length, n —in *vibroscope test for linear density*, that portion of the fiber free to vibrate between fixed supports or holders. **D 4849, D13**

effective force, \bar{F} (F)—the force transmitted through a soil or rock mass by intergranular pressures. **D 653, D18**

effective gage length, n —in *tensile testing*, the estimated length of the specimen subjected to a strain equal to that observed for the true gage length. **D 123, D13**

effective gage length, n —in *tensile testing*, the estimated length of the specimen subjected to a strain equal to that observed for the true gage length. **D 4849, D13**

effective heat of combustion, n —the amount of heat generated per unit mass lost by a material, product or assembly, when exposed to specific fire test conditions (contrast **gross heat of combustion**). **E 176, E05**

effective heat of combustion, n —the measured heat release divided by the mass loss for a specified time period. **E 176, E05**

effective heat of combustion, n —the total measured heat released divided by the mass loss for a specified time period. **E 176, E05**

effective heat of combustion, EHC, (kJ/kg), n —the energy generated by chemical reactions per unit mass of fuel vaporized. **E 176, E05**

effective insulation ratio, n —in *thermal transmittance of textile only*, the increase in insulation afforded by the fabric in comparison to the uncovered test plate under specified conditions of test. **D 123, D13**

effectiveness—extent to which actual performance compares with targeted performance. For example, if a company has established a target sales plan of 10 000 units at the beginning of the year and the company's salespeople sell only 8000 units during the year, the salespeople are appropriately considered "ineffective," as opposed to "inefficient." **E 2135, E53**

effective pathlength (or effective thickness), d_e —in *internal reflection spectroscopy*, the analog of the sample thickness in transmission spectroscopy that represents the distance of propagation of the evanescent wave within an absorbing sample in IRS. It is defined from the relationship: $R = 1 - \alpha d_e$, and is related to the absorption parameter by: $a = \alpha d_e$. **E 131, E13**

effective permeability—a hypothetical quantity that describes the magnetic permeability that is experienced under a given set of physical conditions such as a cylindrical test specimen in an encircling coil at a specific test frequency. This quantity may be different from the permeability of the particular metal being tested in that it takes into account such things as the geometry of the part, the relative position of the encircling coil, and characteristics of the magnetic field. **E 1316, E07**

effective porosity (effective drainage porosity), n_e (D)—the ratio of: (1) the volume of the voids of a soil or rock mass that can be drained by gravity, to (2) the total volume of the mass. **D 653, D18**

effective pressure—see **stress**. **D 653, D18**

effective rolling radius, n —the ratio of the linear velocity of the wheel center of the free rolling tire in the X' direction to the spin velocity. **F 538, F09**

effective size—see **effective diameter**. **D 653, D18**

effective size—the particle size, in SI units, which corresponds to 10 percent finer on the cumulative particle size distribution curve. **D 2652, D28**

effective stress—see **stress**. **D 653, D18**

effective thermal property, n —thermal properties derived from heat-conduction theory applied to ignition/flame-spread data treating the material as homogenous in structure. **E 176, E05**

effective thickness B_e [L]—for compliance-based extension measurements:

$$B_e = B - (B - B_N)^2/B$$

E 1823, E08

effective unit weight—see **unit weight**. **D 653, D18**

effective unloading slope ratio, r —the ratio of an effective unloading slope to that of the initial elastic loading slope on a test record of force versus specimen mouth opening displacement. **E 1823, E08**

effective velocity, n —velocity calculated on the basis of arrival times and propagation distances determined by artificial AE generation; used for computed location. **E 1316, E07**

effective yield strength, σ_Y [FL⁻²]—an assumed value of uniaxial yield strength, that represents the influences of plastic yielding upon fracture test parameters. **E 1823, E08**

effect load XX (ELXX), n —a statistically or graphically estimated loading rate of test material that is expected to cause one or more specified effects in XX % of a group of organisms under specified conditions for a specified time. **D 4175, D02**

effect load XX (ELXX), n —a statistically or graphically estimated loading rate of test material that is expected to cause one or more specified effects in XX % of a representative subpopulation of organisms under specified conditions. **D 4175, D02**

effect load XX (ELXX), n —a statistically or graphically estimated loading rate of test material that is expected to cause one or more specified effects in XX % of a representative subpopulation of organisms under specified conditions. **D 6384, D02**

effervescent atomizer—an internal mixing pneumatic atomizer in which gas bubbles are dispersed in the liquid stream. **E 1620, E29**

efficiency, n —a measure of the performance of a collector.

collection efficiency, n —the percentage of a specified substance retained by a gas cleaning or sampling device.

fractional efficiency, n —the mean collection efficiency for specific size fractions of a contaminant. **D 1356, D22**

efficiency—see **total efficiency and full-energy peak efficiency**. **E 170, E10**

efficiency, n —of a photovoltaic device, the ratio of the power produced by a photovoltaic device operated at its maximum power point to the incident radiant power. **E 1328, E44**

efficiency—cost of inputs for each unit of output produced. For example, the assembly department spent 2320 hours of direct labor in order to produce 2000 actual units of output, while the budget allows only 2000 direct labor-hours for that level of output. The department was clearly inefficient (or wasteful) in the use of labor since it spent 320 hours more than allowed. **E 2135, E53**

efficiency, collector—of a solar thermal collector, the ratio of the amount of energy removed by the heat transfer fluid to the solar energy incident on the collector.

NOTE—For flat-plate collectors, the value of the incident solar energy used is usually based on gross collector area; for concentrating collectors the value is usually based on the aperture area. E 772, E44

efficiency, instantaneous collector—ratio of the amount of energy removed by the heat transfer fluid of a solar collector over a specified time period (usually 5 or 15 min) to the solar energy incident on the collector area in the same period, under steady-state or quasi-steady state.

NOTE—For flat plate collectors, the area used is usually the gross collector area; for concentrating collectors the area used is usually the gross aperture area. E 772, E44

efficiency, period system—ratio of the useful energy supplied by the solar energy system over a period of time to the solar energy incident on the collector area of the system in the same period.

NOTE—The period considered has to be of a suitable length for the type of system. For example, it would not be useful to define the efficiency of a solar space heating system over a month in the summer.

NOTE—For flat-plate collector systems, the value of incident solar energy used is usually based on the gross collector area; for concentrating collector systems, the value is usually based on the aperture area. E 772, E44

efficiency variance—difference between inputs (materials and labor) that were actually used (that is, actual quantity of inputs used) and inputs that should have been used (that is, standard quantity of inputs allowed for actual production), multiplied by the standard price per unit. Efficiency (quantity, usage) variance = (actual quantity - standard quantity) × standard price per unit of input. The efficiency variance is unfavorable if the actual quantity exceeds the standard quantity; it is favorable if the actual quantity is less than the standard. E 2135, E53

efficient vulcanizing (EV) systems, *n*—as applied to natural rubber and isoprene- and butadiene-based synthetic rubbers, a vulcanizing system making efficient use of sulfur and producing at optimum cure a network containing a preponderance of thermally stable monosulfidic crosslinks. D 1566, D11

efflorescence, *n*—crystalline deposit, usually white, of water-soluble compounds on the surface of masonry. C 1232, C15

efflorescence, *n*—a condition that occurs when soluble salts in a dry coating or the substrate migrate to the surface due to the movement of water through the film; characterized by a (commonly) white, nonuniform powder or crystalline incrustation, not removable with neutral water but usually removed with dilute mineral acid. D 16, D01

efflorescence, *n*—a powdery (usually white) exudation on the surface of a specimen caused by precipitation or crystallization of soluble material that has migrated to the surface. E 284, E12

efflorescence (bloom), *n*—a white powdery substance occurring on the surface of products and caused by the migration of soluble salts, followed by precipitation of calcium hydroxide at the surface followed by an atmospheric carbonation. C 1154, C17

efflorescence (bloom)—white powdery substance occurring on the surface of asbestos-cement products, caused by the migration of soluble salts to the surface, followed by precipitation and atmospheric carbonation of calcium hydroxide. D 2946, C17

effluent—exit stream from a unit/vessel. D 6161, D19

effluent—the liquid discharge from a process. F 1600, F20

efflux time—time required for all grout to flow from a flow cone. D 653, D18

1/E fluence—that fluence in the portion of the neutron spectrum produced by moderating media for which the fluence per unit energy, ideally, is inversely proportional to the neutron energy. E 170, E10

egg-case nail—coated, regular-stock-steel, 1 1/8 by 0.072-in. nail with flat 7/32-in. head and sharp medium diamond point. F 547, F16

eggshell, *adj*—semimatte, having a texture resembling that of the outer surface of the shell of a chicken egg. E 284, E12

eggshelling—the texture of a fired glaze similar in appearance to the surface of an eggshell. C 242, C21

eggshell or eggshelling—the texture of a fired ceramic coating similar in appearance to the surface of an eggshell. In porcelain enamel, usually a defect. C 286, B08

E-glass, *n*—a family of calcia-alumina-silicate glasses that are used for general purposes and most electrical applications. E 344, E20

EIFS, *n*—See **exterior insulation and finish system**. E 631, E06

EIFS back-wrapping—process of enclosing exposed edges of thermal insulation board by applying the reinforced base coat around the edges and onto the backside of the insulation or onto the substrate. E 631, E06

EIFS base-coat adhesive—semi-liquid adhesive material providing a matrix within which reinforcing mesh is embedded as a base coat. E 631, E06

EIFS-clad barrier wall assembly, *n*—a wall assembly for which the EIFS cladding provides weather resistance for the EIFS clad portion of the assembly. E 2110, E06

EIFS-clad drainage wall assembly, *n*—a wall assembly incorporating a means of drainage between the EIFS and a weather resistive barrier, for incidental moisture resulting from a breach in the EIFS, to the exterior of the EIFS clad portion of the assembly. E 2110, E06

EIFS insulation board—rigid thermal insulation, interposed between lamina and substrate, providing thermal resistance to the wall assembly. See also **expanded polystyrene thermal insulation board**. E 631, E06

EIFS mechanical fastener, *n*—special mechanical device providing structural connection of the EIFS system, including the insulation board, to the wall structure. E 631, E06

EIFS reinforcement—mesh or other fibrous component of the EIFS base coat included to provide increased toughness and resistance to mechanical impact and cracking. E 631, E06

EIFS reinforcing mesh, *n*—woven or non-woven mesh fabric used as a reinforcement in the EIFS base coat. E 631, E06

EIFS substrate—surface or structure of a wall to which EIFS is adhesively or mechanically attached. E 631, E06

eight-harness satin, *n*—a warp-faced or filling-faced weave illustrating that the entire face of the fabric surface is covered with warp or filling yarn, respectively. D 123, D13

eight-harness satin, *n*—a warp-faced or filling-faced weave illustrating that the entire face of the fabric surface is covered with warp or filling yarn, respectively. D 7018, D13

ejection crack, *n*—in a rigid die system, a defect that occurs during the removal of the compact from the tooling (usually occurs in multilevel parts that are not supported uniformly on all lower surfaces). B 243, B09

ejector, *n*—a device that uses a fluid under pressure, such as steam, air, or water, to move another fluid by developing suction through differential pressure. D 1356, D22

ejector air—air used to convey powder from pump to the part being coated. C 286, B08

elastic, *adj*—of or pertaining to elasticity. D 1566, D11

elastic, *adj*—as a modifier of dynamic force, descriptive of that component of complex force in phase with dynamic deflection, that does not convert mechanical energy to heat, and that can return energy to an oscillating mass-spring system; denoted by the single prime (') as a superscript symbol, as F'. D 1566, D11

elastic electron scatter—the scatter of electrons by an object without loss of energy, usually an interaction between electrons and atoms. E 7, E04

elastic fabric, *n*—a fabric made from an elastomer either alone or in combination with other textiles. (See also **elastomeric yarn**.) D 123, D13

elastic fabric, *n*—a fabric made from an elastomer either alone or in combination with other textiles. D 4850, D13

elasticity, *n*

elasticity, *n*—that property of a material by virtue of which it tends to recover its original size and shape immediately after removal of the force causing deformation. **D 123, D13**

elasticity—property of material that returns to its original form or condition after the applied force is removed. (ISRM) **D 653, D18**

elasticity, *n*—The rapid recovery of a material to its approximate initial shape and dimensions after substantial deformation by force and subsequent release of that force. **D 1566, D11**

elasticity—that property of materials that causes them to return to their original form or condition after the applied force is removed. **D 4092, D20**

elasticity, *n*—that property of a material by virtue of which it tends to recover its original size and shape immediately after removal of the force causing deformation. **D 4848, D13**

elasticity—that property of materials that causes them to return to their original form or condition after the applied force is removed, (D 4092, D20). **E 1142, E37**

elasticity—the capacity of the instrument to undergo induced stress without permanent distortion or breakage of any component. **F 921, F04**

elastic limit, *n*—the greatest stress that a material is capable of sustaining without permanent strain remaining upon complete release of the stress. **C 1145, C28**

elastic limit, *n*—the greatest stress that can be applied to a material without permanent deformation (Compare **yield point**) **D 123, D13**

elastic limit—point on stress strain curve at which transition from elastic to inelastic behavior takes place. (ISRM) **D 653, D18**

elastic limit, *n*—the greatest stress that a material is capable of sustaining, without any permanent strain remaining, upon complete release of the stress. **D 1566, D11**

elastic limit, *n*—*of paper and paperboard*, the value of paper or paperboard tensile force above which the ratio of the rate of change in the tensile force to the rate of change in length is no longer constant. See **elongation** and **tensile strength**. **D 1968, D06**

elastic limit, *n*—*in mechanics*, the stress intensity at which stress and deformation of a material subjected to an increasing force cease to be proportional; the limit of stress within which a material will return to its original size and shape when the force is removed, and hence, not a permanent set. **D 4439, D35**

elastic limit, *n*—*in mechanics*, the maximum stress which can be obtained in a material without causing permanent deformation of the material. (Compare **yield point**.) **D 4848, D13**

elastic limit [FL⁻²], *n*—the greatest stress which a material is capable of sustaining without any permanent strain remaining upon complete release of the stress. **E 6, E28**

elastic modulus, *n*—the ratio of stress to strain below the proportional limit. **C 1145, C28**

elastic modulus—see **complex modulus and storage modulus**.

D 4092, D20

elastic modulus—see **complex modulus and storage modulus**.

E 1142, E37

elastic recovery—in hardness testing, the shortening of the original dimensions of the indentation upon release of the applied load. **E 7, E04**

elastic region, *n*—*of paper and paperboard*, the region of tensile force-elongation behavior of a specific paper or paperboard where the ratio of the rate of change in the tensile force to the rate of change in length is constant. See **elongation** and **tensile strength**. **D 1968, D06**

elastic state of equilibrium—state of stress within a soil mass when the internal resistance of the mass is not fully mobilized. **D 653, D18**

elastic strain energy—potential energy stored in a strained solid and equal to the work done in deforming the solid from its unstrained state less any energy dissipated by inelastic deformation. (ISRM) **D 653, D18**

elastic tape, *n*—a tape containing rubber or other elastomers to permit rubber-like stretch in at least one direction. **D 123, D13**

elastic tape, *n*—a tape containing rubber or other elastomers to permit rubber-like stretch in at least one direction. **D 4850, D13**

elastic true strain, ϵ_e , *n*—elastic component of the true strain. **E 6, E28**

elastic webbing, *n*—a webbing containing rubber or other elastomers to permit rubber-like stretch in at least one direction. **D 123, D13**

elastic webbing, *n*—a webbing containing rubber or other elastomers to permit rubber-like stretch in at least one direction. **D 4850, D13**

elastomer, *n*—a macromolecular material that returns rapidly to approximately its original dimensions and shape after substantial deformation by a weak force and release of the force. **C 717, C24**

elastomer, *n*—a macromolecular material that at room temperature returns rapidly to approximately its initial dimensions and shape after substantial deformation by a weak stress and release of the stress. **D 883, D20**

elastomer, *n*—a macromolecular material that returns rapidly to approximately the initial dimensions and shape after substantial deformation by a weak stress and release of the stress. **D 907, D14**

elastomer—a macromolecular material that returns rapidly to its approximate initial dimensions and shape after substantial deformation by a weak stress and subsequent release of that stress. **D 1079, D08**

elastomer, *n*—an elastic polymer. **D 1566, D11**

elastomer, *n*—a natural or synthetic polymer having the property of substantially recovering its size and shape after removal of a deforming force. **D 4175, D02**

elastomer, *n*—a natural or synthetic polymer having the rubber-like property of substantially recovering its size and shape after removal of a deforming force. **D 4175, D02**

elastomer, *n*—a macromolecular material that returns rapidly to approximately its initial dimensions and shape after substantial deformation by a weak stress and release of the stress. (D11) **F 412, F17**

elastomer—a macromolecular material that at room temperature returns rapidly to approximately its initial dimensions and shape after substantial deformation by a weak stress and release of the stress. (D 883, D20) **F 869, F08**

elastomer, *n*—a macromolecular material that at room temperature returns rapidly to approximately its initial dimensions and shape after substantial deformation by a weak stress and release of the stress. **F 1251, F04**

elastomer, *n*—a term often used for rubber and polymers that have properties similar to rubber. **F 1494, F23**

elastomeric, *adj*—having the characteristics of an elastomer. **C 717, C24**

elastomeric seal—a material or device that uses an elastomer to effect a seal between separable piping components. **F 412, F17**

elastomeric yarn, *n*—a nontextured yarn which can be stretched repeatedly at room temperature to at least twice its original length and which after removal of the tensile force will immediately and forcibly return to approximately its original length. **D 123, D13**

elastomeric yarn, *n*—a nontextured yarn which can be stretched repeatedly at room temperature to at least twice its original length and which after removal of the tensile force will immediately and forcibly return to approximately its original length. **D 4849, D13**

elbow, *n*—*in anatomy*, the joint which articulates between the upper arm and the lower arm. **D 123, D13**

elbow, *n*—the joint that articulates between the upper arm and the lower arm. **D 5219, D13**

elbow, *n*—*in anatomy*, the joint that articulates between the upper arm and the lower arm. **F 1494, F23**

elbow girth, *n*—*in body measurements*, with the arm bent at 90° and the clenched fist placed on the hip, the circumference of the elbow. **D 123, D13**

elbow girth, *n*—the maximum circumference of the elbow, taken over

the outer prominence of the elbow bone with the arm bent 1.57 rad (90°). **D 5219, D13**

electrical center—the center established by the electromagnetic field distribution within a test coil. A constant intensity signal, irrespective of the circumferential position of a discontinuity, is indicative of electrical centering. The electrical center may be different from the physical center of the test coil. **E 1316, E07**

electrical conductivity, *n*—the reciprocal of the resistance in ohms measured between opposite faces of a centimetre cube of an aqueous solution at a specified temperature. **D 1129, D19**

electrical conductivity, *n*—the property of a fluid or solid that permits the passage of an electrical current as a result of an impressed emf. **D 1356, D22**

electrical conductivity—the property of conducting electricity. **D 7099, D18**

electrical contact, *n*—any physical contact between two or more parts which will permit the flow of electricity between the parts. **C 1145, C28**

electrical discharge—a discontinuous movement of electrical charges through an insulating medium, initiated by electron avalanches and supplemented by secondary processes. **D 2864, D27**

electrically continuous surface—a surface that is electrically conductive in that current can be passed at an applied voltage between any two points of its physical surface. **D 5077, D10**

electrical metering system—a system composed of current and potential transformers and a wattmeter electrically connected in such a manner so as to measure the energy usage of a piece of equipment driven by an electric motor. **D 5681, D34**

electrical overstress (EOS)—overstress which may be due to ESD or the operation of items beyond their electrical specifications. **D 5077, D10**

electrical porcelain—vitrified whiteware having an electrical insulating function. **C 242, C21**

electrical properties of frozen ground—these include the: dielectric constant, electrical conductivity, and electrical resistivity. **D 7099, D18**

electrical resistivity, *n*—the electrical resistance offered by a material to the flow of current, times the cross-sectional area of current flow and per unit length of current path, the reciprocal of conductivity. It is also known as resistivity, or specific resistance. **D 4175, D02**

electrical resistivity—the property of a material that determines the electrical current flowing through a centimeter cube of the material when an electrical potential is applied to the opposite faces of the cube. **D 7099, D18**

electrical steel—a term used commercially to designate strip or sheet used in electrical applications and historically has referred to flat-rolled, low-carbon steels or alloyed steels with silicon or aluminum, or both. Common types of electrical steels used in the industry are grain-oriented electrical steel, nonoriented electrical steel, and magnetic lamination steel. **A 340, A06**

electrical steel, grain oriented—a flat-rolled silicon-iron alloy usually containing approximately 3 % silicon, having enhanced magnetic properties in the direction of rolling and normally used in transformer cores. **A 340, A06**

electrical steel, nonoriented—a flat-rolled silicon-iron or silicon-aluminum-iron alloy containing 0.0 to 3.5 % silicon and 0.0 to 1.0 % aluminum and having similar core loss in all directions. **A 340, A06**

electrical system components, *n*—cable trays, conduits and other raceways, open run cables and conductors, cables, conductors, cabinets, and other components, as defined or used in the National Electrical Code, and air drops. **E 176, E05**

electrical testing facility—a location with qualified personnel, testing equipment, and procedures for the inspection and electrical testing of electrical insulating protective equipment. **F 819, F18**

electric boosting—an auxiliary method of adding heat to the glass in a gas- or oil-fired melter by passing electric current through the molten glass. **C 162, C14**

electric breakdown voltage—see **dielectric breakdown voltage**. **D 1711, D09**

electric-butt, cold-upset weld—a weld between two prepared ends of adjacent lengths of work-hardenable material that is pressed together in a resistance welding apparatus which melts the abutting ends to unite them and form the weld. In turn, the resulting weld zone is forced out in the form of flash by a cold-upsetting operation which, through cold-working, restores the material substantially to its original tensile strength. **B 354, B01**

electric constant—the same as **permittivity of free space**. **D 2864, D27**

electric creepage strength—the average voltage gradient under specific conditions of test and for a specific electrode configuration, at which dielectric failure occurs along the interface between a solid insulating material and the fluid in which it is immersed, or at the interface between two solids that are in close physical contact with each other but are not bonded chemically. Dielectric creepage failure may result in tracking. **D 2864, D27**

electric field strength, *n*—the magnitude of the vector force on a point charge of unit magnitude and positive polarity. **D 1711, D09**

electric furnace, *n*—a furnace or kiln in which the main source of heat is provided by electrical means. **C 1145, C28**

electric hygrometer—See **hygrometer**. **D 1356, D22**

electric log—a record or log of a borehole obtained by lowering electrodes into the hole and measuring any of the various electrical properties of the rock formations or materials traversed. **D 653, D18**

electric strength—see **dielectric strength**. **D 1711, D09**

electric typewriter—a typewriter in which an electromechanical device causes the type element to be activated when the keys are struck. **F 909, F05**

electrification time, *n*—the time during which a steady direct potential is applied to electrical insulating materials before the current is measured. **D 1711, D09**

electrification time—the time during which a steady direct potential is applied to electrical insulating materials before the current is measured. **D 2864, D27**

electricified shearling, (electricified lambskin)—shearling in which the wool has been straightened by a special process. **D 1517, D31**

electrochemical admittance—the reciprocal of the electrochemical impedance, $\Delta I/\Delta E$. **G 15, G01**

electrochemical cell—an electrochemical system consisting of an anode and a cathode in metallic contact and immersed in an electrolyte. (The anode and cathode may be different metals or dissimilar areas on the same metal surface.) **G 15, G01**

electrochemical equivalent—the weight of an element, compound, radical, or ion involved in a specified electrochemical reaction during the passage of unit quantity of electricity, such as a Faraday, ampere-hour, or coulomb. **B 374, B08**

electrochemical impedance—the frequency dependent, complex valued proportionality factor, $\Delta E/\Delta I$, between the applied potential (or current) and the response current (or potential) in an electrochemical cell. This factor becomes the impedance when the perturbation and response are related linearly (the factor value is independent of the perturbation magnitude) and the response is caused only by the perturbation. The value may be related to the corrosion rate when the measurement is made at the corrosion potential. **G 15, G01**

electrochemical noise—fluctuations of potential or current, or both, originating from uncontrolled variations in a corrosion process. **G 15, G01**

electrochemical potential (electrochemical tension)—the partial derivative of the total electrochemical free energy of the system with respect to the number of moles of the constituent in a solution when all other factors are constant. (Analogous to the chemical potential of the constituent except that it includes the electrical as well as the chemical contributions to the free energy.) **G 15, G01**

electrochemistry—the branch of science and technology which deals with transformations between chemical and electrical energy.

B 374, B08

electrode—a conductor through which current enters or leaves an electrolytic cell, at which there is a change from conduction by electrons to conduction by charged particles of matter, or vice versa.

B 374, B08

electrode, *n*—in *atomic emission spectrometry*, either of two terminals between which an electrical discharge occurs.

E 135, E01

electrode—the energized or grounded conductor portion of electrical test equipment which is placed near or in contact with the material or equipment being tested.

F 819, F18

electrode clearance—the shortest path from the energized electrode to the ground electrode.

F 819, F18

electrode gap—not recommended, see **analytical gap**.

E 135, E01

electrode life—the length of time that an electrode functions usefully. Life-time of solid-state and glass electrodes is limited by mechanical failure of the electrode body or chemical attack on the sensing membrane, and can range from a few days, if the electrode is used continuously in hot or abrasive flowing streams, to several years under normal laboratory conditions. The life-time of liquid membrane electrodes is limited by loss of ion exchanger with use, and is generally 1 to 6 months.

D 4127, D19

electrode pair—a sensing electrode and a reference electrode; the reference electrode may be separate or combined in one body with the sensing electrode.

D 4127, D19

electrodeposition—the process of depositing a substance upon an electrode by electrolysis. See **electroforming, electroplating, electrorefining, and electrowinning**.

B 374, B08

electrode potential—the difference in potential between an electrode and the immediately adjacent electrolyte referred to some standard electrode potential as zero.

dynamic *E.P.*—the electrode potential measured when current is passing between the electrode and the electrolyte.

equilibrium *E.P.*—a static electrode potential when the electrode and the electrolyte are in equilibrium with respect to a specified electrochemical reaction.

standard *E.P.*—an equilibrium electrode potential for an electrode in contact with an electrolyte in which all of the components of a specified chemical reaction are in their standard states. The standard state for an ionic constituent is unit ion activity.

static *E.P.*—the electrode potential measured when no net current is flowing between the electrode and the electrolyte.

B 374, B08

electrode potential—the potential of an electrode in an electrolyte as measured against a reference electrode. (The electrode potential does not include any resistance losses in potential in either the solution or external circuit. It represents the reversible work to move a unit charge from the electrode surface through the solution to the reference electrode.)

G 15, G01

electrodermal tracing, *n*—the display of physiological patterns of either skin resistance or skin conductance obtained through exosomatic recording with a galvanograph component.

E 2035, E52

electrodialysis (ED)—a process in which ions are transferred through membranes from a less concentrated to a more concentrated solution using direct current electric power as the driving force.

D 6161, D19

electrodialysis reversal (EDR)—same as ED with the addition of a polarity reversal step added to improve performance.

D 6161, D19

electroforming—the production or reproduction of articles by electrodeposition upon a mandrel or mold that is subsequently separated from the deposit.

B 374, B08

electro-galvanized, electro-zinc plated—See **zinc-plated**.

F 547, F16

electrogalvanizing—electrodeposition of zinc coatings.

B 374, B08

electrogoniometry—an instrumentation system for recording angular displacement at a joint continuously during movement.

F 869, F08

electrographite, *n*—in *carbon and graphite technology*, a synonym for manufactured graphite.

C 709, D02

electrographite, *n*—in *carbon and graphite technology*, a synonym for manufactured graphite.

D 4175, D02

electrokinetics—involves the application of an electric field to soil for the purpose of dewatering materials of very low permeability to enhance stability. The electric field produces negative pore pressures near a grout pipe that facilitates grout injection.

D 653, D18

electroless plating—term in use but not recommended. See **autocatalytic plating**.

B 374, B08

electroluminescence, *n*—luminescence resulting from electrical excitation. (See also **luminescence**.)

E 284, E12

electrolysis—production of chemical changes by the passage of current through an electrolyte.

B 374, B08

electrolysis—production of chemical changes of the electrolyte by the passage of current through an electrochemical cell.

G 15, G01

electrolyte—(1) a conducting medium in which the flow of current is accompanied by movement of matter. Most often an aqueous solution of acids, bases, or salts, but includes many other media, such as fused salts, ionized gases, some solids, etc. (2) a substance that is capable of forming a conducting liquid medium when dissolved or melted.

B 374, B08

electrolyte—a substance that ionizes in aqueous solution; also, a solution containing ions. Weak electrolytes are only slightly dissociated into ions in solution (acetic acid), and strong electrolytes are highly dissociated (HCl, NaCl).

D 4127, D19

electrolyte, *n*—diluent, offering slight conductivity, in which cells are suspended.

F 2312, F04

electrolytic capacitor paper, *n*—very pure, porous paper, 17 to 100 μm thick, used to separate the metallic electrodes in electrolytic capacitors.

D 1711, D09

electrolytic cell—a unit apparatus in which electrochemical reactions are produced by applying electrical energy, or which supplies electrical energy as a result of chemical reactions and which includes two or more electrodes and one or more electrolytes contained in a suitable vessel.

B 374, B08

electrolytic cleaning—a process of removing soil, scale, or corrosion products from a metal surface by subjecting it as an electrode to an electric current in an electrolytic bath.

G 15, G01

electrolytic copper—copper of any origin, refined by electrolytic deposition including electrowinning. Usually when this term is used alone it refers to electrolytic tough pitch copper. This designation applies to the following:

- cathodes that are the direct product of the refining operation.
- electrodeposited copper cast in refinery shapes suitable for hot or cold working or both, and by extension, to fabricators' products made therefrom.

—electrodeposited copper cast into ingots or ingot bars suitable for remelting.

B 846, B05

electrolytic extraction—See **extraction**.

E 7, E04

electrolytic polishing—a metallographic preparation procedure where metal is preferentially dissolved from high points on an anodic surface by passage of an electric current through a conductive bath, to produce a specular reflecting surface. Used as an alternative to mechanical polishing.

E 7, E04

electrolytic powder, *n*—powder produced by electrolytic deposition or by the pulverization of an electrodeposit.

B 243, B09

electrolytic printer—a facsimile printing device employing a moist, electrolyte-impregnated roll-fed paper. The current (signals) is applied by feeding the paper between a stationary contact and a revolving drum with a helical contractor. The revolving of the drum causes the point of electrical contact between the blade and helical wire to move laterally across the paper, one line per revolution. As the electrical current passes through the paper, it causes a change of coloration at all points of contact.

F 909, F05

electrolytic process, *n*—the application of a metallic coating on a steel product by passing an electric current through a chemical solution in which the product is immersed; the coating may be applied in a continuous process or a batch process.

A 902, A05

electromagnet—a soft iron core surrounded by a coil of wire that temporarily becomes a magnet when an electric current flows through the wire. **E 1316, E07**

electromagnetic focusing device—See **focusing device**. **E 7, E04**

electromagnetic interference—See **EMI**. **E 631, E06**

electromagnetic interference—See **EMI**. **E 1749, E06**

electromagnetic lens—an electromagnet designed to produce a suitably shaped magnetic field for the focusing and deflection of electrons or other charged particles in electron-optical instrumentation. **E 7, E04**

electromagnetic pulse—See **EMP**. **E 631, E06**

electromagnetic pulse—See **EMP**. **E 1749, E06**

electromagnetic shield—a screen or other housing placed around a device or circuit to reduce the effects on them from both electric and magnetic fields. **D 5077, D10**

electromagnetic spectrum, *n*—a continuum of electric and magnetic radiation, encompassing all wavelengths from electricity, radio and microwaves, at the low-frequency end to infrared, visible light, and ultraviolet light in the midrange, to X rays and gamma rays at the high frequency end of the spectrum. (As defined by the Institute of Electrical and Electronic Engineers, Inc. (IEEE), the spectrum of electromagnetic radiation consists of gamma rays, wavelengths shorter than 0.0006 nm; X rays, 0.0006–5 nm; ultraviolet rays, 5 nm–0.4 μm; visible light, 0.4–0.7 μm; infrared, 0.7 μm–0.1 mm; radio, greater than 0.1 mm.). **E 2114, E06**

electromagnetic testing—a nondestructive test method for materials, including magnetic materials, that uses electromagnetic energy having frequencies less than those of visible light to yield information regarding the quality of testing material. **E 1316, E07**

electromagnetic vibratory atomizer—a vibratory atomizer in which an electromagnetic transducer transmits high-frequency oscillations to the liquid. **E 1620, E29**

electromigration—(1) Current-induced atomic diffusion in a solid metal due to electron momentum and the potential gradient, (2) electrochemical process of growth of metallic path across an insulating surface under imposed electric field. **B 542, B02**

electromotive force (emf), *n*—the electrical potential difference which produces or tends to produce an electric current. **E 344, E20**

Electromotive Force Series (EMF Series)—a list of elements arranged according to their standard electrode potentials, with “noble” metals such as gold being positive and “active” metals such as zinc being negative. **G 15, G01**

electromotive series—a table that lists in order the standard electrode potentials of specified electrochemical reactions. **B 374, B08**

electron—a subatomic particle having a negative charge of 4.8025×10^{-10} esu, and a charge-to-mass ratio or specific charge of $5.2737 \pm 0.0015 \times 10^{17}$ esu/g. **E 7, E04**

electron:

flooding—in *surface analysis*, irradiation of a specimen with low-energy electrons in order to change (generally to reduce) or stabilize the charging potential.

inelastic mean free path—the average of distances, measured along the trajectories, that particles with a given energy travel between inelastic collisions in a substance.

retardation—*AES, XPS*, a method of measuring the kinetic energy distribution by retarding the emitted electrons before or within the analyzer.

spectrometer—see **electron energy analyzer**. **E 673, E42**

electron beam—a stream of electrons in an electron optical system. **E 7, E04**

electron diffraction—the phenomenon, or the technique of producing diffraction patterns through the incidence of electrons upon matter. **E 7, E04**

electro-negative developer—a developer containing negatively charged toner particle. **F 335, F05**

electron energy analyzer—*AES, XPS*, a device for measuring the number of electrons as a function of kinetic energy. (See also **spectrometer**)

pass energy—*XPS, AES*, the mean kinetic energy of electrons in the energy dispersive portion of an electron energy analyzer that will allow them to traverse the analyzer and be counted.

fixed analyzer transmission—*AES, XPS*, a mode of analyzer operation that varies the electron retardation but keeps the pass energy constant in the final analyzer stage.

fixed retarding ratio—*AES, XPS*, a mode of operation in which the electron kinetic energy is analyzed by varying the retarding potential on lens elements preceding the analyzer and the analyzer pass energy so that the analyzer pass energy is a constant fraction of the kinetic energy. **E 673, E42**

electron energy loss spectrum—*XPS*, the energy spectrum of electrons from a monoenergetic electron source after interaction with the specimen, exhibiting peaks due to inelastic loss processes. The spectrum obtained using an incident electron beam of about the same energy as an XPS peak approximates the loss spectrum associated with that XPS peak. Also see **characteristic electron loss phenomena**. **E 673, E42**

electron equilibrium—charged-particle equilibrium for electrons. **E 170, E10**

electron flooding—see **electron**. **E 673, E42**

electron gun—a device for producing and accelerating a beam of electrons. **E 7, E04**

Electronic and Information Technology (EIT)—has the same meaning as “information technology” except EIT also includes any equipment that is used in the creation, conversion, or duplication of data or information. The term EIT includes, but is not limited to, telecommunications products (such as telephones), information kiosks and transaction machines, worldwide websites, multimedia, and office equipment (such as copies and fax machines). The term replaced the term “Automated Data Processing Equipment” (APDE) in the FAR. **E 2135, E53**

electronic data interchange, *n*—the computer to computer exchange of business information in a standardized format. **A 941, A01**

electronic data interchange, *EDI*, *n*—the communication of data between business trading partners accomplished in a standard format and syntax. **F 1294, F05**

Electronic Industries Association, EIA, *n*—an abbreviation for a standards organization in the United States specializing in the electrical and functional characteristics of interface equipment. **F 1294, F05**

electronic scanning system, *n*—a device used to look at readable pages and convert the text found there to an electronic signal. (See **ESS**.) **F 1457, F05**

electronic thermometer, *n*—an instrument that provides a display of temperature sensed through the use of a transducer and electronic circuitry. **E 344, E20**

electronic typewriter—an electric typewriter in which the keyboard input is received by an electronic processor built into the typewriter. This unit then controls the print head and other features to produce the typing action. **F 909, F05**

electron image—a representation of an object formed by a beam of electrons focused by an electron optical system (See **image**.) **E 7, E04**

electron lens—a device for focusing an electron beam to produce an image of an object. **E 7, E04**

electron micrograph—a reproduction of an image formed by the action of an electron beam on a photographic emulsion. **E 7, E04**

electron microscopy—the study of materials by means of the electron microscope. **E 7, E04**

electron microscopy impression—See **impression**. **E 7, E04**

electron optical axis—the path of an electron through an electron optical system along which it suffers no deflection due to lens fields. This axis does not necessarily coincide with the mechanical axis of the system. **E 7, E04**

electron optical system—a combination of parts capable of producing and controlling a beam of electrons to produce an image of an object. **E 7, E04**

electron optics

electron optics—the science that deals with the propagation of electrons, as light optics deals with that of light and its phenomena.

E 7, E04

electron probe—a narrow beam of electrons used to scan or illuminate an object or screen.

E 7, E04

electron retardation—see **electron**.

E 673, E42

electron spectrometer—see **electron energy analyzer**.

E 673, E42

electron standard field—an electron field whose particle energy and direction, spatial uniformity, and particle fluence rate uniformity are well established and reproducible.

E 170, E10

electron trajectory—the path of an electron.

E 7, E04

electron velocity—the rate of motion of an electron.

E 7, E04

electron volt—the kinetic energy gained by an electron after passing through a potential difference of 1 V.

E 1316, E07

electron wavelength—the wavelength necessary to account for the deviation of electron rays in crystals by wave diffraction theory. It is numerically equal to the quotient of Planck's constant divided by the electron momentum. This is approximately $\lambda = (12.3/V) \text{ \AA}$, where V = the accelerating potential in volts.

E 7, E04

electrophoresis—the movement of colloidal particles produced by the application of an electric potential.

B 374, B08

electrophoresis, n —the movement of colloidal particles or macromolecules through a solution under the action of an electromotive force applied through electrodes in contact with the solution.

C 1145, C28

electrophoretic deposition—the process of depositing material on a workpiece from a porcelain enamel slip suspension due to the movement of particles under the influence of an impressed direct current voltage.

C 286, B08

electrophotographic copying process—a process in which a copy of an original document results from the combined action of light and externally applied electric forces.

F 335, F05

electrophotographic material—photoconductor suitable for application in photographic processes.

F 335, F05

electrophotographic printer—a nonimpact printing technique that is similar to the technology employed in typical office copiers, which forms a copy by attracting toner particles to a static charge on the surface of a photoconductor, then transferring the toner image to the surface of a sheet of paper. In the normal office copier, the charged image (latent image) of the original document is formed on the photoconductor simply through exposure of the photoconductor to reflected light from the document. In an electrophotographic printer, the image is formed by a light-source (laser, CRT, LED, LCS, laser diode, or other controlled light source) which erases or discharges a static image charge on the photoconductor according to information being supplied through the input data stream. Each bit of data can be related to a character shape in the memory of the printing system, and in most cases characters are formed by a dot matrix method similar in concept to that of the matrix printer. Paper can be sheet- or roll-fed or continuous form.

F 909, F05

electroplated—surface provided with usually thin electrochemical deposit of brass, cadmium, copper, nickel, tin, zinc, etc., as a result of immersion in electrolytic bath.

F 547, F16

electroplated button, n —plastic buttons which have been made conductive by chemical treatment followed by the electroplating of metallic coatings.

D 123, D13

electroplated button, n —plastic buttons which have been made conductive by chemical treatment followed by the electroplating of metallic coatings.

D 5497, D13

electroplating—the electrodeposition of an adherent metallic coating upon an electrode for the purpose of securing a surface with properties or dimensions different from those of the basis metal.

B 374, B08

electropolishing—the improvement in surface finish of a metal effected by making it anodic in an appropriate solution.

B 374, B08

electro-positive developer—a developer containing positively charged toner particle.

F 335, F05

electrorefining—the process of anodically dissolving a metal from an impure anode and depositing it cathodically in a purer form.

B 374, B08

electrosensitive printer—a nonimpact printing device employing a double layer coated paper. Imaging is accomplished by touching or nearly touching the paper surface with an electrically charged stylus which burns away the top coating, exposing an undercoating of a contrasting color to produce the desired images. This process is also known as electroerosion printing.

F 909, F05

electrostatic atomizer—a device wherein an electric charge is the primary source of energy utilized to produce a spray.

E 1620, E29

electrostatic copying process—a process in which a copy of an original document results from charged particle development of an electrostatically formed image.

F 335, F05

electrostatic decay half-life, n —in textiles, the time in minutes for the maximum voltage induced on the textile to be reduced to one half of the maximum voltage by the various decay mechanisms: conduction and ionization of the air.

D 123, D13

electrostatic decay half-life, n —in textiles, the time in minutes for the maximum voltage induced on the textile to be reduced to one half of the maximum voltage by the various decay mechanisms: conduction and ionization of the air.

D 4849, D13

electrostatic discharge—the transfer of electrostatic charge between bodies at different electrostatic potentials.

D 5077, D10

electrostatic discharge (ESD) protective—a property of materials capable of one or more of the following:

preventing the generation of static electricity.

dissipating electrostatic charges over its surface or volume.

providing shielding from ESD or electrostatic fields.

D 5077, D10

electrostatic discharge sensitive (ESDS)—a property of items in which they are inherently sensitive (ESDS) susceptible to either catastrophic failure or latent damage when exposed to sources of ESD. Items are often categorized as to their levels of sensitivity but in all cases require some means of ESD protective packaging and handling.

D 5077, D10

electrostatic focusing device—See **focusing device**.

E 7, E04

electrostatic immersion lens—See **immersion objective**.

E 7, E04

electrostatic lens—a lens producing a potential field capable of deflecting electron rays to form an image of an object.

E 7, E04

electrostatic powder porcelain enamel—a mixture comprised of frit and additives ground and/or blended together to form a powder suitable for dry electrostatic application.

C 286, B08

electrostatic precipitation—See **precipitation**.

D 1356, D22

electrostatic precipitator—See **precipitator**.

D 1356, D22

electrostatic precipitator (ESP), n —a facility that removes fly ash from the flue gas by producing an electric charge on the fly ash and collecting it electrostatically.

E 2201, E50

electrostatic propensity, n —the capacity of a nonconducting material to acquire and hold an electrical charge by induction (by means of corona discharge) or by triboelectric means (rubbing with another material).

D 123, D13

electrostatic propensity, n —the capacity of a nonconducting material to acquire and hold an electrical charge by induction (by means of corona discharge) or by triboelectric means (rubbing with another material).

D 4849, D13

electrostatic retention—the tenacity with which a charged, electrostatically deposited powder porcelain coating adheres to the work piece before it is fired.

C 286, B08

electrostatics—the science of forces and fields of electric charges in a state of rest.

F 335, F05

electrostatic shield—a barrier or enclosure that prevents the penetration of an electrostatic field.

D 5077, D10

electrostatic spraying—a technique for attaining a uniform coating in which the material sprayed is given an electrical charge.

E 1316, E07

electrotyping—the production of printing plates by electroforming.

B 374, B08

electrowinning—the production of metals by electrolysis with insoluble anodes in solutions derived from ores or other materials.

B 374, B08

element, *n*—in *zippers*, a device designed for interlocking, capable of being affixed along the edge of a tape. (Compare **continuous element**.)

D 123, D13

element, *n*—a device designed for interlocking, capable of being affixed along the edge of a tape. (Compare **continuous element** and **separate element**.)

D 2050, D13

element—the component containing the membrane, generally replaceable, such as a spiral wound cartridge or cassette.

D 6161, D19

element, *n*—in *construction planning, design, specification, estimating, and cost analysis*, is a significant component part of the whole that performs a specific function, or functions, regardless of design, specification, or construction.

E 833, E06

element, *n*—an isolated (totally bounded by void) projection.

F 538, F09

element—the interchangeable type font of an impact printing device: see **thimble, ball, daisy wheel**.

F 909, F05

element, *n*—in *codedsymbologies*, a single bar or space in linear or stacked configurations or a single cell in matrix (2-D) configurations.

F 1294, F05

elemental cost analysis, *n*—in *construction planning, design, specification, estimating, and cost analysis*, is a tabulation of cost categorized by **group element, element**, or **sub-element**, or any combination thereof, to which a **parameter quantity**, or parameter quantities, has, or have, been applied to derive benchmark figures (rates, ratios, percentages, and so forth).

E 833, E06

elemental cost summary, *n*—in *construction planning, design, specification, estimating, and cost analysis*, is a tabulation of cost categorized by **group element, element**, or **sub-element**.

E 833, E06

element edge, *n*—the location where the scan reflectance profile intersects the midpoint between the space reflectance (Rs) and bar reflectance (Rb) of adjoining elements.

F 1294, F05

element printer—an impact printer that generates copy via interchangeable “elements” that each contain a full set of characters. Characters are formed when the element strikes the paper itself through an ink ribbon.

F 909, F05

element width, *n*—the thickness of an element measured from the leading edge of an element to the trailing edge of the same element. (See **X dimension**.)

F 1294, F05

elevated blood lead level (EBL)—lead content in blood that exceeds the safe level established by regulation/local jurisdiction.

E 1605, E06

elevated blood level (EBL)—lead content in blood that exceeds the safe level established by regulation/local jurisdiction.

E 631, E06

elevated temperature testing—tests on plastic pipe above 23°C (73°F).

F 412, F17

elevator, *n*—a general term describing a mechanical device on the Motion Control, Inc. Fiber Information System which moves the specimen clamp while preparing the specimen or while taking a length/uniformity index or strength/elongation measurement.

D 123, D13

elevator—synonym for **bin**, commonly used in the grain industry.

D 653, D18

elevator, *n*—a general term describing a mechanical device on the Motion Control, Inc. Fiber Information System which moves the specimen clamp while preparing the specimen or while taking a length/uniformity index or strength/elongation measurement.

D 7139, D13

elimination—this, like the *definite conclusion of identity*, is the

highest degree of confidence expressed by the document examiner in handwriting comparisons. By using this expression the examiner denotes no doubt in his opinion that the questioned and known writings were not written by the same individual.

Examples—It has been concluded that the John Doe of the known material did not write the questioned material, or it is my opinion (or conclusion or determination) that the John Doe of the known material did not write the questioned material.

E 1658, E30

elk leather—trade term used to designate chrome-tanned cattlehide for uppers of work shoes, hunting boots, some children’s shoes, and others requiring flexibility and durability. More properly **elk-finished cowhide**. Leather made from elkhide is known as “buckskin.”

D 1517, D31

ellipsis, *n*—in *atabular entry*, three periods (...) that indicate that there is no requirement.

A 941, A01

elliptical reinforcement—a line of reinforcement in the approximate shape of an ellipse.

C 822, C13

Elmendorf test—See **packagetesting**.

D 996, D10

elongated grain—a grain with one principal axis significantly longer than either of the other two.

E 7, E04

elongated piece (of aggregate), *n*—a particle of aggregate for which the ratio of the length to width of its circumscribing rectangular prism is greater than a specified value (see also **flat piece (of aggregate)**).

C 125, C09

elongation, *n*—extension produced by a tensile stress.

C 717, C24

elongation, *n*—the ratio of the change in length of a rope during application of tension to the original length of the rope when new.

D 123, D13

elongation, *n*—the ratio of the extension of a material to the length of the material prior to stretching, expressed as a percent. (Compare **extension**.)

D 123, D13

elongation, *n*—extension produced by a tensile stress.

D 1566, D11

elongation, *n*—of *paper and paperboard*, See **stretch**.

D 1968, D06

elongation, *n*—the ratio of the extension of a material to the length of the material prior to stretching, expressed as a percent.

D 4848, D13

elongation, *n*—the ratio of the extension of a material to the length of the material prior to stretching.

D 6477, D13

elongation—increase in length of the anchor under loading resulting from axial strain of the anchor material.

E 2265, E06

elongation—extension produced by a tensile stress. (D 1566, D 11)

F 869, F08

elongation—increase in length of the gage length expressed as a percentage of the original gage length.

F 1789, F16

elongation at break, *n*—the elongation corresponding to the breaking force. (Compare **elongation at rupture**. See also **elongation**.)

D 123, D13

elongation at break, *n*—the elongation corresponding to the breaking load, that is, the maximum load.

D 4439, D35

elongation at break, *n*—the elongation corresponding to the breaking force. (Compare **elongation at rupture**. See also **elongation**.) Syn. **breaking elongation**.

D 4848, D13

elongation at breaking force, *n*—in *fiber strength testing of cotton*, the elongation corresponding to the maximum force, and expressed as a percentage of the 1/8-in. (3.2-mm) gage length.

D 7139, D13

elongation at breaking load, *n*—in *fiber strength testing of cotton*, the elongation corresponding to the maximum load, and expressed as a percentage of the 1/8-in. (3.2-mm) gage length.

D 123, D13

elongation at rupture, *n*—the elongation corresponding to the force-at-rupture. (Compare **elongation at break**.)

D 123, D13

elongation at rupture, *n*—the elongation corresponding to the force-at-rupture. (Compare **elongation at break**.)

D 4848, D13

elongation at specified force, (EASF), *n*—the elongation associated with a specified force on the force-extension curve.

D 123, D13

elongation at specified force, (EASF), *n*—the elongation associated with a specified force on the force-extension curve. (Syn. **corresponding elongation**).

D 4848, D13

elongation at the breaking load, n—deprecated term. Use the preferred term **elongation at break**. **D 4848, D13**

elongation, *El, n*—the increase in gage length of a body subjected to a tension force, referenced to a gage length on the body. Usually elongation is expressed as a percentage of the original gage length. **E 6, E28**

elongation, percent, *n*—the extension of a uniform section of a specimen expressed as percent of the original length. **D 1566, D11**

elongation, ultimate, *n*—the elongation at the time of rupture. **D 1566, D11**

eluant—a liquid used to extract one material from another, as in chromatography. **E 1316, E07**

elute, *v*—to remove sorbed materials from a sorbent by means of a fluid. **D 1356, D22**

EM—abbreviation for **end of message**. **F 1457, F05**

embed, *v*—to encapsulate the nonmetallic reinforcing mesh in the base coat. **E 2110, E06**

embedding, *n*—a general term for all methods of surrounding or enclosing components and assemblies with a substantial thickness of electrically insulating solid or foam material with voids and interspaces between the parts substantially filled. See **potting, encapsulation, and dip encapsulation**. **D 1711, D09**

embedding compound—see **taping compound**. **C 11, C11**

embedment—(1) the process of pressing a felt, aggregate, fabric, mat, or panel uniformly and completely into hot bitumen or adhesive to ensure intimate contact at all points;

(2) the process of pressing granules into coating in the manufacture of factory-prepared roofing, such as shingles. **D 1079, D08**

embedment—the placement of materials completely around the pipe to provide support. **F 412, F17**

embedment depth—distance measured from the surface of the base material to the farthest point of anchor, measured prior to setting of anchor. **E 2265, E06**

embodied energy, *n*—the energy used through the life cycle of a material or product to extract, refine, process, fabricate, transport, install, commission, utilize, maintain, remove, and ultimately recycle or dispose of the substances comprising the item. **E 2114, E06**

embossed—decorated in relief on the surface of the ware. **C 242, C21**

embossed, *adj*—having a permanent multilevel surface produced by mechanical or chemical means. **F 141, F06**

embossed—any deformation of the back of the acceptor media due to imaging, usually by type action. **F 221, F05**

embossed head—head with raised or impressed figure or design. **F 547, F16**

embossed leather—leather that has been ornamented with a geometrical or fancy design by heavy pressure in a machine. **D 1517, D31**

embossing, *n*—the tendency of a paper to take a permanent pattern, either depressed or raised, as a result of contact with the blanket during printing. **D 6488, D01**

embossment—a decoration in relief or excised on the ware surface. **C 242, C21**

embossment—the height of raised print or raised surface on a document. **F 149, F05**

embrittle—to make brittle; that is, to lose ductility. **F 2078, F07**

embrittlement, *n*—the loss or partial loss of ductility in a steel, such that failure is characteristically by fracture without appreciable deformation. **A 902, A05**

embrittlement—the reduction of the normal ductility in a metal due to a physical or chemical change. As it relates to these test methods, embrittlement is the loss of ductility caused by the reaction of cuprous oxide in the copper product when exposed at elevated temperatures to a reducing atmosphere. **B 846, B05**

embrittlement, *n*—the formation of a brittle residue as the result of pyrolysis or incomplete combustion. **D 123, D13**

embrittlement, *n*—the formation of a brittle residue as the result of pyrolysis or incomplete combustion. **D 4391, D13**

embrittlement, *n*—the formation of a brittle residue as the result of pyrolysis or incomplete combustion. **F 819, F18**

embrittlement—the formation of a brittle residue as a result of pyrolysis or incomplete combustion. **F 1494, F23**

embrittlement—the loss of ductility or toughness of a metal or alloy. **F 2078, F07**

embrittlement—the severe loss of ductility or toughness or both, of a material, usually a metal or alloy. **G 15, G01**

embrittlement, hydrogen—See **hydrogen embrittlement**. **B 374, B08**

emergency medical dispatcher (EMD)—a trained public safety telecommunicator with additional training and specific emergency medical knowledge essential for the efficient management of emergency communications. **F 1177, F30**

emergency medical facility—a physical structure, excluding mobile vehicles, which has been approved by the appropriate regulatory authority to receive emergency patients and which is equipped and staffed to evaluate and treat patients with life threatening conditions. **F 1177, F30**

emergency medical services—the provision of services to patients requiring immediate assistance due to illness or injury, including access, response, rescue, prehospital and hospital treatment, and transportation. **F 1177, F30**

emergency medical services (EMS) system—a coordinated arrangement of resources (including personnel, equipment, and facilities) organized to respond to medical emergencies, regardless of the cause. **F 1177, F30**

EMF, *n*—electric and magnetic fields, see **electromagnetic spectrum**. **E 2114, E06**

emf (electromotive force)—an electrical potential. **B 374, B08**

emf stability—the change in emf output expressed in millivolts (or in equivalent degrees), over a period of time. **E 344, E20**

emf stability—the change in output expressed in millivolts (or in equivalent degrees if the thermoelectric power is known) occurring over a specified time at a specified temperature. **E 344, E20**

EMI—an abbreviation for *electromagnetic interference*; caused by electric and magnetic fields that emanate from a wide range of electrical circuitry. **E 631, E06**

EMI—an abbreviation for *electromagnetic interference*; caused by electric and magnetic fields that emanate from a wide range of electrical circuitry. **E 1749, E06**

emission, *n*—release of radiant energy. **E 349, E21**

emission, burst—a qualitative description of the discrete signal related to an individual emission event occurring within the material.

NOTE—Use of the term burst emission is recommended only for describing the qualitative appearance of emission signals. **E 1316, E07**

emission, continuous—a qualitative description of the sustained signal level produced by rapidly occurring acoustic emission from structural sources, leaks, or both.

NOTE—Use of the term *continuous emission* is recommended only for describing the qualitative appearance of emission signals. **E 1316, E07**

emission depth distribution function (for a measured signal)—for particles or radiation emitted from a surface in a given direction, the probability that the particle or radiation leaving the surface in a specified state originated from a specified depth measured normally from the surface into the material. **E 673, E42**

emission function decay length—the negative reciprocal slope of the logarithm of the emission depth distribution function at a specified depth. **E 673, E42**

emission microscope—a type of electron microscope in which the specimen is the cathode source of the electrons. Sometimes used synonymously with shadow microscope. **E 7, E04**

emission mixture, *n*—the total mixture in the outside atmosphere of emissions from all sources. **D 1356, D22**

emissions, *n*—substances discharged into the air from a stack, vent, or other discrete source.

emission rate, *n*—the mass emitted per unit of time from a source or, alternatively, per unit of material or energy produced or consumed by a process. **D 1356, D22**

emission spectroscopy, *n*—measurement of energy spectrum emitted by or from an object under some form of energetic stimulation; for example, light, electrical discharge, and so forth. **D 4175, D02**

emissive power—the use of the term emissive power is discouraged in favor of the preferred term **radiantexitance**. **E 772, E44**

emissivity—the ratio of the radiation given off by the surface of a body to the radiation given off by a perfect black body at the same temperature. **C 242, C21**

emissivity, *n*—the ratio of the radiation given off by the surface of a body to the radiation given off by a perfect black body at the same temperature. **C 1145, C28**

emissivity, *n*—the ratio of the power per unit area radiated from a material's surface to that radiated from a black body at the same temperature. **E 176, E05**

emissivity, ϵ —the ratio of the radiance of a body at a given temperature to the corresponding radiance of a blackbody at the same temperature. **E 1316, E07**

emissivity of a thermal radiator, *n*—ratio of the thermal radiant exitance of the radiator to that of a full radiator at the same temperature. Symbol: ϵ , $\epsilon = M_{e,th}/Me$ ($\epsilon = 1$).

NOTE—Formerly "*pouvoir émissif*" (fr). **E 349, E21**

emittance, ϵ , *n*—the ratio of the radiant flux emitted by a specimen to that emitted by a blackbody at the same temperature and under the same conditions. **C 168, C16**

emittance, ϵ —for a sample at a given temperature, ratio of the radiant flux emitted by a sample to that emitted by a blackbody radiator at the same temperature, under the same spectral and geometric conditions of measurement. See **radiometric properties and quantities**. **E 772, E44**

emittance, directional $\epsilon(\theta; \phi)$, *n*—the ratio of the radiance from a surface in a particular direction to the radiance from a blackbody at the same temperature under the same conditions. **C 168, C16**

emittance, hemispherical ϵ_H or $\epsilon(2\pi)$, *n*—the average directional emittance over a hemispherical envelope covering a surface. **C 168, C16**

emittance, spectral ϵ_λ or $\epsilon(\lambda; \theta; \phi)$, *n*—an emittance based on the radiant energy emitted per unit wavelength interval (monochromatic radiant energy). **C 168, C16**

emittance, total ϵ_T or $\epsilon(t)$, *n*—an emittance that is an integrated average over all wavelengths of radiant energy emitted. **C 168, C16**

emitting spray angle, *n*—see **initial spray angle**. **E 1620, E29**

EMP—an abbreviation for *electromagnetic pulse*; a sudden intense discharge of electromagnetic energy that occurs naturally as a result of lightning discharge and can be induced by near-surface or high-altitude nuclear explosions. **E 631, E06**

EMP—an abbreviation for *electromagnetic pulse*; a sudden intense discharge of electromagnetic energy that occurs naturally as a result of lightning discharge and can be induced by near-surface or high-altitude nuclear explosions. **E 1749, E06**

emplacement—the establishment of contaminant residence in the vadose zone in a particular phase. **D 653, D18**

EMS region—a defined geographic area used for EMS planning, development, and coordination. **F 1177, F30**

emu—the notation emu is an indicator of electromagnetic units. When used in conjunction with magnetic moment, m , it denotes units of ergs per oersted, erg/Oe. A moment of 1 erg/Oe is produced by a current of 10 amperes (1 abampere) flowing in a loop of area 1 cm². The work done to rotate a moment of 1 erg/Oe from parallel to perpendicular in a uniform field of 1 Oe is 1 erg. The conversion to the SI units of magnetic moment J/T (joule/tesla) or $A\ m^2$ is given by

$$\frac{\text{erg/Oe (cgs-emu)}}{J/T\ (\text{SI})} = \frac{10\ \text{amperes cm}^2\ (\text{cgs-emu})}{A\ \text{m}^2\ (\text{SI})} = 10^{-3}$$

Magnetization, M , the magnetic moment per unit volume, has units erg/(Oe-cm³), often expressed as emu/cm³. **A 340, A06**

emulation, *n*—a technique where one device (in this case, a printer) is expected to behave exactly like another. **F 1457, F05**

emulsifiable concentrate—a single-phase liquid system having the property of forming an emulsion when mixed with water. **E 609, E35**

emulsification, *n*—the process of dispersing an immiscible liquid in another liquid. **C 1145, C28**

emulsification time—the time that an emulsifier is permitted to remain on the part to combine with the surface penetrant prior to removal. Also called emulsification dwell time. **E 1316, E07**

emulsifier—a substance that modifies the surface tension of colloidal droplets, keeping them from coalescing, and keeping them suspended. **D 653, D18**

emulsifier—see **emulsifying agent**. **E 609, E35**

emulsifier—a liquid that interacts with an oily substance to make it water-washable. **E 1316, E07**

emulsifier—a surfactant that promotes the suspension of one immiscible liquid in another. **E 1519, E35**

emulsifier, hydrophilic—a water-based liquid used in penetrant examination which interacts with the penetrant oil rendering it water-washable. **E 1316, E07**

emulsifier, lipophilic—an oil based liquid used in penetrant examination which interacts with the penetrant oil rendering it water-washable. **E 1316, E07**

emulsifying agent—a substance that increases the stability of an emulsion. **B 374, B08**

emulsifying agent—a material that increases the stability of a dispersion of one liquid in another. **D 459, D12**

emulsifying agent—a surfactant that promotes the suspension of one liquid in another. **E 609, E35**

emulsifying agent (latex), *n*—a surface-active substance used to facilitate the dispersion of an immiscible liquid compounding material in another liquid and to stabilize the emulsion thereby produced. **D 1566, D11**

emulsion—a suspension of fine particles or globules of one or more liquids in another liquid. **B 374, B08**

emulsion—a suspension of fine particles or globules of one or more liquids in another liquid. **D 459, D12**

emulsion—a system containing dispersed colloidal droplets. **D 653, D18**

emulsion, *n*—a heterogeneous system in which an immiscible liquid is distributed in fine drops in another liquid. **D 907, D14**

emulsion—an intimate mixture of bitumen and water, with uniform dispersion of the bitumen or water globules, usually stabilized by an emulsifying agent or system. **D 1079, D08**

emulsion, *n*—a suspension of fine particles or globules, or both, of one or more liquids in another liquid. **D 4175, D02**

emulsion—a suspension of fine particles or globules of one or more liquids in another liquid. **E 609, E35**

emulsion cleaner—a composition which forms an emulsion capable of dissolving or suspending soil. **D 459, D12**

emulsion paint—under **paint**, see **emulsion paint**. **D 16, D01**

emulsion side, *n*—the image-bearing side of a film master. (See also the opposite **base side**.) **F 1294, F05**

enamel—see **porcelain enamel**. **C 286, B08**

enamel, *n*—a paint that is characterized by an ability to form an especially smooth film. **D 16, D01**

enamel, aluminum—see aluminum enamel. C 286, B08
 enamel, beading—see beading enamel. C 286, B08
 enamel, blackboard—see chalkboard enamel. C 286, B08
 enamel, cast iron—see cast iron enamel. C 286, B08
 enamel, chalkboard—see chalkboard enamel. C 286, B08
 enamel, copper—see copper enamel. C 286, B08
 enameled—coated with enamel of desired color and often baked. F 547, F16
 enameling iron—a very low-carbon, low-metalloid, cold-rolled sheet steel, produced specifically for use as a base metal for porcelain enamel. C 286, B08
 enamel, jewelers'—see jewelers' enamel. C 286, B08
 enamel, reclaim—see reclaim. C 286, B08
 enamel scrapings—see scrapings. C 286, B08
 enantiotropic transformation—a reversible metastable phase change; for example, the freezing of sulfur directly to the rhombic phase, or the direct melting of the latter, without passing through the stable intermediate monoclinic phase. E 7, E04
 encapsulation, *n*—an embedding process utilizing removable molds or other techniques in which the insulating material forms the outer surfaces of the finished unit. D 1711, D09
 encapsulation—see lead-based paint encapsulation. E 631, E06
 encapsulation, *n*—the application of an encapsulant. An encapsulant or encapsulation product is a substance that forms a barrier between lead-based paint and the environment using a liquid-applied coating (with or without reinforcement materials) or an adhesively bonded covering material. E 1605, E06
 encapsulation, *n*—the complete enclosure of a waste in another material in such a way as to isolate it from external effects. E 2201, E50
 encapsulation, *n*—a procedure by which biological materials, such as cells, tissues, or proteins, are enclosed within a microscopic or macroscopic semipermeable barrier. F 2312, F04
 encasement—special materials, their placement and configuration which are designed to fully surround the pipe, and develop a field supporting strength which exceeds that developed by other commonly used installation and bedding techniques. C 896, C04
 encasement, *n*—see incasement, *n*. F 412, F17
 encasement, *v*—see incasement, *v*. F 412, F17
 encephalopathy, *n*—damage to the brain that is caused by severe lead toxicity that is capable of becoming permanent brain damage. E 631, E06
 encircling coils—in electromagnetic testing, coil(s) or coil assembly that surround(s) the part to be tested. Coils of this type are also referred to as annular, circumferential, or feed-through coils. E 1316, E07
 enclosed carbon arc, *n*—a light source in which an arc is produced across a pair of carbon rods by a high energy electrical source, such that a high intensity light is emitted. The carbons are enclosed in an inverted glass dome which acts to prolong the life of the carbons, and to modify the spectral power distribution received by the specimens. G 113, G03
 enclosure, *n*—the use of rigid, durable construction materials that are mechanically fastened to the substrate in order to act as a dust-tight barrier between lead-based paint and the environment. E 1605, E06
 end, *n*—an individual sliver, roving, yarn, or cord. D 123, D13
 end, *n*—*in fabric*, an individual warp yarn (single or ply) or cord. D 123, D13
 end, *n*—*in fibrous composites*, a general term for a continuous, ordered assembly of essentially parallel, collimated filaments, with or without twist. D 3878, D30
 end, *n*—an individual silver, roving, yarn, or cord. D 4849, D13
 end, *n*—*in woven fabric*, an individual warp yarn (single or ply) or cord. D 4850, D13
 endangered species, *n*—a species which is in danger of extinction

throughout all or a significant portion of its habitat range as determined by the governmental entity having jurisdiction.

E 2114, E06

end-centered—having an atom (or group of atoms) separated by a translation of the type $\frac{1}{2}$, $\frac{1}{2}$, 0 from a similar atom (or group of atoms). The number of atoms in an end-centered cell must be a multiple of two. E 7, E04

end connector—device permanently attached to the boom used for joining boom sections to one another or to other accessory devices. F 818, F20

end-construction tile, *n*—tile designed to receive its compressive stress parallel to the axes of the cells. C 43, C15

end count, *n*—*in woven fabric*, the number of individual warp yarns per inch of fabric regardless of whether they are comprised of single or plied components. D 4850, D13

end effect—see edge effect. E 1316, E07

end effect—the loss in sensitivity to discontinuities located near the extreme ends of the tube as the ends of the tube enter or leave the test coil. (E 215) E 1316, E07

end-fired furnace—a melter with fuel supplied from the back wall. C 162, C14

end-grain nailing—nailing in such a way that the point of the nail follows the grain of the wood so that the shank is parallel, or nearly parallel to the grain in that member holding the nail point. It is weaker than side-grain nailing in direct withdrawal. D 996, D10

end groups—the functional groups at either end of the cellulose molecule. It is frequently used for the terminal glucose units that contain these groups. It is usually clear from the context which is meant, and the differentiation is seldom important. One end group is reducing (probably a hemiacetal) and one nonreducing (a free hydroxyl in the 4-position). D 1695, D01

ending inventory—goods on hand at the end of the accounting period. Ending inventory shows up in the income statement in the calculation of cost of goods sold and in the balance sheet. E 2135, E53

end item—deliverable or product. E 2135, E53

end match—matched lumber with a tongue on one end of the piece and a matching groove on the opposite end. D 9, D07

end (of gypsum board), *n*—the end perpendicular to the paper-bound edge. The gypsum core is always exposed. C 11, C11

end of life—the practical or theoretical limit of page production for an all-in-one cartridge used in a page yield test. F 335, F05

end of message, *n*—an electronic signal from the sender to the receiver indicating the last byte has been transmitted. (See EM.) F 1457, F05

end of text, *n*—an electronic signal sent to indicate the end of the printable body of the message, it may be followed by control bytes. (See ETX.) F 1457, F05

end-of-the-pipe technologies, *n*—technologies (such as scrubbers on smokestacks) that reduce emissions of pollutants after they have formed. E 2114, E06

endothermic—pertaining to a reaction that occurs with the adsorption of heat. D 653, D18

endothermic gas, *n*—a reducing gas atmosphere used in sintering, produced by the reaction of a hydrocarbon vapor and air over a catalyst with the use of an external heat source. It is low in carbon dioxide and water vapor while containing combustibles of about 60 atomic percent hydrogen and carbon monoxide combined. B 243, B09

endothermic reaction, *n*—a chemical reaction in which heat is absorbed. C 1145, C28

endotoxin, *n*—a high molecular weight lipopolysaccharide (LPS) complex associated with the cell wall of gram-negative bacteria that is pyrogenic in humans. Though endotoxins are pyrogens, not all pyrogens are endotoxins. F 2312, F04

end out, *n*—a void caused by a missing warp yarn. D 123, D13

end out, *n*—a void caused by a missing warp yarn. (*Syn.* missing end) D 3990, D13

end point—the occurrence in the effluent of the maximum permissible concentration of an adsorbate of interest. **D 2652, D28**

end-port furnace—synonymous with **end-fired furnace**.

C 162, C14

end post—the terminal post at the end of a line of fence. **F 552, F14**

end product—supplies delivered under a line item of a government contract. **E 2135, E53**

end product—the chemical compound resulting from a particular metabolic process. **F 1600, F20**

end rail clamp—a two-piece clamp with carriage bolt and nut designed for horizontal rail connections to an end post. **F 552, F14**

endurance limit—maximum stress below which a bolt or screw can presumably endure an infinite number of stress cycles. **F 1789, F16**

endurance, thermal, *n*—the ability of a ceramic product to withstand thermal shock or to withstand deterioration during exposure to high temperatures. **C 1145, C28**

end-use, *n*—*in wear testing*, the use for which a textile is intended.

D 123, D13

end user, *n*—the facility which utilizes the heat content or other forms of energy from the combustion of scrap tires (for energy recovery). The last entity who uses the tire, in whatever form, to make a product or provide a service with economic value (for other uses).

D 5681, D34

end user—one that has been provided property, and exercises the right to use it. **E 2135, E53**

end user, *n*—*for the purpose of this guide*, this term is used to identify specifically the party requiring protective clothing (for example, the employer of the person wearing the garment). **F 1494, F23**

end user—party that installs the mechanical fastener during assembly of a component or product. **F 1789, F16**

energizing cycle—the application of a magnetizing force to a conductor. **E 1316, E07**

energy:

per channel—*EIA*, energy differences between two successive channels.

edge—*EIA*, values of the backscattering energy in a BS spectrum for an element (or isotope) that is located at the surface of the specimen.

loss—*EIA*, energy dissipated by the particles of the incident beam as they penetrate through the specimen.

of incident beam—average energy of analyzing particle in the incident beam at the moment of impact.

pass—(See *pass energy* under **electron energy analyzer**.)

surface approximation—*EIA*, see **surface energy approximation**. **E 673, E42**

energy absorption—the dissipation or transfer of energy due to motion into heat energy. **F 869, F08**

energy, acoustic emission event—the total elastic energy released by an emission event. **E 1316, E07**

energy, acoustic emission signal—the energy contained in a detected acoustic emission burst signal, with units usually reported in joules and values which can be expressed in logarithmic form (dB, decibels). **E 1316, E07**

energy calibration—a process of establishing the relationship between photon or particle energy and channel number in the spectrometer. The energy calibration may be as simple as building a table of two or more energy-channel pairs or as complex as using a least squares algorithm to establish a function describing the energy versus channel relationship. **E 170, E10**

energy efficiency—the product of the current efficiency and the voltage efficiency for a specified electrochemical process. **B 374, B08**

energy equivalent, *n*—the energy required to raise the temperature of a calorimeter system 1°C (or 1°F) per gram of sample. **D 5681, D34**

energy equivalent, heat capacity, or water equivalent, *n*—the energy required to raise the temperature of the calorimeter an arbitrary unit. This is the quantity that, when multiplied by the

corrected temperature rise, then adjusted for extraneous heat effects, and divided by the weight of the sample, gives the gross calorific value. **D 121, D05**

energy input rate—peak rate (Btu/h or kW) at which the equipment consumes energy; typically reflected during preheating, $E_{input\ rate}$

$$E_{input\ rate} = \frac{E \times 60}{t}$$

where:

$E_{input\ rate}$ = measured peak energy input rate. Btu/h, kW,
 E = energy consumed during period of peak energy input, Btu, kWh or kJ and, and
 t = period of peak energy input, min.

F 1827, F26

energy loss—the energy per unit volume that is lost in each deformation cycle. (ISO) **D 4092, D20**

energy product, $B_d H_d$ —the product of the coordinate values of any point on a demagnetization curve. **A 340, A06**

energy-product curve, magnetic—the curve obtained by plotting the product of the corresponding coordinates, B_d and H_d , of points on the demagnetization curve as abscissa against the induction, B_d , as ordinates.

NOTE—The maximum value of the energy product, $(B_d H_d)_m$, corresponds to the maximum value of the external energy.

NOTE—The demagnetization curve is plotted to the left of the vertical axis and usually the energy-product curve to the right.

A 340, A06

energy product, maximum $(B_d H_d)_m$ —for a given demagnetization curve, the maximum value of the energy product. **A 340, A06**

energy recovery, *n*—a process by which all or part of the tire is utilized as fuel (TDF) to recover its entire value. **D 5681, D34**

energy recovery, *n*—obtaining usable energy by consuming waste through a variety of processes. **E 2114, E06**

energy-to-food—the energy (Btu or kWh) imparted to a food product during a cooking energy efficiency (see **cooking energy efficiency**) test, E_{food} . **F 1827, F26**

energy utilization—amount of energy used, E_{util} .

$$E_{util} = \frac{H_g}{P}$$

where:

E_{util} = energy utilization, Btu/lb
 H_g = amount of energy burned, Btu, and
 P = weight of product, lb.

F 1827, F26

energy value, *n*—the assignment of a value to the tire-derived fuel as measured in British thermal units per pound or calories per gram. **D 5681, D34**

engine coolant, *n*—a fluid used to transfer heat from an engine to the radiator, usually containing specific amounts of glycols, water, corrosion inhibitors, and a foam suppressor. **D 4725, D15**

engine coolant concentrate, *n*—a formulated liquid product intended to be diluted with water for use in engine cooling systems. **D 4725, D15**

engine dynamometer test, *n*—a laboratory full-scale engine test designed to evaluate corrosion protection and inhibitor stability of engine coolants under simulated operational conditions. **D 4725, D15**

engineer, *n*—*in pipe laying*, the person, firm, corporation, or government agency acting for the owner as his duly authorized agent in the designing and engineering of the project. **C 1154, C17**

engineer, *n*—*for pipe laying*, the person, firm, corporation, or government agency acting for the owner as his duly authorized agent in the designing and engineering of the project. **D 2946, C17**

engineered controls—measures implemented at the work site to

engineered controls

- contain, control, or otherwise reduce exposure to lead dust and debris. **E 631, E06**
- engineered plastic, *n***—a material that has been made by specific design and through use of particular monomers and monomer sequences to produce a plastic with desired properties, possibly for a specific application. **D 883, D20**
- engineering controls**—measures other than respiratory protection or administrative controls that are implemented at the work site to contain, control, and/or otherwise reduce exposure to lead-contaminated dust and debris, usually in the occupational health setting. The measures include process and product substitution, isolation, and ventilation. (HUD Guidelines, OSHA) **E 1605, E06**
- engineering economics**—the application of economic techniques to the evaluation of design and engineering alternatives. **E 631, E06**
- engineering economics, *n***—the application of economic techniques to the evaluation of design and engineering alternatives. **E 833, E06**
- engineering economics, *n*** (économie du génie)—application of engineering, mathematical, and economic techniques to the economic evaluation of engineering alternatives. **E 631, E06**
- engineering economics, *n*** (économie du génie)—application of engineering, mathematical, and economic techniques to the economic evaluation of engineering alternatives. **E 1480, E06**
- engineering plastics, *n***—those plastics and polymeric compositions for which well-defined properties are available such that engineering rather than empirical methods can be used for the design and manufacture of products that require definite and predictable performance in structural applications over a substantial temperature range. **D 883, D20**
- engineering plastics, *n***—those plastics and polymeric compositions for which well-defined properties are available, such that engineering rather than empirical methods can be used for design and manufacture of products requiring definite and predictable performance in structural applications over a substantial temperature range. (D20) **F 412, F17**
- engineering strain, *e, n***—a dimensionless value that is the change in length (ΔL) per unit length of original linear dimension (L_0) along the loading axis of the specimen; that is, $e = (\Delta L)/L_0$. **E 6, E28**
- engineering stress, *S* [FL^{-2}], *n***—the normal stress, expressed in units of applied force, F , per unit of original cross-sectional area, A_0 ; that is, $S = F/A_0$. **E 6, E28**
- engine motor octane requirement, *n***—one full motor octane number greater than the maximum motor octane number that results in knock (graphic knock level descriptions can be seen in Annex A1). For example, a test engine knocks on primary reference fuels with 96 and 97 motor octane numbers. The test engine does not knock on a primary reference fuel with a 98 motor octane number. The maximum motor octane number that results in knock is 97, so the motor octane requirement is 98. **D 4175, D02**
- engine oil, *n***—a liquid that reduces friction or wear, or both, between the moving parts within an engine; removes heat, particularly from the underside of pistons; and serves as a combustion gas sealant for piston rings. **D 4175, D02**
- English degree**—number of grains of substance per one British imperial gallon of water. **D 6161, D19**
- engobe, *n***—a slip, other than a glaze, that is not impervious and is applied to a ceramic body to function as a glaze undercoat or to impart color, texture, opacity, or other characteristics. **C 43, C15**
- engobe**—a slip coating applied to a ceramic body for imparting color, opacity, or other characteristics, and subsequently covered with a glaze. **C 242, C21**
- engraftment, *n***—incorporation of grafted tissue into the body of the host. **F 2312, F04**
- engraving**—the process of carving figures, letters, etc., upon glass by abrasive means. **C 162, C14**
- enhancement factor, *n***—the correction for the departure of the mixture of air and water vapor from ideal gas laws. **D 1356, D22**
- enrichment culture**—a liquid culture that enhances the growth of a given type of organism. **F 1600, F20**
- ensonification**—see **insonification**. **E 1316, E07**
- entanglement, *n***—the extent or degree to which the filaments in a yarn are interlocked and cannot be readily separated. **D 123, D13**
- entanglement, *n***—the extent or degree to which the filaments in a yarn are interlocked and cannot be readily separated. **D 4849, D13**
- enthalpy**—a thermodynamic *function* defined by the equation $H = U + PV$ where H is the enthalpy, U is the *internal* energy, P is the pressure, and V the volume of the system. **E 1142, E37**
- entity**—that which can be individually described and considered. **E 1187, E36**
- entrained air**—see **air void**. **C 125, C09**
- entrained air (or gas), *n***—in *liquids*, a two-phase mixture of air (or gas) dispersed in a liquid in which the liquid is the major component on a volumetric basis. **D 4175, D02**
- entrainment loss**—oil droplets escaping with the flow of water diverted under the skirt. **F 818, F20**
- entrance angle, β , *n***—in *retroreflection*, angle between the illumination axis and the retroreflector axis. **E 284, E12**
- entrapped air**—see **air void**. **C 125, C09**
- envelope, *n***—in *packaging*, a container of flexible material having only two **faces** and joined at three edges to form a partial enclosure. The nonjoined edge provides a filling opening which later may be closed or sealed. **D 996, D10**
- envelope**—a continuous membrane edge seal formed at the perimeter and at penetrations by folding the base sheet or ply over the plies above and securing it to the top of the membrane. The envelope prevents bitumen seepage from the edge of the membrane. **D 1079, D08**
- envelope**—*of a particle in catalysis*, a theoretical surface that encloses the particle and that bridges openings to the interior of the particle. **D 3766, D32**
- envelope**—a layer of cell membrane-derived lipoprotein that surrounds the protein coat (capsid) of some viruses. **E 1705, E48**
- envelope, drainage**—the materials completely surrounding a pipe to provide support or protection or act as a filter. **F 412, F17**
- envelope grouting**—grouting of rock surrounding a hydraulic pressure tunnel for purpose of consolidation, and primarily, reduction of permeability. **D 653, D18**
- environment, *n***—*as related to fire*, the conditions and surroundings that may influence the behavior of a material, product, or assembly when it is exposed to ignition sources or fire. **E 176, E05**
- environment**—in *fatiguetesting*, the aggregate of chemical species and energy that surrounds a test specimen. **E 1823, E08**
- environmental baseline survey (EBS)**—a survey of DoD real property based on all existing environmental information related to the storage, release, treatment, or disposal of hazardous substances or petroleum products or derivatives on the property to determine or discover the obviousness of the presence or likely presence of a release or threatened release of any hazardous substance or petroleum product. In certain cases, additional data, including sampling and analysis, may be needed in the EBS to support classification of the property into one of the standard environmental condition of property area types. Additionally, an EBS may also satisfy the uncontaminated property identification requirements of CERFA. An EBS will consider all sources of available information concerning environmentally significant current and past uses of the real property and shall, at a minimum, consist of the following: (1) a detailed search and review of available information and records in the possession of the DoD components or records made available by the regulatory agencies or other involved Federal agencies. DoD components are responsible for requesting and making reasonable inquiry into the existence and availability of relevant information and records to include any additional study information (for example, surveys for radioactive materials, asbestos, radon, lead-based paint, transformers containing PCB, Resource Conservation and Recovery Act Facility Assessments and Investigations (RFA and RFI), and underground storage tank cleanup program) to determine the environmental condition of the property; (2) a review of all reasonably obtainable Federal, state,

and local government records for each adjacent facility where there has been a release or likely release of any hazardous substance or any petroleum product, and that is likely to cause or contribute to a release or threatened release of any hazardous substance or any petroleum product on the DoD real property; (3) an analysis of aerial photographs that may reflect prior uses of the property, which are in the possession of the Federal government or are reasonably obtainable through state or local government agencies; (4) interviews with current or former employees, or both, involved in operations on the real property; (5) visual inspections of the real property; any buildings, structures, equipment, pipe, pipeline, or other improvements on the real property; and of properties immediately adjacent to the real property, noting sewer lines, runoff patterns, evidence of environmental impacts (for example, stained soil, stressed vegetation, and dead or ill wildlife), and other observations that indicate the actual or potential release of hazardous substances or petroleum products; (6) the identification of sources of contamination on the installation and on adjacent properties that could migrate to the parcel during Federal government ownership; (7) ongoing response actions or actions that have been taken at or adjacent to the parcel; and (8) physical inspection of the property adjacent to the real property, to the extent permitted by owners or operators of such property. **D 5681, D34**

environmental baseline survey (EBS) report—the written record of an EBS that includes the following: (1) an executive summary briefly stating the areas of real property (or parcels) evaluated and the conclusions of the EBS; (2) the property identification (for example, the address, assessor parcel number, or legal description); (3) any relevant information obtained from a detailed search of Federal government records pertaining to the property, including available maps; (4) any relevant information obtained from a review of the recorded chain of title documents regarding the real property. The review should address those prior ownerships and uses that could reasonably have contributed to an environmental concern, and, at a minimum, cover the preceding 60 years; (5) a description of past and current activities, including all past DoD uses to the extent such information is reasonably available, on the property and on adjacent properties; (6) a description of hazardous substances or petroleum products management practices (to include storage, release, treatment, or disposal) at the property and adjacent properties; (7) any relevant information obtained from records reviews and visual and physical inspections of adjacent properties; (8) a description of ongoing response actions or actions that have been taken at or adjacent to the property; (9) an evaluation of the environmental suitability of the property for an intended lease or deed transaction, if known, including the basis for determination of such suitability; and (10) references to key documents examined (for example, aerial photographs, spill incident reports, and investigation results). **D 5681, D34**

environmental challenging—the process of subjecting a package to extremes of temperature, or humidity, or both, with the goal of determining sensitivities of the package to environmental stresses. In contrast to accelerated aging, environmental challenging often includes conditions, or transitions, or both, of temperature and humidity that equal or exceed those that can be encountered in a package life cycle. **F 1327, F02**

environmental chamber, n—an enclosed space, used for testing designed and constructed to provide control of interior atmosphere to specified conditions. **E 631, E06**

environmental chamber—See **building space**. **E 631, E06**

environmental compartment, n—a subdivision of the environment based on physical or chemical properties, or both. **D 4175, D02**

environmental compartment, n—a subdivision of the environment based on physical or chemical properties, or both. **D 6384, D02**

environmental condition of property map—a map, prepared on the basis of all environmental investigation information conducted to date, that shows the environmental condition of a DoD installation's real property in terms of the seven standard environmental condition of property area types defined in this classification. **D 5681, D34**

environmental conditions, n—in *textile testing*, the atmosphere in which specified moisture levels, temperature ranges, and concentrations of gases are controlled. **D 123, D13**

environmental conditions, n—in *textile testing*, the atmosphere in which specified moisture levels, temperature ranges, and concentrations of gases are controlled. **D 6799, D13**

environmental hydrogen embrittlement (EHE)—generally caused by hydrogen introduced into the steel from the environment after exposure to an externally applied stress. **F 2078, F07**

environmental hydrogen embrittlement—can be “corrosion-assisted hydrogen embrittlement” caused by the liberation of hydrogen during the corrosion process, which is absorbed as atomic hydrogen, resulting in embrittlement under certain conditions of material strength and applied external stress. The end result is brittle failure. The hydrogen may also be absorbed from other external chemical sources. **F 1789, F16**

environmental indicator, n—a measurement, statistic or value that provides a proximate gage or evidence of the effects of environmental management programs or of the state or condition of the environment in a given area. **E 2114, E06**

environmental lien—a charge, security, or encumbrance upon title to a property to secure the payment of a cost, damage, debt, obligation, or duty arising out of response actions, cleanup, or other remediation of hazardous substances or petroleum products upon a property, including (but not limited to) liens imposed pursuant to CERCLA 42 USC § 9607(1) and similar state or local laws. **D 5681, D34**

environmentally-assisted cracking—the initiation or acceleration of a cracking process due to the conjoint action of a chemical environment and tensile stress. **G 15, G01**

environmentally assisted cracking (EAC)—generic, crack growth as a result of exposure to the environment. **F 2078, F07**

environmentally controlled area—See **ECA**. **E 631, E06**

environmentally controlled area—See **ECA**. **E 1749, E06**

environmental resistance, n—a measure of a direct thermal product's ability to resist the effects of exposure to environmental contaminants on either the imaged or unimaged areas. **F 1623, F05**

environmental stress cracking—the development of cracks in a material that is subjected to stress or strain in the presence of specific chemicals. **F 412, F17**

environment-assisted cracking, EAC—a cracking process in which the environment promotes crack growth or higher crack growth rates than would occur without the presence of the environment. **E 1823, E08**

environment chamber—in *fatigue testing*, the container of the bulk volume surrounding a test specimen. **E 1823, E08**

environment chamber volume [L³]—in *fatigue testing*, that bulk volume surrounding a test specimen. **E 1823, E08**

environment composition [ML⁻³]—in *corrosion fatigue testing*, the concentration of the chemical components in the fluid environment surrounding a test specimen. **E 1823, E08**

environment hydrogen content [ML⁻³]—in *corrosion fatigue testing*, the hydrogen gas concentration of the fluid environment surrounding a test specimen. **E 1823, E08**

environment monitoring—in *fatigue testing*, the periodic or continuous measurement of fluid concentrations of the environment. **E 1823, E08**

environment oxygen content [ML⁻³]—in *corrosion fatigue testing*, the oxygen concentration of the fluid environment surrounding a test specimen. **E 1823, E08**

environment pressure [FL⁻²]—in *fatigue testing*, the pressure of the bulk volume surrounding a test specimen. **E 1823, E08**

environment temperature—in *fatigue testing*, the temperature of the bulk volume surrounding a test specimen. **E 1823, E08**

environment volume [L³]—in *fatigue testing*, the total volume immediately surrounding a test specimen plus that contained in a circulating reservoir if applicable. **E 1823, E08**

enzyme—biological catalyst that is protein in nature. **E 1705, E48**

- EP**—*in tribology*, abbreviation for extreme pressure. **D 4175, D02**
- EPA**—Environmental Protection Agency **E 631, E06**
- EPA—Environmental Protection Agency (USA)**—an organization that has set the potable water standards. **D 6161, D19**
- EPA identification**—unique number assigned by EPA to each generator or transporter of hazardous waste, and to each treatment, storage, or disposal facility. **E 631, E06**
- ephemeral gully**—a channel that is formed by gully erosion on cropland and that is routinely but temporarily obscured by mechanical operations such as tilling. **D 4410, D19**
- epicondyles**—the bony prominence above the condyles where the ligaments attach. **F 869, F08**
- epidermal autograft, n**—an autograft consisting primarily of epidermal tissue, including keratinocyte stem cells, but with little dermal tissue. **F 2312, F04**
- epidermis, n**—*in mammalian hair fibers*, the outside or surface layer of the fiber consisting of flat, irregular, horny cells or scales. **D 123, D13**
- epidermis, n**—*in mammalian hair fibers*, the outside or surface layer of the fiber consisting of flat, irregular, horny cells or scales. **D 4845, D13**
- epigenetic ice**—ice in the ground that formed after the deposition of the earth material in which it occurs. **D 7099, D18**
- epigenetic ice wedge**—an ice wedge that developed after the deposition of the earth material in which it occurs. **D 7099, D18**
- epigenetic permafrost**—(1) permafrost that formed after the deposition of the earth material in which it occurs; (2) permafrost that formed through the lowering of the permafrost base in previously deposited material. **D 7099, D18**
- epithermal neutrons**—a general classification of neutrons with energies above those of thermal neutrons; or frequently, neutrons with energies in the resonance range, between the thermal limit and some upper limit, such as 0.1 MeV (see **thermal neutrons**). **E 170, E10**
- EP lubricating oil, n**—a liquid lubricant containing an extreme pressure (EP) additive. **D 4175, D02**
- epoxy**—a multicomponent resin grout that usually provides very high, tensile, compressive, and bond strengths. **D 653, D18**
- epoxy plastic, n**—a thermoplastic or thermosetting plastic containing ether or hydroxyalkyl repeating units, or both, resulting from the ring-opening reactions of lower-molecular weight polyfunctional oxirane resins, or compounds, with catalysts or with various polyfunctional acidic or basic coreactants. **F 1251, F04**
- epoxy plastics, n**—thermoplastic or thermosetting plastics containing ether or hydroxyalkyl repeating units, or both, resulting from the ring-opening reactions of lower molecular weight polyfunctional oxirane resins, or compounds, with catalysts or with various polyfunctional acidic or basic coreactants. **D 883, D20**
- epoxy resin**—a viscous liquid or brittle solid containing epoxide groups that can be crosslinked into final form by means of a chemical reaction with a variety of setting agents used with or without heat. **C 904, C03**
- EPROM**—erasable programmable read only memory; a type of memory chip used in computing equipment (in this case, a printer). **F 1457, F05**
- EPS**—extra-cellular polysaccharide produced by bacteria to form a protective coating especially after attaching to the membrane surface. **D 6161, D19**
- EPS, n**—expanded polystyrene. See **rigid cellular polystyrene thermal insulation board**. See also **cellular polystyrene**. **E 631, E06**
- epsilon (ε)**—designation generally assigned to intermetallic, metal-metalloid, and metal-nonmetallic compounds found in ferrous alloy systems (for example, Fe_3Mo_2 , $FeSi$, Fe_3P). **E 7, E04**
- epsilon carbide**—carbide with hexagonal close-packed lattice which precipitates during the first stage of tempering of primary martensite. Its composition corresponds to the empirical formula $Fe_{2.4}C$. **E 7, E04**
- epsilon structure**—structurally analogous close-packed phases (similar to epsilon brass), or electron compounds, that have ratios of 7 valence electrons to 4 atoms. **E 7, E04**
- equal allocation, n**—this occurs when the number of sets in ranked set sampling is an integer multiple of the size of the set. **D 5681, D34**
- equal-discharge-increment (EDI) method**—a procedure for obtaining the discharge weighted suspended-sediment concentration of flow at a cross section whereby depth integration is performed at the centers of three or more equal flow segments of the cross section. If approximately equal volumes of water-sediment mixture are collected from each flow segment, the samples may be composited for analysis. If unequal volumes are collected, samples from each flow segment must be analyzed separately and the results combined mathematically. **D 4410, D19**
- equal-energy illuminant, n**—illuminant having the same spectral power at all wavelengths in the specified spectral region. **E 284, E12**
- equal-energy source, n**—a source having the same radiant exitance in each constant wavelength interval in the spectral region under consideration. **E 284, E12**
- equalizing, n**—see **blending**. **B 243, B09**
- equalizing block**—an object, usually metal, that when placed in a nonuniform temperature region, has greater temperature uniformity (due to its relatively high thermoconductivity and mass) than the medium surrounding the object. **E 344, E20**
- equal-width-increment (EWI) method**—a procedure of obtaining the discharge weighted suspended-sediment concentration of flow at a cross section by performing depth integration at a series of verticals equally spaced across the cross section and using the same vertical transit rate at all sampling verticals. **D 4410, D19**
- equatorial mount**—a sun-tracking mount, usually clock-driven, whose axis of rotation is parallel to that of the earth. **E 772, E44**
- equiaxed grain**—a polygonal crystallite, in an aggregate, whose dimensions are approximately the same in all directions. **E 7, E04**
- equilay conductor**—see **concentric-lay conductor**. **B 354, B01**
- equilibrium, n**—condition reached in air drying in which change in weight of the sample, under conditions of ambient temperature and humidity, is no more than 0.1 %/h or 0.05 %/½ h. **D 121, D05**
- equilibrium, n**—*in petroleum products*—the condition where the vapor above the test specimen and the test specimen are at the same temperature at the time the ignition source is applied. **D 4175, D02**
- equilibrium**—a state of dynamic balance between the opposing actions, reactions, or velocities of a reversible process. **E 7, E04**
- equilibrium adsorptive capacity**—the quantity of a given component adsorbed per unit of adsorbent from a fluid or fluid mixture at equilibrium temperature and concentration, or pressure. **D 2652, D28**
- equilibrium diagram**—See **constitutional diagram**. **E 7, E04**
- equilibrium diagram**—see **constitutional diagram**. **E 1142, E37**
- equilibrium eutectic**—See **eutectic, equilibrium**. **C 242, C21**
- equilibrium fuel level, n**—*for knock testing*, test procedure in which the fuel-air ratio for maximum knock intensity for sample and reference fuels is determined by making incremental step changes in carburetor fuel level, observing the equilibrium knock intensity for each step and selecting the level that produces the highest knock intensity reading. **D 4175, D02**
- equilibrium headspace, n**—the vapor space above the liquid in which all vapor components are in equilibrium with the liquid components. **D 4175, D02**
- equilibrium moisture basis**—See **equilibrium moisture basis** under **reporting bases**. **D 121, D05**
- equilibrium moisture content**—a moisture content at which wood neither gains nor loses moisture to the surrounding air. **D 9, D07**
- equilibrium moisture content**—(1) the moisture content of a material stabilized at a given temperature and relative humidity, expressed as percent moisture by weight;

(2) the typical moisture content of a material in any given geographical area. **D 1079, D08**

equilibrium moisture content—the percentage mass of moisture in a material when it has attained equilibrium with water vapor at a specified pressure or partial pressure. It is determined by successive weighings of the sample, either on the adsorption or desorption curve, and plotting moisture content against the logarithm of time. It should be designated as adsorption equilibrium or desorption equilibrium. **D 1695, D01**

equilibrium permafrost—permafrost that is in equilibrium with the existing mean annual surface or sea-bottom temperature and with the geothermal heat flux. **D 7099, D18**

equilibrium (reversible) potential—the potential of an electrode in an electrolytic solution when the forward rate of a given reaction is exactly equal to the reverse rate. (The equilibrium potential can only be defined with respect to a specific electrochemical reaction.) **G 15, G01**

equilibrium surface composition—see **sputtering**. **E 673, E42**

equipment—non-expendable, tangible moveable property needed for the performance of a task or useful in effecting an obligation. **E 2135, E53**

equipment check, n—an indication of a problem in the printer, sent by the printer to the cluster controller. **F 1457, F05**

equipment package, n—the building blocks of ITS subsystems that perform a specific function. **E 867, E17**

equipment test level accuracy—(1) For a single test equipment, using a large group of test specimens, the average percentage of test deviation from the correct average value.

(2) The average percentage deviation from the average value obtained from similar tests, on the same test specimen or specimens, when measured with a number of other test equipments that have previously been proven to have both suitable reproducibility of measurement and test level, and whose calibrations and quality have general acceptance for standardization purposes and where better equipment for establishing the absolute accuracy of test is not available. **A 340, A06**

equipotential line—a line connecting points of equal hydraulic head. A set of such lines provides a contour map of a potentiometric surface. **D 653, D18**

equitranference—equal diffusion rates of the positively and negatively charged ions of an electrolyte across a liquid junction. **D 4127, D19**

equitransferent filling solution—a reference electrode filling solution in which the diffusion rates of negatively and positively charged ions are equal. For low liquid junction potentials, the ionic strength of the filling solution must be high compared to the sample solution. **D 4127, D19**

equivalent alkalis, Na₂Oeq, n—in hydraulic cement, total combined sodium and potassium oxides, expressed as a percentage, calculated from the analysis, by means of the formula (Na₂Oeq = % Na₂O + 0.658 × % K₂O). **C 219, C01**

equivalent conductivity—in an electrolyte, the conductivity of the solution divided by the number of equivalents of conducting solute per unit volume, that is, the conductivity divided by the normality of the solution. **B 374, B08**

equivalent design load—a magnitude of 60-s duration uniform load selected by specifying authority to represent design loads. **E 631, E06**

equivalent diameter (equivalent size), D (L)—the diameter of a hypothetical sphere composed of material having the same specific gravity as that of the actual soil particle and of such size that it will settle in a given liquid at the same terminal velocity as the actual soil particle. **D 653, D18**

equivalent diameter (sphere)—See **equivalent diameter (sphere) under diameter**. **C 242, C21**

equivalent-energy fracture toughness (K-EE) [FL^{-3/2}]—the crack extension resistance determined by the procedure specified in Practice E 992. **E 1823, E08**

equivalent fission fluence—the fluence of fission spectrum neutrons that would give a detector or material response for a particular reaction equal to that in a given neutron field. **E 170, E10**

equivalent fluid—a hypothetical fluid having a unit weight such that it will produce a pressure against a lateral support presumed to be equivalent to that produced by the actual soil. This simplified approach is valid only when deformation conditions are such that the pressure increases linearly with depth and the wall friction is neglected. **D 653, D18**

equivalent I.Q.I. sensitivity—that thickness of I.Q.I. expressed as a percentage of the section thickness radiologically examined in which a 2T hole or 2 % wire size equivalent would be visible under the same radiological conditions. **E 1316, E07**

equivalent monoenergetic neutron fluence, $\Phi_{eq}(E_o)$ —characterizes an incident energy fluence spectrum, $\Phi(E)$, in terms of the fluence of monoenergetic neutrons at a specific energy, E_o , required to produce the same displacement kerma, K_o , in a specific material (for example, silicon) as $\Phi(E)$. **E 170, E10**

equivalent 2200 m/s fluence, Φ_o —a measure of the thermal neutron fluence made with a 1/v detector and using the 2200 m/s cross section.

$$\Phi_o = n v_o t$$

where:

n = neutron density,

v_o = 2200 m/s, and

t = exposure time of the detector.

E 170, E10

equivalent nitrogen pressure—the calculated pressure that a gage or another device would indicate if the gas in the device were replaced by nitrogen at the same molecular density. **E 1316, E07**

equivalent orifice, n—the diameter of the sharp-edged circular opening in the plate mounted in an ASTM Plenum Chamber (see Specification F 431, for Air Performance Measurement Plenum Chamber for Vacuum Cleaners), the opening having a resistance to air flow equivalent to the resistance caused by a specific usage of the vacuum cleaner. The equivalent orifice diameter is expressed in inches or millimetres. **F 395, F11**

equivalent penetrometer sensitivity—that thickness of penetrometer, expressed as a percentage of the section thickness radiographed, in which a 2T hole would be visible under the same radiographic conditions. **E 1316, E07**

equivalent per million (epm), n—a unit chemical equivalent weight of solute per million unit weights of solution. **D 1129, D19**

equivalent per million (EPM)—a unit chemical equivalent weight of solute per million unit weights of solution. Concentration in equivalents per million is calculated by dividing concentration in ppm by the equivalent weight of the substance or ion. Equivalent weight is the atomic weight of the substance divided by the valence of the substance. **D 1616, D19**

equivalent product, n—provides the same amount of product or number of recommended uses as contained in the package being replaced (as related to Subcommittee D10.46 package source reduction). **D 996, D10**

equivalent spherical diameter—See **equivalent diameter (sphere) under diameter**. **C 242, C21**

equivalent thickness, n—the calculated solid thickness of concrete or masonry for purposes of determining fire resistance ratings of barrier elements on the basis of heat transmission end-point criteria. **E 176, E05**

equivalent uniform annual value—See **annual value**. **E 631, E06**

equivalent uniform annual value, n—See **annual value**. **E 833, E06**

equivalent viscous damping, c, n—at a given frequency, the quotient of $F''(1)$ divided by the velocity of the imposed deflection.

$$c = F''(1) / \omega X^*(1)$$

D 1566, D11

equivalent volume sphere diameter—the diameter of a hypothetical sphere having the same volume as the actual particle. **E 1620, E29**

equivalent weight

equivalent weight—the weight of an ion determined by dividing the sum of the atomic weights of its component atoms by its valence.

D 6161, D19

equiviscous temperature (EVT), *n*—the temperature at which a bitumen attains the proper viscosity for built-up membrane application. EVT may or may not be applicable to polymer modified bituminous sheet materials. (See **EVT for asphalt** and **EVT for coal tar**).

D 1079, D08

equiviscous temperature for asphalt, *n*—the equiviscous temperature (EVT) for roofing asphalt (Specification D 312, Type I, II, III, or IV) is as follows: (1) *mop application*—the temperature at which the asphalt's apparent viscosity is 125 cP. (2) *mechanical spreader application*—the temperature at which the asphalt's apparent viscosity is 75 cP. See **equiviscous temperature and EVT application range**.

D 1079, D08

equiviscous temperature for coal tar—the equiviscous temperature (EVT) for roofing coal tar (Specification D 450, Type I or III) is the temperature at which the coal tar's apparent viscosity is 25 cP. See **equiviscous temperature and EVT application range**.

D 1079, D08

eradication—the complete elimination of a pest from an area.

E 609, E35

erasability—ease with which the image may be removed without impairing the surface of the paper.

F 221, F05

erasable optical medium—an erasable and rewritable storage medium where the digital data is represented by the degree of reflectivity of the medium recording layer; the data can be altered.

E 1316, E07

erasable programmable read only memory, *n*—a type of memory chip used in printers where the content of the chip can be read only when in normal use, but with special treatment it can be erased and reprogrammed.

F 1457, F05

erasure correction, *n*—a use of error correction characters to correct data errors that have unknown locations.

F 1294, F05

ERD—energy recovery device.

D 6161, D19

ERNS list—EPA's Emergency Response Notification System list of reported CERCLA hazardous substance releases or spills in quantities equal to or greater than the reportable quantity, as maintained by the National Response Center. Notification requirements for such releases or spills are codified in 40 CFR Parts 302 and 355.

D 5681, D34

erosion—the progressive loss of material from a solid surface due to mechanical interaction between that surface and a fluid, a multicomponent fluid, or solid particles carried with the fluid.

G 15, G01

erosion, *n*—in tribology, progressive loss of original material from a solid surface due to mechanical interaction between that surface and a fluid, a multicomponent fluid, or impinging liquid or solid particles.

G 40, G02

erosion corrosion, *n*—nonuniform, accelerated corrosion characterized by a smooth appearance and caused by high velocity coolant.

D 4725, D15

erosion-corrosion—a conjoint action involving corrosion and erosion in the presence of a moving corrosive fluid, leading to the accelerated loss of material.

G 15, G01

erosion-corrosion, *n*—a synergistic process involving both erosion and corrosion, in which each of these processes is affected by the simultaneous action of the other, and in many cases is thereby accelerated.

G 40, G02

erosion, electrical, *n*—the progressive wearing away of electrical insulation by the action of electrical discharges.

D 1711, D09

erosion of refractories, *n*—wearing away of refractory surfaces by the washing action of moving liquids.

C 71, C08

erosion rate, *n*—any determination of the rate of loss of material (erosion) with exposure duration. (See also **rationalized erosion rate**).

G 40, G02

erosion rate-time curve, *n*—a plot of instantaneous erosion rate versus exposure duration, usually obtained by numerical or graphi-

cal differentiation of the cumulative erosion-time curve. (See also **erosion rate-time pattern**).

G 40, G02

erosion rate-time pattern, *n*—any qualitative description of the shape of the erosion rate-time curve in terms of the several stages of which it may be composed.

G 40, G02

erosion resistance, *n*—the ability of a coating to withstand being worn away by chalking or by the abrasive action of water or windborne particles of grit. The degree of resistance is measured by the amount of the coating retained. See **abrasion resistance**.

D 16, D01

erosion resistance, electrical, *n*—the resistance of electrical insulating materials to erosion by the action of electrical discharges.

C 1145, C28

erosion resistance, electrical, *n*—the quantitative expression of the amount of electrical erosion under specific conditions.

D 1711, D09

ERR—external ROM receptacle.

F 1457, F05

ERR, *n*—an error.

F 1457, F05

erroneous data, *n*—one or more pieces of data in a data set that has incorrect values due to a variety of reasons such as improper functioning of the data collection device, miscommunications, or shortcomings in subsequent processing programs.

E 867, E17

error—difference of an observation from the best obtainable estimate of the true value.

D 121, D05

error, *n*—the random or systematic deviation of the observed sample value from its true value (see *bias* and *sampling error*).

D 5681, D34

error, *n*—of a result, the difference between a result obtained on a material and its accepted reference value. (compare *b-value*.)

E 135, E01

error, *n*—of a temperature measurement, result of a temperature measurement minus a true value of temperature.

E 344, E20

error—*in a statistical sense*, any deviation of an observed value from the true, but generally unknown, value. When expressed as a fraction or percentage of the value measured, it is called a relative error. All statements of precision or bias should indicate clearly whether they are expressed in absolute or relative sense.

E 1547, E15

error—the substitution of one character for another.

F 149, F05

error correction, *n*—use of error correction characters to locate and correct data errors that have unknown locations.

F 1294, F05

error correction characters, *n*—special symbol characters that are calculated mathematically from other symbol characters for the purpose of error correction, error detection or erasure correction.

F 1294, F05

error correction level, *n*—an indicator of the number of error correction characters in a symbol.

F 1294, F05

error detection, *n*—use of error correction characters to determine that the number of errors in the symbol exceeds the error correction capacity.

F 1294, F05

error of result, *n*—the test result minus the accepted reference value (of the characteristic).

NOTE—It is not possible to correct for random error.

E 456, E11

error of the first kind, α , *n*—*in a statistical test*, the rejection of a statistical hypothesis when it is true.

D 123, D13

error of the second kind, β , *n*—*in a statistical test*, the acceptance of a statistical hypothesis when it is false.

D 123, D13

error, random—the chance variation encountered in all experimental work despite the closest possible control of variables. It is characterized by the random occurrence of both positive and negative deviations from the mean value for the method, the algebraic average of which will approach zero in a long series of measurements.

E 1547, E15

error rate—the ratio of the number of character substitutions to the total number of characters read.

F 149, F05

ERT—energy recovery turbine.

D 6161, D19

- ESC**, *n*—abbreviation for **escape**; a keyboard control character whose function varies with the software or type of terminal. **F 1457**, F05
- ESCA**—acronym for “electron spectroscopy for chemical analysis,” a term historically used to describe a technique whereby one generates electron spectra by irradiating a specimen with narrow band characteristic X-rays. **E 673**, E42
- escape or pair production peak**—a peak in a gamma ray spectrum resulting from the pair production process within the detector, annihilation of the positron produced, and escape from the detector of one or more of the annihilation photons (see **pair production and annihilation radiation**).
single escape peak—the gamma ray spectrum peak corresponding to escape of one of the annihilation photons from the active volume of the detector. The energy of the single escape peak is equal to the original gamma ray energy minus 511 keV.
double escape peak—the gamma ray spectrum peak corresponding to escape of both of the annihilation photons from the active volume of the detector. The energy of the double escape peak is equal to the original gamma ray energy minus 1.022 MeV. **E 170**, E10
- Escherichia colia**—see **E. coli**. **D 6161**, D19
- Esc key**, *n*—the keyboard key which is used to generate the ESC. **F 1457**, F05
- escutcheon**, *n*—a protective or ornamental cover located at the termination of a post, picket, or rail against a tread, floor, or wall. (Syn. *collar, cover flange, cover plate, or cover ring*.) **E 631**, E06
- escutcheon*—See **railing systems**. **E 631**, E06
- escutcheon**, *n*—a protective or ornamental cover located at the termination of a post, baluster, or rail against a tread, floor, or wall. (Syn. *collar, cover flange, cover plate, or cover ring*.) **E 1481**, E06
- escutcheon pin**—small, regular-stock-steel or nonferrous, $\frac{1}{4}$ by 0.035 to 2 by 0.092-in. nails with oval head and medium diamond point. **F 547**, F16
- ESS**—abbreviation for **electronic scanning system**. **F 1457**, F05
- essentially flat surface**, *n*—surface where the irregularity from a plane does not exceed ± 1 mm. **E 176**, E05
- ester-based insulating fluid**—an insulating fluid that may be either synthetic or natural-based. Synthetic ester fluids are produced by the reaction of an organic acid with an alcohol, usually a diol, triol, or tetraol. Natural ester fluids are derived from an animal or agricultural (vegetable or seed) source. They are generically referred to as triglycerides, being a combination of glycerol and various organic acids of varying molecular weights. **D 2864**, D27
- ester gum*—under **resin, synthetic**, see *ester gum*. **D 16**, D01
- ester gum**, *n*—a resin made from rosin and a polyhydric alcohol, generally glycerol or pentaerythritol. **D 804**, D01
- esterified seed oil**—a modified seed oil wherein the fatty acids are esterified with an alcohol (such as: methyl or ethyl). **E 1519**, E35
- estimate**—*in statistical analysis*, the particular value or values of a parameter computed by an estimation procedure for a given sample. **E 1823**, E08
- estimated crack extension, Δa [L]**—an increase in estimated crack size ($\Delta a = a - a_{og}$). **E 1823**, E08
- estimated crack size a [L]**—the distance from a reference plane to the observed crack front developed from measurements of elastic compliance or other methods. The reference plane depends on the specimen form, and it is normally taken to be either the boundary, or a plane containing either the force line or the centerline of a specimen or plate. The reference plane is defined prior to specimen deformation. **E 1823**, E08
- estimated texture depth, (ETD)**, *n*—the estimate of mean texture depth (MTD), by means of a linear transformation of mean profile depth (MPD). **E 867**, E17
- estimation**—*in statistical analysis*, a procedure for making a statistical inference about the numerical values of one or more unknown population parameters from the observed values in a sample. **E 1823**, E08
- ESWTR**—enhanced surface water treatment rule. **D 6161**, D19
- etch**, *n*—a roughened surface produced by a chemical or electrochemical means. **B 374**, B08
- etch**, *v*—to dissolve unevenly a part of the surface of a metal. **B 374**, B08
- etch**—to attack the surface of glass with hydrofluoric acid or other agent, generally for marking or decoration. **C 162**, C14
- etch**—to attack the surface of glass with hydrofluoric acid or other agent, generally for marking or decoration. **E 344**, E20
- etched**—(1) treated by etching.
 (2) weathered so that surface is roughened. **C 162**, C14
- etched**—an altered surface texture resulting from chemical attack. **C 286**, B08
- etched**—cleaned of grease and oil, with slightly dulled, microscopically roughened surface, usually by a chemical process. **F 547**, F16
- etch figures**—markings formed on a crystal surface by etching or chemical solution and usually related geometrically to the crystal structure. **E 7**, E04
- etching**—controlled preferential attack on a metal surface for the purpose of revealing structural details. **E 7**, E04
- etching**—the removal of surface material by chemical or electrochemical methods. **E 1316**, E07
- ethanol**, *n*—ethyl alcohol, the chemical compound C_2H_5OH . **D 4175**, D02
- ethanol**—ethyl alcohol, the chemical compound C_2H_5OH , a two carbon alcohol. **E 1705**, E48
- ethanol (ethyl alcohol, grain alcohol)**— CH_3CH_2OH ; can be produced chemically from ethylene or biologically from the fermentation of various sugars from carbohydrates found in agricultural crops and cellulosic residues from crops or wood. **E 1705**, E48
- ethylbenzene (C_8H_{10})**—mol weight 106.16; clear, colorless, flammable liquid; freezing point, $-94.97^\circ C$; boiling point, $136^\circ C$. **D 4790**, D16
- ethylcellulose**—any of several ethyl ethers of cellulose. The one most generally used in industry has sufficient substitution to be soluble in organic solvents. **D 1695**, D01
- ethylene plastic**—a plastic based on polymers of ethylene or copolymers of ethylene with other monomers, the ethylene being in greatest amount by mass. **F 1251**, F04
- ethylene plastics**, *n*—plastics based on polymers of ethylene or copolymers of ethylene with other monomers, the ethylene being in greatest amount by mass. (ISO) **D 883**, D20
- ethylene plastics**, *n*—plastics based on polymers of ethylene or copolymers of ethylene with other monomers, the ethylene being in greatest amount by mass. (ISO, D20) **F 412**, F17
- ethylene product**, *n*—hydrocarbon product containing at least 99.85 mass % ethylene. **D 4175**, D02
- ethylene-vinyl acetate (EVA)**—copolymers from these two monomers form a class of plastic materials. **F 869**, F08
- ettringite**, *n*—a high-calcium sulfoaluminate mineral ($Ca_6Al_2(SO_4)_3(OH)_{12} \cdot 26H_2O$). **E 2201**, E50
- ETX**—abbreviation for **end of text**. **F 1457**, F05
- ETX/ACK**, *n*—a standard for “ready/not-ready” status communication between the host and a printer. **F 1457**, F05
- eutectic**:
deformation eutectic—the composition within a system of two or more components that, on heating under specified conditions, develops sufficient liquid to cause deformation at the minimum temperature.
equilibrium eutectic—the composition within any system of two or more crystalline phases that melts completely at the minimum temperature, or the temperature at which such a composition melts. **C 242**, C21
- eutectic**—mixture of two or more substances which solidifies as a whole when cooled from the liquid state, without change in composition. **E 1142**, E37

eutectic alloy

eutectic alloy—the alloy which has the composition of the eutectic point. E 7, E04

eutectic arrest—in a cooling curve (or heating curve) an approximately isothermal segment, corresponding to the time interval during which the heat of transformation from the liquid phase to two or more conjugate solid phases is being evolved, (or conversely). E 7, E04

eutectic carbides—in hypereutectic tool steels, the skeleton-like structure of the eutectic carbide. E 7, E04

eutectic colony, grain—a two-phase region which solidified progressively from a simple center and, therefore, has some uniformity of structural relationship. E 7, E04

eutectic equilibrium—a reversible univariant transformation in which a liquid, that is stable only at superior temperature, decomposes into two or more conjugate solid phases; for example, $L = \alpha + \beta$, $L = \alpha + \beta + \gamma$, etc. E 7, E04

eutectic point—the composition of a liquid phase that is in univariant equilibrium with two or more solid phases; the lowest melting alloy of a composition series. E 7, E04

eutectic point—see **eutectic**. E 1142, E37

eutectic structure—the structure resulting when an alloy has passed through a eutectic equilibrium upon freezing. E 7, E04

eutectic temperature—the temperature below which all liquid portions of an aqueous suspension have entered the solid phase. E 1705, E48

eutectoid equilibrium—a reversible univariant transformation in which one solid phase, that is stable only at superior temperature, decomposes into two or more conjugate solid phases; for example, $\alpha = \beta + \gamma$, $\alpha = \beta + \gamma + \delta$, etc. E 7, E04

eutectoid point—the composition of a solid phase which, upon cooling, undergoes univariant transformation into two, or more, other solid phases. E 7, E04

eutectoid reaction—See **eutectoid equilibrium**. E 7, E04

eutectoid structure—the microstructure resulting when an alloy has passed through an eutectoid equilibrium upon cooling. E 7, E04

evacuated tube collector—see **collector, evacuated tube**. E 772, E44

evacuation, n—the process used to move the patient/subject between the completion of extraction and the beginning of transportation. F 1490, F32

evaluate, v (évaluer(installations))—(a facility) to assess the capability of a facility to perform the function(s) for which it is designed, used, or required to be used. E 631, E06

evaluate, v (évaluer(installations))—(a facility) to assess the capability of a facility to perform the function(s) for which it is designed, used, or required to be used. E 1480, E06

evaluation—See **facility evaluation**. E 631, E06

evaluation—determination of whether a relevant indication is cause to accept or to reject a material or component. E 1316, E07

evaluation—See **facility evaluation**. E 1480, E06

evaluation, n—for lead hazards, a general term to include risk (hazard) assessment, visual assessment, clearance examination, paint inspection and the results of testing for lead. E 1605, E06

evaluation, n—the third part of a performance statement, consisting of the method(s) of assessing conformance of the element being addressed to the criteria. E 2151, E06

evaluation device, n—equipment designed to measure composition or quality constituents used to determine the value of live animals, carcasses, and individual cuts of meat. F 2463, F10

evaluation period, n—the period of time an item is used before being evaluated on the specific performance properties. D 123, D13

evaluation system, n—device or group of devices used to measure and record composition or quality constituents used to determine the value of live animals, carcasses, and individual cuts of meat. F 2463, F10

evaluation threshold—a threshold value used for analysis of the examination data. Data may be recorded with a *system examination threshold* lower than the *evaluation threshold*. For analysis

purposes, dependence of measured data on the *system examination threshold* must be taken into consideration. E 1316, E07

evaluator, n—a part of, or an attachment to, an unevenness testing instrument, which automatically gives an estimate of R_u . D 123, D13

evaluator, n—a part of, or an attachment to, an unevenness testing instrument, which automatically gives an estimate of R_u . D 4849, D13

evanescent wave—the standing wave that exists in the less refractive medium, normal to the reflecting surface of the IRE during internal reflection. E 131, E13

evaporation—process where a liquid (water) passes from a liquid to a gaseous state. D 6161, D19

evaporation—the vaporization of a material by heating it, usually in a vacuum. In electron microscopy this process is used for shadowing or to produce thin support films by condensation of the vapors of metals or salts. E 7, E04

evaporation reduction agent—a material that reduces the evaporation rate of a spray mix during or after application, or both. E 1519, E35

evaporation residue—the nonvolatile impurities remaining after vaporizing a substance. D 4790, D16

even flow atomizer—see **even spray atomizer**. E 1620, E29

even spray atomizer—a fan spray atomizer that produces a relatively uniform band of liquid, usually by means of injection, through an elliptical orifice. (This definition applies to devices utilized in the agricultural industry.) E 1620, E29

event, acoustic emission (emission event)—a local material change giving rise to acoustic emission. E 1316, E07

event count (Ne)—see **count, event**. E 1316, E07

event count rate (Ne)—see **rate, event count**. E 1316, E07

event sampling—See **sampling**. D 1356, D22

eversion—a turning outward, eversion of the foot; turning the sole away from the mid-line of the body. F 869, F08

evidentiary PDD examination, n—test procedures that are designed to meet minimum standards for admissibility in court or administrative hearings. Among the necessary components are: electronic recording of the session, use of a PDD technique for which the preponderance of the published peer-reviewed research shows an average accuracy of 90% or better; individually validated scoring rules, and; optimized decision rules. Use of a movement sensor is also recommended. E 2035, E52

evolutionary operation (EVOP), n—a sequential form of experimentation conducted in production facilities during regular production. E 456, E11

evolutionary operation (EVOP), n—a sequential form of experimentation conducted in production facilities during regular production.

NOTE—The principal theses of EVOP are that knowledge to improve the process should be obtained along with a product, and that designed experiments using relatively small shifts in factor levels (within production tolerances) can yield this knowledge at minimum cost. The range of variation of the factors for any one EVOP experiment is usually quite small in order to avoid making out-of-tolerance products, which may require considerable replication, in order to be able to clearly detect the effect of small changes. E 1325, E11

evolved gas analysis (EGA), n—a technique in which the nature and amount, or both, of gas or vapor evolved by a substance is subjected to a controlled-temperature program. (ICTAC)

NOTE—Some specific forms of EGA have become established for investigating different aspects of catalysis, such as reduction, oxidation or desorption. In this context, EGA in a hydrogen atmosphere is known as temperature-programmed reduction (TPR); EGA in an oxygen atmosphere is temperature-programmed oxidation (TPO); and EGA in the absence of decomposition, in an inert atmosphere or vacuum, is temperature-programmed desorption (TPD). For each technique the

method used for gas identification and quantification should always be clearly stated. E 473, E37

evolved gas detection, (EGD), *n*—see **evolved gas analysis**.

E 473, E37

EVT application range, *n*—the bitumen application temperature range. The range is from 25°F below the EVT to 25°F above the EVT (50°F span). The temperature is measured in the mop cart or mechanical spreader just prior to the application of bitumen to the substrate. D 1079, D08

Ewald sphere—a geometric construction, of radius equal to the reciprocal of the wavelength of the incident radiation, with its surface at the origin of the reciprocal lattice. Any crystal plane will reflect if the corresponding reciprocal lattice point lies on the surface of this sphere. E 7, E04

examination, *n*—analysis of (1) the materials, structure, embellishments, and condition of a cultural object, and (2) the impact of these factors along with documentary characteristics on the treatment, display, and storage of the object. D 123, D13

examination—an element of investigation, without the use of special laboratory appliances or procedures, of supplies and services to determine conformance to those specified requirements which can be determined by such investigations. Examination is generally nondestructive and includes, but is not limited to visual, auditory, olfactory, tactile, gustatory, and other investigations, simple physical manipulation, gaging, and measurement. D 1517, D31

examination, *n*—the investigation of the structure, materials, and condition of cultural property including the identification of the extent and causes of alteration and deterioration. D 5038, D13

examination, *n*—a procedure for determining a property (or properties) or other conditions or characteristics of a material or component by direct or indirect means.

NOTE—Examples include utilization of X-rays or ultrasonic waves for the purpose of determining (directly or by calculation) flaw content, density, or (for ultrasound) modulus; or detection of flaws by induction of eddy currents, observing thermal behavior, AE response, or utilization of magnetic particles or liquid penetrants. E 1316, E07

examination area—that portion of a structure being monitored with acoustic emission. E 1316, E07

examination medium—a powder or suspension of magnetic particles that is applied to a magnetized test surface to determine the presence or absence of surface or slightly subsurface discontinuities. E 1316, E07

examination region—that portion of the test article evaluated using acoustic emission technology. E 1316, E07

exceedances spectrum—*in fatigue loading*, representation of spectrum loading contents by the number of times specified values of a particular loading parameter (peak, range, and so forth) are equaled or exceeded (also known as *cumulative occurrences* or *cumulative frequencyspectrum*). E 1823, E08

excess capacity—machinery and equipment kept on standby.

E 2135, E53

excess electrostatic charge, *n*—the algebraic sum of all positive and negative electric charges on the surface of, or in, a specific volume.

D 1711, D09

excess hydrostatic pressure—see **hydrostatic pressure**. D 653, D18

excess ice—the ice in the ground that exceeds the total volume of the pores that the ground would have under natural unfrozen conditions. D 7099, D18

excessive corrosion—corrosion that is not removed by cleaning as described in Practice E 864. E 631, E06

excessive corrosion—corrosion that is not removed by cleaning as described in Practice E 864. E 1749, E06

excess moisture—synonym for *surface moisture*. D 121, D05

excess property—property no longer required. E 2135, E53

exchange capacity—the capacity to exchange ions as measured by the quantity of exchangeable ions in a soil or rock. D 653, D18

exchange capacity—see **ion-exchange capacity**. D 1695, D01

exchange current density—the rate of charge transfer per unit area

when an electrode reaches dynamic equilibrium (at its reversible potential) in a solution; that is, the rate of anodic charge transfer (oxidation) balances the rate of cathodic charge transfer (reduction). G 15, G01

excitation, *n*—the electrical current passing through the element.

E 344, E20

excitation depth distribution function—the probability that specified excitations are created at specified depths measured normally from a surface into the material by a beam of specified particles or radiation incident on the surface in a given direction. E 673, E42

excitation potential—the applied potential on an X-ray tube required to produce characteristic radiation from the target. E 7, E04

excitation potential (X-ray), *n*—the potential required to produce characteristic radiation from an element. E 135, E01

excitation purity, P_e , *n*—the ratio of the lengths of line segments NC to ND, obtained when a straight line is drawn on the CIE chromaticity diagram from the achromatic (neutral) point (N), through the point (C) representing the color stimulus considered, to the intersection (D) with the spectrum locus or the straight boundary of nonspectral colors, as the case may be. E 284, E12

excitation (stimulus)—an external force (or other input) applied to a system that causes the system to respond in some way. D 653, D18

exciting current, *ac*, *I*—See **current, *ac* exciting**. A 340, A06

exciting power, rms, P_z —the product of the ac rms exciting current and the rms voltage induced in the exciting (primary) winding on a magnetic core.

NOTE—This is the apparent volt-amperes required for the excitation of the magnetic core only. When the core has a secondary winding, the induced primary voltage is obtained from the measured open-circuit secondary voltage multiplied by the appropriate turns ratio.

A 340, A06

exciting power, specific, $P_{z(B:f)}$ —the value of the ac rms exciting power divided by the active mass of the specimen (volt-amperes/unit mass) taken at a specified maximum value of cyclically varying induction *B* and at a specified frequency *f*. A 340, A06

exciting voltage, *E*—the ac rms voltage across a winding linking the flux of a magnetic core. The voltage across the winding equals that across the assumed parallel combination of core inductance *L*₁, and core resistance, *R*₁. A 340, A06

exclusion booming—placement of a boom to protect an area from the entry of a floating substance. F 818, F20

exemplar, *n*—a specimen of physical evidence of known origin (source: Osterburg and Ward, *CriminalInvestigation*, 1992, p. 837). E 1732, E30

exfiltration—the volume of pipeline flow leaving a sewer and its connections into the soil from pipe, joints, connections, and appurtenances. C 822, C13

exfiltration—the quality of water leaving the test section during a specified time period. C 896, C04

exfiltration, pipe—the passage of fluid from a pipe section through small holes or leaks. F 412, F17

exfoliation—corrosion that proceeds laterally from the sites of initiation along planes parallel to the surface, generally at grain boundaries, forming corrosion products that force metal away from the body of the material, giving rise to a layered appearance. G 15, G01

exhaust hood—a device that captures hot air, odors, and vapors produced in the cooking process and directs them to an exhaust fan. F 1827, F26

exhaust pressure—in leak testing, same as **forepressure**. E 1316, E07

exhaust tubulation—Same as **pump-out tubulation**. E 1316, E07

xinite—See **xinite** under **maceral**. D 121, D05

exitance, *M*, *n*—flux leaving a surface per unit area. E 284, E12

exitance, radiant—see **radiant exitance**. E 772, E44

exit orifice, *n*—the final passage found in the insert that the liquid flows through before exiting the dispensing system where the size of the orifice diameter can determine the size of the spray particles and spray pattern. D 6655, D10

exogenous inclusion

exogenous inclusion—a nonmetallic constituent produced by entrapment of foreign material in the melt. (See **inclusions**.) E 7, E04

exotherm—the temperature rise resulting from the liberation of heat by any process of chemical reaction. E 631, E06

exotherm—the temperature rise resulting from the liberation of heat by any process of chemical reaction. E 1749, E06

exothermic—pertaining to a reaction that occurs with the evolution of heat. D 653, D18

exothermic atmosphere (gas), n—a reducing gas atmosphere used in sintering, produced by partial or complete combustion of hydrocarbon fuel gas and air with the associated generation of heat. The maximum combustible content is approximately 25 atomic percent. B 243, B09

exothermic reaction, n—a chemical reaction in which heat is evolved. C 1145, C28

exotic species, n—an introduced species not native or indigenous to the area where it is found. E 2114, E06

expandable plastic, n—a plastic in a form capable of being made cellular by thermal, chemical, or mechanical means. D 883, D20

expandable plastic, n—a plastic in a form capable of being made cellular by thermal, chemical, or mechanical means. (D20) F 412, F17

expanded bed—a bed of granular particles through which a fluid flows upward at a rate sufficient to slightly elevate and separate the particles without changing their relative positions. D 2652, D28

expanded blast-furnace slag, n—the lightweight cellular material obtained by controlled processing of molten blast-furnace slag with water or water and other agents, such as steam or compressed air or both. C 125, C09

expanded metal—See **screen**. E 631, E06

expanded metal—See **screen**. E 1481, E06

expanded plastics—See **cellular plastic**. D 883, D20

expanded plastics—See **cellular plastics**. F 412, F17

expanded rubber, n—*in building construction*, an elastomeric closed-cell material made by incorporating a gas-producing ingredient into a rubber compound that decomposes during vulcanization, producing gas bubbles that expand the compound; the bubbles are predominately non-interconnecting. C 717, C24

expanded rubber (sponge), n—cellular rubber having closed cells, made from solid rubber compound. D 1566, D11

expanded vinyl wall covering, n—a wall covering consisting of a woven textile backing, an expanded vinyl base coat layer (which is a homogeneous vinyl layer that contains a blowing agent), and a nonexpanded vinyl skin coat. E 176, E05

expansion anchor—post-installed anchor that derives its capacity predominately from frictional forces generated by mechanical expansion of the anchor against sides of hole. E 2265, E06

expansion anchor, n—a component that forms a connection to bony element by means of a mechanism which enlarges once the component is inserted into the bony elements. F 1582, F04

expansion chamber, n—an enlargement at the top of the capillary to provide protection against breakage caused by excessive gas pressure. E 344, E20

expansion curve, thermal—the curve produced by plotting a dimension or the volume of a substance versus the temperature. E 7, E04

expansion joint, n—see **control (expansion-contraction) joint**. C 11, C11

expansion joint, n—*in building construction*, a formed or assembled joint at a predetermined location, which prevent the transfer of forces across the joint as a result of movement or dimensional change of different elements of a structure or building. C 717, C24

expansion joint—a structural separation between two building elements that allows free movement between the elements without damage to the roofing or waterproofing system. D 1079, D08

expansion joint—See **joints**. E 631, E06

expansion joint—a discontinuity between two constructed elements, or **components**, allowing for differential movement (such as expansion) between them without damage. E 631, E06

expansion joint, n—a structural separation between building elements that allow independent movement without damage to the assembly. E 2110, E06

expansion joint seal, n—*in building construction*, a seal or sealant system that provides an elastic, compressible, or flexible barrier to the passage of gases, liquids, or solids. C 717, C24

expansion sleeve—outer part of expansion anchor, which is forced outward by its center part as a result of applied torque or impact, to bear against the sides of the predrilled hole. E 2265, E06

expansive cement—a cement that tends to increase in volume after it is mixed with water. D 653, D18

expansive hydraulic cement, n—a hydraulic cement that forms a paste when mixed with water, and increases in volume a controlled amount during the early hardening period occurring after setting. C 219, C01

expectation, error of, n—a bias due to preconceived ideas that influences an assessor's judgment. E 253, E18

expendable—property that can be consumed or become scrap as a result of intended use like drill bits and sanding wheels. E 2135, E53

expendable container—See **container**. D 996, D10

expendable pallet—See **pallet**. D 996, D10

experimental design, n—see **design of experiments**. E 456, E11

experimental design, n—see **design of experiments**. E 1325, E11

experimental error, n—variability attributable only to a test method itself. D 123, D13

experimental unit, n—a portion of the experiment space to which a treatment is applied or assigned in the experiment. E 456, E11

experimental unit, n—a portion of the experiment space to which a treatment is applied or assigned in the experiment.

NOTE—The unit may be a patient in a hospital, a group of animals, a production batch, a section of a compartmented tray, etc. E 1325, E11

experiment space, n—the materials, equipment, environmental conditions and so forth that are available for conducting an experiment. E 456, E11

experiment space, n—the materials, equipment, environmental conditions and so forth that are available for conducting an experiment. E 1325, E11

expert, n—a common term for a person with extensive experience in a product category who performs perceptual evaluations to draw conclusions about the effects of variations in raw materials, processing, storage, aging, etc. Experts often operate alone. (See also **assessor** and **expert assessor**.) E 253, E18

expert assessor, n—an assessor with a high degree of sensory acuity who has experience in the test procedure and established ability to make consistent and repeatable sensory assessments. An expert assessor functions as a member of a sensory panel. (See also **assessor** and **expert**.) E 253, E18

expired data, n—the status assigned to a set of data, summary statistics, or information that is no longer current or valid and needs to be replaced. E 867, E17

explosion—a rapid release of energy (usually by means of combustion) with a corresponding pressure buildup capable of damaging equipment and building structures. D 5681, D34

explosion suppression—the technique of detecting and extinguishing incipient explosions in the shredder enclosure and contiguous enclosed areas before pressures exceed the damage threshold. D 5681, D34

explosion venting—the provision of an opening(s) in the shredder enclosure and contiguous enclosed areas to allow gases to escape during a deflagration and thus prevent pressures from reaching the damage threshold. D 5681, D34

exponent of dynamic air permeability (EXP), n—*for inflatable restraints*, a descriptive factor used in a mathematical model integral to the apparatus software which relates the change in dynamic air permeability as the pressure differential changes. D 6799, D13

exposed surface, *n*—that surface of the specimen subjected to the incident heat. **E 176**, E05

exposed tape width, *n*—*in zippers*, the part of the tape extending beyond the shoulders of the interlocking elements to the outer tape edge. **D 123**, D13

exposed tape width, *n*—the part of the tape extending beyond the shoulders of the interlocking elements to the outer tape edge. **D 2050**, D13

exposed underlayer—the underlying layer of mat or roving not covered by surface mat in a pultrusion.

NOTE—This condition can be caused by reinforcement shifting, too narrow surface mat, too wide underlying mat, uneven slitting of surface mat, or necking down of surface mat or excessive tension in pulling it off the spindle. **D 3918**, D20

exposure—(1) the transverse dimension of a roofing element not overlapped by an adjacent element in any roofing system. The exposure of any ply in a membrane may be computed by dividing the felt width minus 51 mm (2 in.), by the number of shingled plies; thus, the exposure of a 914-mm (36-in.) wide felt in a shingled, four-ply membrane should be 216 mm (8½ in.);

(2) the time during which a portion of a roofing element is exposed to the weather. **D 1079**, D08

exposure, *n*—contact with a chemical, biological, physical or other agent over a specified time period. **D 1356**, D22

exposure:—(1) The act of submitting material to radiation to which it is sensitive.

(2) the quantitative measure of exposure as a function of intensity and time of the radiation (often the product of $I \times t$) falling on a sensitive material.

(3) *X-ray*—the product of X-ray intensity and time. **E 7**, E04

exposure—contact with a chemical or physical agent. **E 943**, E47

exposure—the product of irradiance and time required to produce a suitable pattern on the recording medium. **E 1316**, E07

exposure, *n*—contact with a physical, chemical, biological, or radiological agent. **E 2114**, E06

exposure, *n*—the act of subjecting the test specimen to the test conditions. **G 113**, G03

exposure angle, *n*—the tilt from horizontal of the test specimen or any other exposed material, or both. **G 113**, G03

exposure duration, *n*—*in erosion or wear*, exposure time, or any other appropriate measure of the accumulation of exposure to an erosion or wear environment. **G 40**, G02

exposure index—the rating of a film for use in connection with exposure tables, exposure computers, and exposure meters. (See also **sensitivity**.) **E 7**, E04

exposure latitude—range of light or time settings over which an acceptable copy can be produced. **F 335**, F05

exposure racks, at-latitude—in solar energy applications, racks that hold specimens at an inclination angle equal to the latitude of the rack location, facing south. **E 772**, E44

exposure, radiographic exposure—the subjection of a recording medium to radiation for the purpose of producing a latent image. Radiographic exposure is commonly expressed in terms of milliamperes-seconds or millicurie-hours for a known source-to-film distance. **E 1316**, E07

exposure rate, *X*—the quotient of dX by dt , where dX is the increment of exposure in the time interval, dt (ICRU).

$$X = dX/dt$$

Unit: $C \cdot kg^{-1} s^{-1}$ **E 170**, E10

exposure scale—in a photographic process, the range of exposure over which substantially correct reproduction is obtained. This is measured by the ratio of the exposure corresponding to the minimum useful gradient at the high exposure end of the scale to that corresponding to the minimum useful gradient at the low exposure end. **E 7**, E04

exposure table—a summary of values of radiographic exposures suitable for the different thicknesses of a specified material.

E 1316, E07

exposure, *X*—the quotient of dQ by dm , where the value of dQ is the absolute value of the total charge of the ions of one sign produced in air when all the electrons (negatrons and positrons) liberated by photons in air of mass dm are completely stopped in air (ICRU).

$$X = dQ/dm$$

Unit: $C \cdot kg^{-1}$

E 170, E10

ex situ—a term used to describe work performed after removal to another location or away from a facility. **E 1605**, E06

ex situ treatment, *n*—treatment, remediation, or cleanup of contaminated material in a treatment facility at a different location from the contaminated site. **E 833**, E06

extended binary code decimal interchange code, *n*—an eight-bit code set used on communications lines with IBM or IBM-compatible terminals and computers. (See **EBCDIC**.) **F 1457**, F05

extended life coolant, *n*—an engine coolant for light-duty service vehicles with recommended change-out of the coolant after 160 000 km (100 000 miles), 5 years, or 4000 operating hours. **D 4725**, D15

extended life mortars—mortar consisting of cementitious materials, aggregate, water, and set-control admixtures which are measured and mixed at a central location using weight-or-volume-control equipment. This mortar as delivered to a construction site shall be usable for a period in excess of 2½ h. **C 1180**, C12

extended pigments, *n*—organic pigments diluted with an extender (for example, alumina trihydrate, blanc fixe, or calcium carbonate). **D 16**, D01

extended source—a source of infrared radiation whose image completely fills the field of view of a detector.

NOTE—The irradiance is independent of the distance from the source to the region of observation. In practice, sources that are not extended sources are considered to be point sources; see **point source**.

E 1316, E07

extender—an additive whose primary purpose is to increase total grout volume. **D 653**, D18

extender, *n*—substance added to an adhesive to reduce the amount of the primary binder required per unit area. **D 907**, D14

extender, *n*—an organic material used to augment the polymer in a compound. **D 1566**, D11

extender—a material that increases the effective life of an agricultural after application. **E 1519**, E35

extensibility, *n*—that property by virtue of which a material can undergo extension or elongation following the application of sufficient force. (See also **elongation**.) **D 123**, D13

extensibility, *n*—that property by virtue of which a material can undergo extension or elongation following the application of sufficient force. **D 4848**, D13

extension, *n*—the change in length of a material due to stretching. (Compare **elongation**.) **D 123**, D13

extension—linear strain associated with an increase in length. (ISRM) **D 653**, D18

extension, *n*—the change in length of a material due to stretching. (Compare **elongation**.) **D 4848**, D13

extension—movement by which the angle at the joint is increased in the sagittal plane; the opposite of flexion. **F 869**, F08

extensional definition, *n*—a definition of a term formed by listing all of the entities that comprise the concept. **E 1992**, E02

extension force, *n*—the force required to stretch a material to a given length. **D 123**, D13

extension lead wires—wires leading from a thermocouple to the voltage-measuring instrument. These wires should have the same temperature-emf relationship as the thermocouple wires. **E 7**, E04

extension-recovery chart, *n*—in *elastic materials testing*, a continuously plotted graph of tension versus extension resulting from an extension-recovery cycle. (Compare **tension-recovery chart**. See also **extension-recovery cycle** and **tension-recovery cycle**.)

D 123, D13

extension-recovery cycle, *n*—in *tension testing*, the continuous extension of a specimen, with a momentary hold at a specified extension, followed by a controlled rate of return to zero extension. (Compare **tension-recovery cycle**. See also **extension-recovery chart** and **tension-recovery chart**.)

D 123, D13

extension-recovery cycle, *n*—in *tension testing*, the continuous extension of a specimen, with a momentary hold at a specified extension, followed by a controlled rate of return to zero extension.

D 4848, D13

extension wires, *n*—those having temperature-emf characteristics that when connected to a thermocouple effectively transfer the reference junction to the other end of the wires. (Compare **compensating wires**.)

E 344, E20

extension wires, *n*—wires of either Seebeck matching or of compensating extension wire type used to extend the effective length of the thermoelements. Compensating extension wires match the Seebeck coefficient only over a limited temperature range.

E 344, E20

extensometer, *n*—a device for determining elongation of a specimen as it is strained.

D 1566, D11

extensometer, *n*—a device for sensing strain.

E 6, E28

extensometer—device for sensing the elongation of fastener material while it is subjected to tensile stress, for the purpose of measuring linear deformation under controlled test conditions.

F 1789, F16

extensometer system, *n*—a system for sensing and indicating strain.

*Type 1 extensometer system, *n**—an extensometer system that both defines gage length and senses extension; for example, a clip-on strain gage type with conditioning electronics.

*Type 2 extensometer system, *n**—an extensometer system that senses extension of a gage length that is defined by specimen features such as ridges, notches, or overall height (in case of a compression test piece).

*Type 3 extensometer system, *n**—an extensometer system that intrinsically senses strain (ratiometric principle); for example, video camera system.

E 6, E28

exterior air-distribution envelope—the boundary or barrier separating the interior volume of the air distribution system from the outside environment or unconditioned spaces.

E 631, E06

exterior insulation and finish system (EIFS), *n*—non-load-bearing outdoor wall finish system consisting of a thermal insulation board, an attachment system, a reinforced base coat, exterior joint sealant, and a compatible finish.

E 631, E06

exterior insulation and finish system (EIFS), *n*—nonload bearing, exterior wall cladding system that consists of an insulation board attached either adhesively or mechanically, or both, to the substrate; an integrally reinforced base coat; and a textured protective finish coat.

E 2110, E06

exterior pack—See **pack**.

D 996, D10

exterior type plywood—a term applied to plywood that is capable of withstanding prolonged exposure to severe service conditions including prolonged and repeated wetting without failure in the glue bonds; the commercial classification is a function of veneer grade as well as glue durability.

D 1038, D07

exterior work area—outdoor porch, stairway, or other element of trim or walls on the exterior of a building.

E 631, E06

external circuit—the wires, connectors, measuring devices, current sources, and so forth, that are used to bring about or measure the desired electrical conditions within the test cell.

G 15, G01

external flotation (aka outboard flotation)—flotation element located external to the boom membrane.

F 818, F20

external force—a force that acts across external surface elements of a material body. (ISRM)

D 653, D18

external load-crushing strength test—a test of the pipe in which

external crushing forces are exerted in specified directions and locations on a specified length of pipe.

C 822, C13

external mixing pneumatic atomizer—a pneumatic atomizer in which pressurized gas is directed on a liquid film or jet outside the nozzle, so as to form a spray.

E 1620, E29

external ROM receptacle, *n*—a printed wiring board that accepts read only memory cartridges containing fonts or emulations. (See **ERR**.)

F 1457, F05

external sealing bands—flexible wrappings that are applied to the outside of a concrete pipe, box section, or manhole section joint intended to control the movement of fluids or solids through the joint.

C 822, C13

external tension—external tension member separated from the boom membrane by bridles.

F 818, F20

extinction—a decrease in the intensity of the diffracted beam caused by perfection or near perfection of crystal structure. (See also **primary extinction** and **secondary extinction**.)

E 7, E04

extinction coefficient—the ratio of the diffracted beam intensity when extinction is present to the diffracted beam intensity when extinction is absent. It is applicable to either **primary** or **secondary extinction**.

E 7, E04

extra-atomic relaxation energy—XPS, see **screening energy**.

E 673, E42

extracellular matrix, *n*—“(ECM), any material produced by cells and excreted to the extracellular space within the tissues. It takes the form of both ground substance and fibers and is composed chiefly of fibrous elements, proteins involved in cell adhesion, and glycosaminoglycans and other space-filling molecules. It serves as a scaffolding holding tissues together and its form and composition help determine tissue characteristics.” Extracellular matrix, a biological material or tissue derivative, may be used as a component of a TEMP.

F 2312, F04

extract—a liquid, powder, or solid concentrate of vegetable tannin obtained by extracting tannins from natural sources.

D 1517, D31

extractable matter, *n*—nonfibrous material in or on a textile, not including water, which is removable by a specified solvent or solvents, as directed in a specified procedure.

D 123, D13

extractable matter, *n*—nonfibrous material in or on a textile, not including water, which is removable by a specified solvent or solvents as directed in a specified procedure.

D 4845, D13

extractable matter, *n*—nonfibrous material in or on a textile not including water that is removable by a specified solvent or solvents, as directed in a specified procedure.

D 5684, D13

extraction—a general term concerning chemical methods of isolating phases from the metal matrix.

(1) *acid extraction*—removal of phases by dissolution of the matrix metal in an acid.

(2) *chlorine extraction*—removal by formation of a volatile chloride.

(3) *electrolytic extraction*—removal by using an electrolytic cell containing an electrolyte which preferentially dissolves the metal matrix.

E 7, E04

extraction—the dissolution of target analytes from a solid matrix into a liquid form. During sample digestion, target analytes are extracted (solubilized) into an acid solution.

E 631, E06

extraction, *n*—the dissolution of target analytes from a solid matrix into a liquid form.

E 1605, E06

extraction, *n*—the process of removing the patient/subject from an immediately hazardous environment along with assessment, treatment, stabilization, and packaging.

F 1490, F32

extraction cleaner, *n*—a portable, floor-supported cleaning system that can have the floor nozzle directly connected to the extractor or separated from the extractor housing by a hose, and is designed primarily for wet cleaning of carpet. The cleaning involves applying a solution on the carpet and its subsequent removal. The solution dispensing system may be totally self-contained or require hook up to a water supply when in use. The extractor may have some form of agitation to assist in the soil removal. The extractor

may have attachments and provisions for cleaning other surfaces. **F 395, F11**

extraction cleaning, n—a general term for a number of refurbishing methods in which the cleaning agent is delivered onto the textile product, agitated, and simultaneously removed by suction. **D 123, D13**

extraction cleaning, n—a general term for a number of refurbishing methods in which the cleaning agent is delivered onto the textile product, agitated, and simultaneously removed by suction. **D 5253, D13**

extraction cleaning, dry foam, n—See **dry foam extraction cleaning, D 5253, D13**

extraction cleaning, hot water, n—See **hot water extraction cleaning, D 5253, D13**

extraction cleaning, rotary, n—See **rotary extraction cleaning, D 5253, D13**

extraction cleaning, steam, n—a deprecated term since no steam is used. See the preferred term, **hot water extraction cleaning, D 5253, D13**

extractives—compounds occurring in plant materials but not forming part of the structural elements, that are removed with neutral solvents such as ether, alcohol, and water. **D 9, D07**

extractives—compounds occurring in plant materials, but not forming part of the structural elements, that are removed with neutral solvents such as ether, alcohol, and water. **D 1695, D01**

extrados—the exterior curved surface of an arch, as opposed to intrados, which is the interior curved surface of an arch. (ISRM) **D 653, D18**

extra-large head—usually more than 3½ times shank diameter, normally referring to head of regular-stock-steel nail. **F 547, F16**

extraneous ink—any spot appearing within the “read” area, but outside the COL, caused by smear, tracking, or splatter that can be caused either in the manufacturing or while entering data on the form and can result in less optimum readability. **F 149, F05**

extraneous moisture—synonym for *surface moisture*. **D 121, D05**

extraordinary repairs—work that extends the life of a fixed asset that is capitalized, based on the entity’s capitalization thresholds, rather than expensed. **E 2135, E53**

extrapolated onset point (temperature or time), n—the temperature or time found by extrapolating the baseline prior to the thermal event to the intersection of a tangent constructed at the inflection point on the leading edge of the thermal event. **E 473, E37**

extrapolated onset temperature, n—empirically, the temperature found by extrapolating the baseline (prior to the peak) and the leading side of the peak to their intersection. **E 1445, E27**

extra smooth sheet, n—product produced by cold rolling (skin passing) the metallic coated sheet with a small reduction in thickness to smooth the surface and impart resistance to stretcher strain. (Syn. **skin passed sheet**) **A 902, A05**

extra-steep asphalt—See **super-steep asphalt, D 1079, D08**

extreme pressure (EP) additive, n—in a lubricant, a substance that minimizes damage to metal surfaces in contact under high stress rubbing conditions. **D 4175, D02**

extreme weather conditions—environmental conditions that have occurred only once during the past 30 years. **E 1705, E48**

extrinsic fiber optic chemical sensor, n—a fiber optic chemical sensor in which modulation of the optical signal is not effected through a change in the properties of the fiber itself. **E 131, E13**

extrudability, n—in building construction, the ability of a sealant under pressure to flow through an orifice. **C 717, C24**

extrudate, n—the material that issues from an extruder. **D 1566, D11**

extrude, v—to shape a plastic body by forcing the body through a die. **C 1145, C28**

extruded, v—formed by being forced through a shaping orifice as a continuous body. **C 709, D02**

extruded, v—formed by being forced through a shaping orifice as a continuous body. **D 4175, D02**

extruded particleboard—a particleboard manufactured by forcing a mass of particles coated with an extraneous binding agent through a heated die with the applied pressure parallel to the faces and in the direction of extruding. **D 1554, D07**

extruder, n—a device, such as a pug mill, that forces plastic bodies through a die of appropriate shape and size in a continuous column. **C 1145, C28**

extruder, n—machine designed to force a rubber or rubber mix through an orifice, which is often shaped to the geometry of the desired product. **D 1566, D11**

extrusion—a uniform metal shape, long in relation to its cross-sectional dimensions, produced by forcing a suitably preheated billet or preform through an orifice (die) of the desired cross section. Extrusions generally are furnished in straight lengths. **B 846, B05**

extrusion, n—shaping of brick by pushing plastic clay or shale through a die opening that forms the peripheral dimensions of the brick. **C 43, C15**

extrusion, n—a process in which heated or unheated plastic is forced through a shaping orifice (a die) in one continuously formed shape, as in film, sheet, rod, or tubing. **D 883, D20**

extrusion, n—the continuous shaping of a material during plastic passage through a die. **D 1566, D11**

extrusion, n—a process whereby heated or unheated plastic forced through a shaping orifice becomes one continuously formed piece. (D20) **F 412, F17**

extrusion billet, n—solid or hollow form, commonly cylindrical, used as the final length of material charged into the extrusion press cylinder, and is usually a cast product, but may be a wrought product or sintered from powder compact. **B 881, B07**

extrusion coating—in flexible barrier materials, (1) a process of extrusion whereby a molten extrudate adheres to the surface of another (solid) material, forming a continuous layer upon cooling. (2) Also, the product resulting from such a process. **F 17, F02**

extrusion coating—See Terminology F 17. **F 1327, F02**

extrusion ingot, n—solid or hollow cast form, usually cylindrical, suitable for extruding. **B 881, B07**

extrusion log, n—starting stock for extrusion billet. Extrusion log is usually produced in lengths from which shorter extrusion billets are cut. **B 881, B07**

extrusion mark (score line), n—a mark formed on an extrudate during the extrusion process either by accident or intent. **D 1566, D11**

extrusion welding—a process in which heated plastic is forced through a shaping orifice (or die) and applied with pressure to suitably prepared, locally preheated plastic pieces of the same resin base, to join them. **C 904, C03**

exudation, n—the action by which all or a portion of the low melting constituent of a compact is forced to the surface during sintering. Sometimes referred to as “bleed out.” Synonymous with **sweating, B 243, B09**

exudation—the migration of a substance to the surface of a coating or lining film. **D 4538, D33**

eye—the opening in the bottom of a pot furnace through which the flame enters. **C 162, C14**

eye bolt—bolt having a head which is a closed or open ring which as a threaded shank and has a defined breaking strength, proof load, and tensile strength. **F 1789, F16**

eyebrow—used for direct mounting to ovens and some dishwashers. **F 1827, F26**

eye clearance—the distance from the back lens of an eyepiece to the proper location of the viewer’s eye, typically about 8 mm (about 20 mm for high eyepoint eyepieces which permit the use of eyeglasses). **E 7, E04**

eye lens—the lens in an eyepiece nearest to the eye. **E 7, E04**

eyepiece—the lens system used in an optical instrument for magnification of the image formed by the objective. **E 7, E04**

eyepiece micrometer—See **ocular micrometer, E 7, E04**

F

- F**—an F factor that contains a portion of the *E. coli* genome. E 1705, E48
- fabric, n**—*in textiles*, a planar structure consisting of yarns or fibers. D 123, D13
- fabric**—a fibrous material containing natural or synthetic fibers, or both, in yarn form, interlaced in various configurations (woven, knitted, or nonwovens). D 459, D12
- fabric**—*for rock or soil*, the spatial configuration of all textural and structural features as manifested by every recognizable material unit from crystal lattices to large scale features requiring field studies. D 653, D18
- fabric**—the orientation in space of the elements composing the rock substance. (ISRM) D 653, D18
- fabric, n**—a woven or nonwoven cloth of organic or inorganic filaments, threads, or yarns. D 1079, D08
- fabric**—a planar textile (Synonym: cdth)
- braided fabric, n*—a cloth constructed by a braiding process.
- knitted fabric, n*—a cloth constructed by a knitting process.
- nonwoven fabric, n*—a cloth constructed by bonding or interlocking, or both (but not interlacing) fiber by any combination of mechanical, chemical, thermal, or solvent means.
- plied yarn, n*—a yarn formed by twisting together two or more single yarns in one operation.
- woven fabric, n*—a cloth constructed by a weaving process. D 3878, D30
- fabric, n**—*in textiles*, a planar structure consisting of yarns or fibers. D 4850, D13
- fabric, n**—textiles cords used in tire manufacturing. D 5681, D34
- fabric, n**—*in textiles*, a planar structure consisting of yarns or fibers. D 6477, D13
- fabric**—the micromorphology of soil. D 7099, D18
- fabricate, v**—*in buttons*, the conversion of a blank into a complete button. D 123, D13
- fabricate, v**—*in buttons*, the conversion of a blank into a completed button. D 5497, D13
- fabricate, v**—to manufacture, form, construct, or assemble a product or component. E 631, E06
- fabricated**—assembled or built. E 2135, E53
- fabricating, n**—the manufacture of plastic products from molded parts, rods, tubes, sheeting, extrusions, or other forms by appropriate operations such as punching, cutting, drilling, and tapping including fastening plastic parts together or to other parts by mechanical devices, adhesives, heat sealing, or other means. D 883, D20
- fabricating, n**—the manufacture of plastic products from molded parts, rods, tubes, sheeting, extrusions, or other forms by appropriate operations such as punching, cutting, drilling, and tapping including fastening plastic parts together or to other parts by mechanical devices, adhesives, heat sealing, or other means. (D20) F 412, F17
- fabrication**—*when applied to dimension stone*, any of the processes involved in changing a raw stone piece to its final end use form. This includes, but is not limited to cutting, splitting, grinding, drilling, or face-finishing. C 119, C18
- fabricator, n**—*as related to corrugated metal pipe*, (1) the organization that produces the finished pipe, or (2) for structural plate pipe, the organization that processes flat sheets and other items needed for the field assembly of the finished products. A 902, A05
- fabric (chain link fence)**—a fencing material made from wire helically wound and interwoven in such a manner as to provide a continuous mesh without knots or ties except in the form of knuckling or of twisting the ends of the wires to form the selvages of the fabric. F 552, F14
- fabric dip, n**—*for tire fabrics*, a chemical composition which is applied to a textile cord or fabric to improve its adhesion to rubber compounds. D 123, D13
- fabric dip, n**—*for tire fabrics*, a chemical composition which is applied to a textile cord or fabric to improve its adhesion to rubber compounds. D 6477, D13
- fabric, n (édifice)**—*of a building*, all the elements, components, parts, and materials of a building, at any scale and of any age. E 631, E06
- fabric, n (édifice)**—*of a building*, all the elements, components, parts, and materials of a building, at any scale and of any age.
- historic fabric, n (édificehistorique)*—those portions of the building fabric that have historic significance. E 1480, E06
- fabric growth, n**—the increase in the original length of a specimen after the application of a specified force for a prescribed time and the subsequent removal of the tension D 123, D13
- fabric growth, n**—the increase in the original length of a specimen after the application of a specified force for a prescribed time and the subsequent removal of the tension. D 4850, D13
- fabric package, n**—a length of fabric in a form suitable for handling, storing, or shipping. D 123, D13
- fabric package, n**—a length of fabric in a form suitable for handling, storing, or shipping. D 4849, D13
- fabric ribbon**—an inked ribbon wherein the substrate is a woven cloth material, such as nylon, cotton, silk, etc. F 221, F05
- fabric roof-system, n**—a system of coated fabric or laminated fabric along with support cables, edge ropes, clamps, neoprene, roof drains, arch wear strips, and anchor bolts that constitutes the outside top covering of a building. D 123, D13
- fabric roof-system, n**—a system of coated fabric or laminated fabric along with support cables, edge ropes, clamps, neoprene, roof drains, arch wear strips, and anchor bolts that constitutes the outside top covering of a building. D 4850, D13
- fabric softener**—a laundry auxiliary product or laundry detergent ingredient whose primary function is to give fabrics a soft feel, smooth surface, or reduce static electricity, or a combination thereof. D 459, D12
- fabric stability, n**—*in vinyl-coated glass screening and louver cloth*, the property denoting the ability to resist slippage of yarn segments in one direction over yarn segments in the opposite direction. D 123, D13
- fabric stability, n**—*in vinyl coated glass screening and louver cloth*, the property denoting the ability to resist movement of yarn segments in one direction over yarn segments in the opposite direction. D 7018, D13
- fabric stretch, n**—the increase in length of a specimen of fabric resulting from a force applied under specified conditions. D 123, D13
- fabric stretch, n**—the increase in length of a specimen of fabric resulting from a force applied under specified conditions. D 4850, D13
- FAC**—free available chlorine. D 6161, D19
- facade paint, n**—a decorative and protective coating for exterior masonry surfaces—usually for buildings and walls. D 16, D01
- face, n**—the surface designed to be left exposed to view or to receive decoration or additional finishes. C 11, C11
- face**—to cover with a new surface. C 896, C04
- face**—the wide surface of rectangular pieces of lumber. Often the surface that determines the grade of lumber destined for remanufacture. D 9, D07
- face, n**—*in buttons*, that portion which will be exposed after attaching to the substrate. D 123, D13
- face**—See **container**. D 996, D10
- face**—the better side of a panel in any grade of plywood calling for a face and back; also either side of a panel where the grading rules draw no distinction between faces. D 1038, D07
- face, n**—*in buttons*, that portion which will be exposed after attachment to the substrate. D 5497, D13

face, *adj*—pertaining to viewing a specimen at an angle close to its surface normal. **E 284**, E12

face angle—the included dihedral angle between two opposite faces of an indenter. **E 7**, E04

face angle, *n*—the aspecular angle when a specimen is viewed close to its surface normal and illuminated near 45°, or when those angles of illumination and viewing are interchanged. **E 284**, E12

face-centered—having atoms (or groups of atoms) separated by translations of 1/2, 1/2, 0; 1/2, 0, 1/2; and 0, 1/2, 1/2 from a similar atom (or group of atoms). The number of atoms in a face-centered cell must be a multiple of four. **E 7**, E04

face color, *n*—the color of a material when viewed at its face angle. **E 284**, E12

face (crystal)—an idiomorphic plane surface on a crystal. **E 7**, E04

face dimpling, *n*—buckling of the compressive facing into the individual cells of the honeycomb core due to compressive loading or the prepreg facing sagging into the individual honeycomb cells during cocure. **C 274**, D30

face, exposed, *n*—the in situ exposed surface(s) of a manufactured masonry unit. **C 1232**, C15

face, finished, *n*—any surface(s) of a manufactured masonry unit intended by the manufacturer to be exposed to view. **C 1232**, C15

face glazing, *n*—the method of glazing in which a rabbeted glazing recess, with no removable stop, is used and a triangular bead of compound is applied to the face of the lite and extended onto the recess. **C 717**, C24

face (heading)—the advanced end of a tunnel, drift, or excavation at which work is progressing. (ISRM) **D 653**, D18

face nail—See **siding nail**. **F 547**, F16

facer, *n*—the outermost, adhered top or bottom, or both, sheet (or layer) of an insulation board that is comprised of a different material than the insulation itself. It is commonly composed of organic paper, glass mat, or a combination thereof, generally impregnated or coated, or both, with asphalt, latex, or the like; or metal foil. **D 1079**, D08

face side, *n*—*intextile materials*, the side of the material that is outward in the completed object. (Ant. **back side**.) **D 123**, D13

face side, *n*—in textile materials, the side of the material that is outermost in the completed product. (Ant. **back side**, *wrong side*. Syn. *right side*.) **D 4965**, D13

face surface bend—procedure whereby load is applied perpendicular to the weld axis of the joint, at the weld, such that the weld face is subject to tension. **C 904**, C03

face wrinkling, *n*—buckling of the compressive facing into or away from the core. This progresses the width of the panel and causes failure. **C 274**, D30

facilities capital—the net book value of tangible capital assets and of those intangible capital assets that are subject to amortization. **E 2135**, E53

facility, *n*—a physical setting used to serve a specific purpose. **E 631**, E06

facility—see **hazardous-waste facility**. **E 631**, E06

facility, *n*—a physical setting used to serve a specific purpose. **E 1605**, E06

facility durability, *n*—the capability of a **facility** to maintain serviceability for a specified time. **E 631**, E06

facility durability, *n*—(durée de facilité)—*of a facility*, the capability of a facility to maintain serviceability for at least a specified period of time. Compare **durability—of a building**. **E 1480**, E06

facility durability, *n* (durée de facilité)—*of a facility*, the capability of a facility to maintain serviceability for at least a specified period of time. Compare **durability—of a building**. **E 631**, E06

facility evaluation, *n*—comparison of the qualitative and quantitative results of observations, measurements, analyses, or other tests against criteria established for a specified purpose and to a specified precision and reliability. **E 631**, E06

facility evaluation, *n*—comparison of the qualitative and quantitative results of judgments, observations, measurements, analyses, or

other tests against performance criteria established for a specified purpose, and to a specified precision and reliability. (See also **requirement statement**.) Compare **rating process**. **E 631**, E06

facility evaluation, *n*—comparison of the qualitative and quantitative results of judgments, observations, measurements, analyses, or other tests against performance criteria established for a specified purpose, and to a specified precision and reliability. (See also **requirement statement**.) Compare **rating process**. **E 1480**, E06

facility function, *n*—the purpose or activity for which the **facility** is designed, used, or required to be used. **E 631**, E06

facility-in-service, *n* (installation en service)—facility as completed and operational; for example, an occupied **building** or a road in service. **E 631**, E06

facility-in-service, *n* (installation en service)—facility as completed and operational; for example, an occupied **building** or a road in service. **E 1480**, E06

facility management—practice of planning and managing workplaces. **E 631**, E06

facility, *n* (facilité)—a physical setting used to serve a specific purpose. **E 1480**, E06

facility operator, *n* (exploitant d'installations)—organization or agency having a contract with the owner or investor to operate a facility.

facility program, *n* (programme d'installations): **E 631**, E06

facility operator, *n* (exploitant d'installations)—organization or agency having a contract with the owner or investor to operate a facility. **E 1480**, E06

facility performance, *n*—the behavior in service of a **facility** for a specified use. **E 631**, E06

facility performance, *n* (rendement d'installations)—behavior in service of a facility for a specified use. **E 1480**, E06

facility program, *n* (programme d'installations): **design program**, *n* (programme de conception)—(*design brief*) document specifying what facilities will be provided to the **occupants**, and confirming to the owner the requirements for the facility.

functional program, *n* (programme fonctionnel)—document that specifies functional facility serviceability requirements of **occupants** and owner.

project brief, *n* (exposé projet)—document describing the required **facility serviceability** in detail sufficient for the project to proceed. **E 1480**, E06

facility project brief (statement of work)—document describing services to be provided by the design consultant (architect, engineer, or interior designer) for a **facility**, in detail sufficient for the design to proceed. **E 631**, E06

facility project brief (statement of work), *n* (exposé de projet d'installations (exposé travaux))—document describing services to be provided by the design consultant (architect, engineer, or interior designer) for a facility, in detail sufficient for the design to proceed. **E 1480**, E06

facility scattered neutrons—neutrons scattered in the facility that contribute to the film exposure. **E 1316**, E07

facility serviceability, *n* (fonctionnalité d'installations)—capability of a facility to perform the function(s) for which it is designed, used, or required to be used. **E 1480**, E06

facility serviceability, *n*—the capability of a **facility** to perform the function(s) for which it is designed, used, or required to be used. **E 631**, E06

facility serviceability profile, *n*—a graphic representation, usually as a bar chart, of the level of serviceability for each topic of serviceability. **E 631**, E06

facility serviceability profile, *n* (profil de fonctionnalité d'installations)—graphic display, usually as a bar chart, of the set of **rating scores** for aspects of the serviceability of a facility.

E 631, E06

facility serviceability profile, n (profil de fonctionnalité d'installations)

facility serviceability profile, n (profil de fonctionnalité d'installations)—graphic display, usually as a bar chart, of the set of **rating scores** for aspects of the serviceability of a facility.

E 1480, E06

facility use, n—the functions and activities that take place in a **facility**.

E 631, E06

facility use, n (utilisation d'installations)—functions and activities that take place in a facility.

E 1480, E06

facing, n—a protective or decorative (or both) surface applied as the outermost layers of an insulation system.

C 168, C16

facing, n—the outermost layer or composite component of a sandwich construction, generally thin and of high density, which resists most of the edgewise loads and flatwise bending moments: synonymous with **face**, **skin** and **facesheet**.

C 274, D30

facing—the outer layer of **revetment**.

D 653, D18

facing, n—a form of **linerboard** used as a flat member of **corrugated fiberboard** (sometimes erroneously called a **liner**).

D 996, D10

facing—the outermost layer or composite component of a sandwich construction, generally thin and of high density, that resists most of the edgewise loads and flatwise bending moments (Syn. **face**; **skin**).

E 631, E06

facing—the outermost layer or composite component of a sandwich construction, generally thin and of high density, that resists most of the edgewise loads and flatwise bending moments (Syn. **face**; **skin**).

E 1749, E06

facing brick, n—brick for general purposes where appearance properties such as color, texture, and chippage are important; see **Specification C 216** and **Specification C 652**.

C 43, C15

facing delamination, n—where the facing becomes disbonded from the core.

C 274, D30

facing leathers—a lightweight leather generally used for facing seams, and binding the edges of shoe uppers. Also applied to lightweight, smooth calf and lamb, and to skivers, of which the inner surfaces of billfolds and wallets are frequently made.

D 1517, D31

facing unit—manufactured masonry unit designed for use where one or more faces will be exposed and for which the specification includes requirements on color, finish, and other properties affecting appearance.

C 1232, C15

factor, n—*in experimenting*, a condition or circumstance that is being investigated to determine if it has an effect upon the result of testing the property of interest.

D 123, D13

factorial experiment (general), n—in general, an experiment in which all possible treatments formed from two or more factors, each being studied at two or more levels (versions) are examined so that interactions (differential effects) as well as main effects can be estimated.

E 456, E11

factorial experiment (general), n—in general, an experiment in which all possible treatments formed from two or more factors, each being studied at two or more levels (versions), are examined so that interactions (differential effects) as well as main effects can be estimated.

E 1325, E11

factory-finished boards—boards with a factory-applied surface as, for example, powder or liquid coatings or overlays. These finished boards require no further field finishing.

D 1554, D07

factory mix, n—a material that is prepared at the point of manufacture and is ready to use without the addition of other materials, except possibly water to adjust consistency.

E 2110, E06

factory-primed boards—boards with a factory-applied primer that requires subsequent finishing in the field.

D 1554, D07

factory sole leather—one of the two principal types of sole leather. It is tanned and finished to have more flexibility and compressibility than Finders' sole leather, and is more suitable for use in shoemaking machinery. (See also **Finders' soleleather**.)

D 1517, D31

factory square—10 m² (108 ft²).

D 1079, D08

facultative anaerobe, n—a microorganism capable of growing in both oxic and anoxic environments.

D 4175, D02

facultative organisms—microbes capable of adapting to either aerobic or anaerobic environments.

D 6161, D19

fade—{archaic} attack of the surface of glass causing an oily or whitish surface.

C 162, C14

fading, n—a change in color, usually to a lighter and less-saturated color.

E 284, E12

fading (slate)—a slate that has a significant color change within the first year of exposure to weather, often the result of chemical alteration of the iron minerals.

C 119, C18

fading unit (AATCC), n—a specific amount of exposure made under the conditions specified in various test methods where one Fading Unit is one-twentieth (1/20 th) of the exposure required to produce a color change equal to Step No. 4 on the Gray Scale for Color Change or 1.7 ± 0.3 CIELAB units of color difference on Blue Wool Lightfastness Standard L 4 or 20 ± 1.7 CIELAB units of color difference on the Xenon Reference Fabric or combination thereof. (AATCC Technical Manual

G 113, G03

)
Fahrenheit, adj—pertaining to or denoting something related to the expression of temperature in degrees Fahrenheit.

E 344, E20

Fahrenheit—designation of a degree on the Fahrenheit temperature scale that is related to the International Practical Temperature Scale by means of the equation: $T_F = 1.8 T_C + 32$.

where:

T_F is the temperature in degree Fahrenheit and T_C is the temperature in degrees Celsius.

E 1142, E37

Fahrenheit (°F)—designation of a degree on the Fahrenheit temperature scale that is related to the International Practical Temperature Scale.

D 6161, D19

faience mosaics—faience tile that are less than 6 in.² (39 cm²) in facial area, usually 3/16 to 3/8 in. (8 to 9.5 mm) thick, and usually mounted to facilitate installation.

C 242, C21

faience tile—glazed or unglazed tile, generally made by the plastic process, showing characteristic variations in the face, edges, and glaze that give a handcrafted, nonmechanical, decorative effect.

C 242, C21

faience ware—formerly a decorated earthenware with an opaque glaze, but currently designating a decorated earthenware having a transparent glaze.

C 242, C21

failure, n—an arbitrary point beyond which a material ceases to be functionally capable of its intended use. (Compare **rupture**.)

D 123, D13

failure, n—*in sewnfabric seams*, fabric or sewing thread rupture or seam (yarn) slippage.

D 123, D13

failure, n—see **adhesive-joint failure, adhesion failure, cohesion failure** and **substrate failure**.

D 907, D14

failure—see **dielectric failure**.

D 1711, D09

failure, n—an arbitrary point beyond which a material ceases to be functionally capable of its intended use.

D 4439, D35

failure, n—*in testinggeosynthetics*, water or air pressure in the test vessel at failure of the geosynthetic.

D 4439, D35

failure, n—an arbitrary point beyond which a material ceases to be functionally capable of its intended use. (Compare **rupture**.)

D 4848, D13

failure, adhesive—rupture of an adhesive bond, such that the plane of separation appears to be at the adhesive-adherend interface.

F 412, F17

failure by rupture—see **shear failure**.

D 653, D18

failure criterion—specification of the mechanical condition under which solid materials fail by fracturing or by deforming beyond some specified limit. This specification may be in terms of the stresses, strains, rate-of-change of stresses, rate-of-change of strains, or some combination of these quantities, in the materials.

D 653, D18

failure criterion—theoretically or empirically derived stress or strain relationship characterizing the occurrence of failure in the rock. (ISRM)

D 653, D18

failure (in rocks)—exceeding the maximum strength of the rock or

exceeding the stress or strain requirement of a specific design. (ISRM) **D 653, D18**

failure mode—failure mechanism during load application to anchor. **E 2265, E06**

failure (of a bulk solid)—plastic deformation of an overconsolidated bulk solid subject to shear, causing dilation and a decrease in strength. **D 653, D18**

fairing—a shape that produces a smooth transition from one direction to another. Also referred to as a *feathering*. **E 631, E06**

fairing—a shape that produces a smooth transition from one direction to another. Also referred to as a *feathering*. **E 1749, E06**

fair value—is the amount at which the asset (liability) could be bought (incurred) or sold (settled) in a current transaction between willing parties, that is, other than in a forced or liquidation sale. Quoted market prices in active markets are the best evidence of fair value and shall be used as the basis of the measurement, if available. However, in many instances, quoted market prices in active markets will not be available for the long-lived asset (asset groups) covered by this definition. In those instances, the estimate of fair value shall be based on the best information available, including prices for similar assets (groups) and the results of using other valuation techniques. **E 2135, E53**

fall, n—undesirable descent due to the force of gravity, usually from a standing posture or during ambulation, to a lower level, usually the ground or floor. **F 1646, F13**

fallback—shrinkage, settlement, or loss of plugging material placed in a borehole or well. **D 653, D18**

fallback—a reduction in bitumen softening point, sometimes caused by refluxing or overheating in a relatively closed container. (See also **softening point drift**). **D 1079, D08**

fall-off—tendency of an electrostatically deposited powder to fall off the work piece during normal processing. **C 286, B08**

fall velocity—the settling rate of a particle in a given medium. **D 4410, D19**

false brinelling, n—damage to a solid bearing surface characterized by indentations not caused by plastic deformation resulting from overload but thought to be due to other causes such as *fretting corrosion*. (See also **brinelling**). **G 40, G02**

false indication, n—an NDT indication that is interpreted to be caused by a condition other than a discontinuity or imperfection. **E 1316, E07**

false negative, n—misclassification of a deceptive person as truthful. **E 2035, E52**

false negative error, n—occurs when environmental data mislead decision maker(s) into not taking action specified by a decision rule when action should be taken. **D 5681, D34**

false negative error, n—an error which occurs when (environmental) data misleads the decision maker(s) into not taking action when action should be taken. **D 5681, D34**

false positive, n—a test result that states that a drug is present when, in fact, such a drug is not present in an amount greater than a threshold or designated cut-off concentration. **E 1732, E30**

false positive, n—misclassification of a truthful person as deceptive. **E 2035, E52**

false positive error, n—occurs when environmental data mislead decision maker(s) into taking action specified by a decision rule when action should not be taken. **D 5681, D34**

false positive error, n—an error which occurs when environmental data misleads the decision maker(s) into taking action when action should not be taken. **D 5681, D34**

false set—see **early stiffening** **C 219, C01**

false set—*in grouting*, the rapid development of rigidity in a freshly mixed grout without the evolution of much heat. **D 653, D18**

family—a complete series of penetrant materials required for the performance of a liquid penetrant examination. **E 1316, E07**

family, n—a set of fonts sharing the same type style, but differing in height, weight, and posture. **F 1457, F05**

family (of crystal planes)—the planes in any one crystal that have common Miller indices, regardless of sign. **E 7, E04**

fan airflow rate, Q_{fan} , n—the volume of airflow through the blower door per unit of time (m^3/s , ft^3/min). **E 631, E06**

fan/control energy rate—the rate of energy consumption (Btu/h or kW) by the equipment's controls or fan motor, to both, E_{fan} .

$$E_{fan} = \frac{E_{fan} \times 60}{t_{preheat} \times 1000}$$

where:

E_{fan} = fan/control energy measured in Btu or Wh, and
 $t_{preheat}$ = preheat time, min.

F 1827, F26

fancy leather—leathers made from hides and skins of all kinds that have commercial importance and value primarily because of grain, or distinctive finish, whether natural or the result of processing. Such processing may be graining, printing, embossing, ornamenting (including in gold, silver, and aluminum finishes), or any other finishing operation enhancing the appeal of leather. **D 1517, D31**

fan first vacuum cleaner system, n—a vacuum cleaner construction in which the dirt laden air is passed through the fan system and then into the dirt receptacle (bag type filter, bagless filter or other type of dirt separator). The separated air is then expelled from the cleaner. This type of construction is sometimes referred to as dirty air or direct system. **F 395, F11**

fan-out effect, n—widening of the paper web in a web-fed press, normally caused by dampening but also by printing pressure, which can theoretically occur in sheet-fed printing as well. **D 6488, D01**

fan pattern, n—a spray pattern in which the liquid flux is concentrated in a narrow oval or ellipse in a plane perpendicular to the spray axis. **E 1620, E29**

fan spray atomizer—a pressure atomizer that produces a flat sheet of liquid that collapses into particles. The angle or width of the sheet is controlled by the shape of a slot or oval discharge orifice, by an external deflector, or by impinging jets. **E 1620, E29**

faraday—the number of coulombs (96,490) required for an electrochemical reaction involving one chemical equivalent. **B 374, B08**

far field—the zone of the beam where equal reflectors give exponentially decreasing amplitudes with increasing distance. **E 1316, E07**

far-infrared—pertaining to the infrared region of the electromagnetic spectrum with wavelength range from approximately 25 to 1000 μm (wavenumber range 400 to 10 cm^{-1}). **E 131, E13**

fastener, n—in packaging, a device that serves to secure one part to another; for example, nail, screw, **staple, strapping, stitch**, or adhesive. **D 996, D10**

fastener, n—integral tooth of connector plate and/or separate nail used to fasten connector plate to wood member. **E 631, E06**

fasteners:

fastener—see **anchor**. **E 2265, E06**

fastener—see **mechanical fastener**. **F 1789, F16**

fastener electroplating—electro-deposition by electrolysis of an adherent metallic coating upon a fastener serving as an electrode. This coating may function as protective, decorative, or in a defined engineering function such as wearability or abrasive resistance. **F 1789, F16**

fastener manufacturer—organization or firm that procures a raw material, fabricates it into a mechanical fastener, and processes it to have certain mechanical properties. **F 1789, F16**

fastener quality—conformance of a fastener to its specification for dimensions, mechanical properties, performance requirements, and other requirements of a specification. **F 1789, F16**

fasteners:

self-sealing fastener—a fastener that provides a tight seal without the need for sealant material nor the use of a mechanical seal (for example, an interference fit fastener).

wet-installed fastener—a fastener that is coated on the shank and under the head with a curing-type sealant to provide a

fasteners:

corrosion barrier and a secondary seal. **E 1749, E06**

fastener specification—precise statement of a set of requirements to be satisfied by a fastener, its material, or its processing. It also indicates the procedure used to determine whether the requirements given are satisfied. **F 1789, F16**

fastener standard—document which details the attributes of a finished fastener and includes such characteristics as geometry, material or chemistry, heat treatment, finish, lot size, and packaging. **F 1789, F16**

fastener tensile stress area—assumed cross sectional area of a threaded fastener through the thread, which is used when computing the load a fastener can support in tension. **F 1789, F16**

fastener testing—determination or verification that the fastener meets its specification requirements. **F 1789, F16**

fast Fourier transform (FFT)—a method for speeding up the computation of a discrete FT by factoring the data into sparse matrices containing mostly zeroes. **E 131, E13**

fast neutrons—a term for designating neutrons of energy exceeding some threshold that must be specified (typically 0.1 or 1 MeV); often associated with those neutrons predominantly responsible for displacement damage of materials in neutron radiation fields. **E 170, E10**

fast pack container—See **container**. **D 996, D10**

fate, environmental—the form and location of a material resulting from transport and transformation. **E 943, E47**

fatigue—the process of progressive localized permanent structural change occurring in a material subjected to conditions that produce fluctuating stresses and strains at some point or points and that may culminate in cracks or complete fracture after a sufficient number of fluctuations. **D 653, D18**

fatigue—decrease of strength by repetitive loading. (ISRM) **D 653, D18**

fatigue, n —in atomic spectrometry, the decrease in response of a photoelectric radiant energy receiver caused by the accumulated exposure of the receiver to radiant energy. **E 135, E01**

fatigue—the process of progressive localized permanent structural change occurring in a material subjected to conditions that produce fluctuating stresses and strains at some point or points and that may culminate in cracks or complete fracture after a sufficient number of fluctuations. **E 1823, E08**

fatigue—any degradation in electrophotographic properties of a photoconductive material caused by repetitive charging, light exposure, or other operation in the imaging process. **F 335, F05**

fatigue, n —the process of progressive localized permanent structural change occurring in a material subjected to conditions that produce fluctuating stresses and strains at some point or points and that may culminate in cracks or complete fracture after a sufficient number of fluctuations. **F 1582, F04**

fatigue breakdown, n —the deterioration of an elastomeric product during repeated deformation. **D 1566, D11**

fatigue-crack-growth rate, da/dN , [L]—the rate of crack extension under fatigue loading, expressed in terms of crack extension per cycle of fatigue. **E 1823, E08**

fatigue-crack-growth threshold, ΔK_{th} [$FL^{-3/2}$]—that asymptotic value of ΔK at which da/dN approaches zero. For most materials an *operational*, though arbitrary, definition of ΔK_{th} is given as that ΔK which corresponds to a fatigue crack growth rate of 10^{-10} m/cycle. **E 1823, E08**

fatigue cycle—See **cycle**. **E 1823, E08**

fatigue ductility, D_f —the ability of a material to deform plastically before fracturing, determined from a constant-strain amplitude, low-cycle fatigue test. **E 6, E28**

fatigue ductility exponent, c , n —the slope of a log-log plot of the plastic strain range and the fatigue life. **E 6, E28**

fatigue, dynamic, n —the deterioration of a material by repeated deformation. See **fatigue breakdown.** **D 1566, D11**

fatigue life, n —the number of deformations required to produce a

specified state of fatigue breakdown in a test specimen or product that is deformed under a prescribed set of conditions. **D 1566, D11**

fatigue life, n —the number of loading cycles, N , of a specified character that a given specimen sustains before failure of a specified nature occurs. **F 1582, F04**

fatigue life for p % survival—an estimate of the fatigue life that p % of the population would attain or exceed under a given loading. The observed value of the median fatigue life estimates the fatigue life for 50 % survival. Fatigue life for p % survival values, where p is any number, such as, 95, 90, and so forth, also may be estimated from the individual fatigue life values. **E 1823, E08**

fatigue life, N_p , n —the numbers of cycles of stress or strain of a specified character that a given specimen sustains before failure of a specified nature occurs. **E 6, E28**

fatigue life, N_f —the number of cycles of a specified character that a given specimen sustains before failure of a specified nature occurs. Fatigue life, or the logarithm of fatigue life, is a dependent variable. **E 1823, E08**

fatigue limit—point on stress-strain curve below which no fatigue can be obtained regardless of number of loading cycles. (ISRM) **D 653, D18**

fatigue limit—see *endurance limit*. **F 1789, F16**

fatigue limit for p % survival [FL^{-2}]—the limiting value of fatigue strength for p % survival as N becomes very large; p may be any number, such as 95, 90, and so forth. **E 1823, E08**

fatigue limit, S_f [FL^{-2}]—the limiting value of the median fatigue strength as the fatigue life, N_f , becomes very large. **E 1823, E08**

fatigue loading—periodic, or not periodic, fluctuating loading applied to a test specimen or experienced by a structure in service. (Also known as *cyclic loading*.) **E 1823, E08**

fatigue notch factor, k_f —the ratio of the fatigue strength of a specimen with no stress concentration to a specimen with a stress concentration for the same percent survival at N cycles and for the same conditions. **E 1823, E08**

fatigue notch sensitivity, q —a measure of the degree of agreement between fatigue notch factor, k_f , and theoretical stress concentration factor, k_t . **E 1823, E08**

fatigue strength—maximum stress on an externally threaded fastener which can be tolerated for a specified number of repeated cycles prior to failure. **F 1789, F16**

fatigue strength at N cycles, S_N [FL^{-2}]—a value of stress for failure at exactly N cycles as determined from an $S-N$ diagram. The value of S_N thus determined is subject to the same conditions as those which apply to the $S-N$ diagram. **E 1823, E08**

fatigue strength at N Cycles, S_n [FL^{-2}], n —a value of stress for failure at exactly N cycles as determined from an $S-N$ diagram. The value S_n thus determined is subject to the same conditions as those that apply to the $S-N$ diagram. **F 1582, F04**

fatigue strength for p % survival at N cycles [FL^{-2}]—an estimate of the stress level at which p % of the population would survive N cycles; p may be any percent, such as 95, 90, and so forth. **E 1823, E08**

fatigue test—test involving repeated loading cycles, usually in excess of 2×10^6 cycles. **E 2265, E06**

fatigue test, n —a test designed to evaluate the cyclic load properties of a material, component, interconnection, subconstruct, construct, subassembly, or assembly. **F 1582, F04**

fatigue testing system—a device for applying repeated force cycles to a specimen or component. **E 1823, E08**

fatigue wear, n —wear of a solid surface caused by fracture arising from material fatigue. **G 40, G02**

fatiguing force, n —in testing sewn seams, the force that is repeatedly applied to a test specimen. **D 123, D13**

fatiguing force, n —in testing sewn seams, the force that is repeatedly applied to a test specimen. **D 4850, D13**

fatliquor—an emulsion of oils or greases in water, usually with an emulsifying agent, used to lubricate the fibers of leather. **D 1517, D31**

- fatty alcohol sulfate**—the product obtained by treating a one-chain fatty alcohol with a sulfonating agent, the major constituent being the half sulfuric acid ester of the fatty alcohol or a salt thereof. **D 459, D12**
- fatty matter, free**—the sum of the free rosin acids and free fatty acids plus the unsaponified and unsaponifiable fatty matter. **D 459, D12**
- fatty matter, total**—fatty and rosin acids plus unsaponified and unsaponifiable fatty matter. This fatty matter is usually isolated from an acidic 50/50 volume percent solution of ethanol and water by extraction with petroleum ether, as per Test Method D 460 and Test Methods D 820. **D 459, D12**
- fatty matter, unsaponifiable**—fatty matter (other than acids) that contain no saponifiable esters, such as fatty alcohols, and mineral oil. **D 459, D12**
- fatty matter, unsaponified**—fatty matter containing saponifiable esters, such as fatty oils, glycerides, and lanolin. **D 459, D12**
- fat wrinkle**—wrinkles on the grain of leather caused by fat deposits in the live animal. **D 1517, D31**
- fault**—a fracture or fracture zone along which there has been displacement of the two sides relative to one another parallel to the fracture (this displacement may be a few centimetres or many kilometres). (See also **joint fault set** and **joint fault system**. (ISRM) **D 653, D18**
- fault breccia**—the assemblage of broken rock fragments frequently found along faults. The fragments may vary in size from inches to feet. (ISRM) **D 653, D18**
- fault gouge**—a clay-like material occurring between the walls of a fault as a result of the movement along the fault surfaces. (ISRM) **D 653, D18**
- faulting of joints and cracks, n**—difference in elevation across a joint or crack. **E 867, E17**
- faulting of joints and cracks, n**—difference in elevation across a joint or crack. **E 1778, E17**
- faying surface**—the surface that makes contact with another surface. **E 631, E06**
- faying surface**—the surface that makes contact with another surface. **E 1749, E06**
- faying surface seal**—a seal installed between two overlapping surfaces. **E 631, E06**
- faying surface seal**—a seal installed between two overlapping surfaces. **E 1749, E06**
- FDA**—Food and Drug Administration (USA). **D 6161, D19**
- feasibility study, n** (étude de faisabilité)—study of a planned scheme or development, the practicality of its achievement, and its projected financial outcome. **E 631, E06**
- feasibility study, n** (étude de faisabilité)—study of a planned scheme or development, the practicality of its achievement, and its projected financial outcome. **E 1480, E06**
- feather**—See **striation**. **C 162, C14**
- feather fiber, n**—detached barbs of feathers which are not joined or attached to each other. **D 123, D13**
- feather fiber, n**—detached barbs of feathers which are not joined or attached to each other. **D 7022, D13**
- feathering, n**—a ragged edge on printed type. **D 6488, D01**
- feathering, n**—a ragged or finely trailing pattern at the sharp edge of type or solid areas. **D 6488, D01**
- feathering**—See **fairing**. **E 631, E06**
- feathering**—See **fairing**. **E 1749, E06**
- feathering**—an undesirable thread-like deposit extending radially from the edge of an image. **F 221, F05**
- feathering**—an undesirable thread-like deposit extending radially from the edge of an image (Terminology F 221). **F 335, F05**
- feathering, n**—a type of element irregular wear characterized by thin strips of rubber extending from the edge of the element. **F 538, F09**
- feathering, n**—ink spread over substrate causing fuzzy edges, spidery lines and poor print quality. See also **wicking**. **F 1857, F05**
- feathers**—an imperfection consisting of clusters of fine seed caused by dirt or foreign material entering the glass at the time of casting or shaping. **C 162, C14**
- feathers, n**—the outgrowth forming the contour and external covering of fowl. **D 123, D13**
- feathers, n**—the outgrowth forming the contour and external covering of fowl. **D 7022, D13**
- feathers, crushed, n**—feathers and feather fiber resulting from curling, crushing, or chopping feathers without removing the quill. **D 123, D13**
- feathers, crushed, n**—feathers and feather fiber resulting from curling, crushing, or chopping feathers without removing the quill. **D 7022, D13**
- feathers, damaged, n**—feathers that have been broken, damaged by insects, by mildew or rot, or otherwise materially injured. **D 123, D13**
- feathers, damaged, n**—feathers that have been broken, damaged by insects, by mildew or rot, or otherwise materially injured. **D 7022, D13**
- feathers, landfowl, n**—See **feathers, nonwaterfowl**. **D 123, D13**
- feathers, landfowl, n**—See **feathers, nonwaterfowl**. **D 7022, D13**
- feathers, nestling, n**—immature feathers in which the barbs are held together and covered by a sheath. **D 123, D13**
- feathers, nestling, n**—immature feathers in which the barbs are held together and covered by a sheath. **D 7022, D13**
- feathers, nonwaterfowl, n**—feathers derived from chickens, turkeys, or other landfowl. (Syn. *feathers, landfowl*) **D 123, D13**
- feathers, nonwaterfowl, n**—feathers derived from chickens, turkeys, or other landfowl. (Syn. *feathers, landfowl*.) **D 7022, D13**
- feathers, quill, n**—feathers which are over 100 mm (4 in.) in length or which have a quill point exceeding 9.5 mm (3/16 in.) in length. **D 123, D13**
- feathers, quill, n**—feathers which are over 100 mm (4 in.) in length or which have a quill point exceeding 9.5 mm (3/16 in.) in length. **D 7022, D13**
- feathers, waterfowl, n**—feathers from ducks or geese, or both. **D 123, D13**
- feathers, waterfowl, n**—feathers from ducks or geese, or both. **D 7022, D13**
- feature, n**—of a facility, a physical element of a building, building component, building subsystem, unit of furnishing or equipment, or of a location, or of an aspect of design, arrangement, form or color, which helps or hinders the satisfaction of a requirement for serviceability. **E 631, E06**
- featured edge, n**—an edge configuration of the paper bound edge of gypsum board that provides special design or performance. **C 11, C11**
- feature, n** (élément caractéristique)—of a facility, a building element, building component, building subsystem, unit of furnishing or equipment, or aspects of design, arrangement, form of color, which helps or hinders the satisfaction of a requirement for serviceability. **E 631, E06**
- feature, n** (élément caractéristique)—of a facility, a building element, building component, building subsystem, unit of furnishing or equipment, or aspects of design, arrangement, form of color, which helps or hinders the satisfaction of a requirement for serviceability. **E 631, E06**
- combination of features, n** (éléments caractéristiques combinés)—of a facility, features which, when present together in a facility, affect satisfying a requirement for serviceability. **E 1480, E06**
- feature extraction**—characterization of objects in an image, usually with the goal of distinguishing those objects. **E 1316, E07**
- feature-specific measurement, n**—an individual measurement of each detected feature in the field of view. **E 7, E04**
- federal agency**—any department, agency, office, or other independent establishment of the government. **E 2135, E53**
- Federal Register (FR)**—publication of the United States government published daily (except for Federal holidays and weekends) containing all proposed and final regulations and some other

activities of the Federal government. When regulations become final, they are included in the Code of Federal Regulations (CFR) as well as published in the Federal Register. **D 5681, D34**

Federal Register (FR)—document published daily by the Federal Government that contains such entries as proposed or final regulations. See **CFR** and **Code of Federal Regulation**.

E 631, E06

feebly magnetic material—a material generally classified as “non-magnetic,” whose maximum normal permeability is less than 4.

A 340, A06

feed—the input solution to a treatment/purification system or device, including the raw water supply prior to any treatment. The liquid entering the module. **D 6161, D19**

feed channel spacer—a plastic netting between membrane leaves which provides the flow channel for the fluid passing over the surface of the membrane and increases the turbulence of the feed-brine stream. **D 6161, D19**

feed chute—a device that can replace the carriage for the purpose of slicing multiple small cross-sectional food products. This device also includes an end weight or spring to permit slicing of product to within the last one-quarter inch. **F 1827, F26**

feed distributor—the plastic mesh cylinder at the core of the fiber bundle which distributes the feed evenly. **D 6161, D19**

feeder—a mechanical device for regularly producing and delivering gobs of glass to a forming unit. **C 162, C14**

feeder process—See **gob process**. **C 162, C14**

feeder shoe—See **pusher**. **F 592, F16**

feed, gravity, n—the movement of materials from one container to another container or location by force of gravity. **C 1145, C28**

feed pretreatment—process carried out on a crude (raw) feed stream prior to feeding to a membrane separation system to eliminate objectionable components such as biological agents and colloids that might impede the stable operation of the membrane. **D 6161, D19**

feedstock, n—*in metal injection molding (MIM)*, a moldable mixture of metal powder and binder. **B 243, B09**

feedstock—the base raw material that is the source of carbohydrate, such as starch, for producing sugars that can be fermented into alcohol and carbon dioxide. **E 1705, E48**

feed-through coils—see **encircling coils**. **E 1316, E07**

feed unit, n—*inan open-end spinning machine*, the device which presents the feed stock to the opening roller by either a feed roller and feed plate combination or interacting feed rollers. (See also **opening device**.) **D 123, D13**

feed unit, n—*inan open-end spinning machine*, the device which presents the feed stock to the opening roller by either a feed roller and feed plate combination or interacting feed rollers. (See also **opening device**.) **D 3888, D13**

feed water—that water entering a device or process. **D 6161, D19**

feldspar—a mineral aggregate consisting chiefly of microcline, albite, or anorthite or combination thereof. **C 242, C21**

Felicity effect—the presence of acoustic emission, detectable at a fixed predetermined sensitivity level at stress levels below those previously applied. (E 1067) **E 1316, E07**

Felicity ratio—the ratio of the stress at which the Felicity effect occurs to the previously applied maximum stress. (E 1067, E 1118)

NOTE—The fixed sensitivity level will usually be the same as was used for the previous loading or test. (E 1118) **E 1316, E07**

felt, n—a textile (fabric) characterized by the densely matted condition of most or all of the fibers of which it is composed. **D 123, D13**

felt, n—a textile structure characterized by interlocking and consolidation of its constituent fibers achieved by the interaction of a suitable combination of mechanical energy, chemical action, moisture, and heat but without the use of weaving, knitting, stitching, thermal bonding, or adhesives. **D 123, D13**

felt—a flexible sheet manufactured by the interlocking of fibers with

a binder or through a combination of mechanical work, moisture, and heat. Felts are manufactured principally from vegetable fibers (organic felts), asbestos fibers (asbestos felts) or glass fibers (glass fiber felts); other fibers may be present in each type. **D 1079, D08**

felt, n—a textile structure characterized by interlocking and consolidation of its constituent fibers achieved by the interaction of a suitable combination of mechanical energy, chemical action, moisture, and heat but without the use of weaving, knitting, stitching, thermal bonding, or adhesives. **D 4845, D13**

felt layer—(1) a machine used for applying bitumen and built-up roofing felts;

(2) See **ply**. **D 1079, D08**

felt mill ream—the mass in pounds of 480 ft² of dry, unsaturated felt, also termed “point weight.” **D 1079, D08**

felt side—the top side of the paper in the paper manufacturing process as opposed to **wire side**. Optical scanning forms should be printed on the felt side. **F 149, F05**

female end of pipe (bell, socket, groove, modified groove)—that portion of the end of the pipe, regardless of its shape or dimensions, which overlaps a portion of the end of the adjoining pipe. **C 822, C13**

female member—the component that accommodates and encloses the male member at the box lock junction. **F 921, F04**

FEMF—Fuel Ethanol Manufacturing Facility. **E 1705, E48**

femtolitre, n—a cubic micron; a measurement of cell volume. **F 2312, F04**

fence—a part of the lever that fits into tumbler gates, permitting the lever to engage the drive cam. **F 471, F12**

fence—a type of barrier consisting of, but not limited to, posts, boards, wire, stakes, or rails that is used to inhibit patrons from coming into contact with the moving portion or restricted portion of an amusement ride or device. **F 747, F24**

fence nail—stout, bright, regular-stock-steel, 1¼ by 0.135 to 4 by 0.225-in. nails with large flat ⅝ to 1⅝³²-in. head and medium diamond point. **F 547, F16**

“fence type” boom—boom consisting of a self-supporting or stiffened membrane supported by flotation. **F 818, F20**

Feret’s diameter—See **caliper diameter**. **E 7, E04**

fermentation—decomposition of organic compounds, by microorganisms, to fuels and chemicals such as alcohols, acids, and energy-rich gases. **E 1705, E48**

fermentation—the biochemical reaction process where microorganisms in a nutrient medium convert a feedstock to a product. **E 1705, E48**

fermentation fuel—a fuel produced by fermentation of biomass. **NOTE**—Ethyl alcohol is the most common form of fermentation fuel. **E 772, E44**

fermentation fuel—a fuel produced by fermentation of biomass. **E 1705, E48**

Fermi energy (level)—*for metals*, the energy of the top-most filled electron level at zero Kelvin. *For insulators and semiconductors*, the Fermi level is usually between the valence and conduction bands. **E 673, E42**

Fermi level referencing—*XPS*, a method of establishing the binding energy scale for a particular specimen by assigning the kinetic energy corresponding to the Fermi level, as determined by analysis of the specimen’s XPS or UPS spectrum, as the point of zero binding energy. See also **Fermi energy (level)**. **E 673, E42**

ferric chloride—crystalline form of FeCl₃ · 6H₂O, a coagulant. **D 6161, D19**

ferric sulfate—Fe₂(SO₄)₃ · 9H₂O, a coagulant. **D 6161, D19**

ferrimagnetic material—a material whose atomic magnetic moments are both ordered and anti-parallel but being unequal in magnitude produce a net magnetization in one direction. **A 340, A06**

ferrite—a term referring to magnetic oxides in general, and especially to material having the formula M O Fe₂ O₃, where M is a divalent

- metal ion or a combination of such ions. Certain ferrites, magnetically "soft" in character, are useful for core applications at radio and higher frequencies because of their advantageous magnetic properties and high volume resistivity. Other ferrites, magnetically "hard" in character, have desirable permanent magnet properties. **A 340, A06**
- ferrite**—designation commonly assigned to alpha iron containing alloying elements in solid solution. Increasing carbon content markedly decreases the high-temperature limit of equilibrium. **E 7, E04**
- ferrite grain size**—the grain size of the ferrite in predominantly ferritic steels. See Test Methods E 112. **E 7, E04**
- ferritize, vt**—to increase the quantity of ferrite in the matrix of a ferrous casting through an appropriate heat treatment. **A 644, A04**
- ferritizing anneal, *n***—the process of producing a predominantly ferritic matrix in cast iron through an appropriate heat treatment. **A 644, A04**
- ferritizing anneal, *n***—a heat treatment that produces a predominantly ferritic matrix in a steel object. **A 941, A01**
- ferritizing anneal**—the process of producing a predominantly ferritic matrix in a ferrous alloy through an appropriate heat treatment. **E 7, E04**
- ferroalloy, *n***—an alloy of iron and one or more other metals, for use as an addition to the molten metal during the manufacture of steels, nickel alloys, or cobalt alloys. **A 941, A01**
- ferromagnetic**—a term applied to materials that can be magnetized or strongly attracted by a magnetic field. **E 1316, E07**
- ferromagnetic material**—a material whose magnetic moments are ordered and parallel producing magnetization in one direction. **A 340, A06**
- ferromagnetic material**—a material that, in general, exhibits the phenomena of magnetic hysteresis and saturation, and whose permeability is dependent on the magnetizing force. **E 1316, E07**
- ferrous sulfate**— $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$, a coagulant. **D 6161, D19**
- ferrous sulfate**—cupric sulfate dosimeter—a liquid chemical radiation dosimetry system composed of water with ferrous sulfate or ferrous-ammonium sulfate and cupric sulfate in aqueous sulfuric acid solution and whose response is based quantitatively on the amount of oxidation of ferrous to ferric ions by ionizing radiation, as analyzed by spectrophotometry. It is considered to be a reference standard dosimeter. **E 170, E10**
- festooning**—loading a cartridge with a supply of imaging material without the use of carrier spools. **F 221, F05**
- fetter ring nail**—term applied to annularly threaded nail. (See thread.) **F 547, F16**
- F factor**—an episode of *E. coli*. Encoded on it are the functions necessary to produce an F pilus. **E 1705, E48**
- fiber**—attenuated glass generally with a diameter of less than a millimetre and a length/diameter ratio of more than 5. **C 162, C14**
- fiber, *n*—in fiber-cement**, any material in a form such that it has a minimum length to average maximum transverse dimension of 10 to 1, a maximum cross-sectional area of $5.06 \times 10^{-2} \text{ mm}^2$ (corresponding to a circular cross section of 0.254 mm in diameter) and a maximum transverse dimension of 0.254 mm. **C 1154, C17**
- fiber, *n*—in fiber-reinforced cement**, any material in a form such that it has an aspect ratio of at least 10 and a typical transverse dimension less than 2 mm. **C 1154, C17**
- fiber, *n*—in textiles**, a generic term for any one of the various types of matter that form the basic elements of a textile and that is characterized by having a length at least 100 times its diameter. (See also **manufactured fiber**, **natural fiber**, and **and**.) **D 123, D13**
- fiber**—for peats and organic soils, a fragment or piece of plant tissue that retains a recognizable cellular structure and is large enough to be retained after wet sieving on a 100-mesh sieve (openings 0.15 mm). **D 653, D18**
- fiber**—the unit cell of vegetable growth, which is many times longer than its diameter and which consists largely of cellulose. It is the basic unit of pulps and papers. **D 1695, D01**
- fiber, *n***—a thread-like body or filament many times longer than its diameter. For paper, fibers usually are of vegetable origin but may be derived from animal, mineral, or synthetic sources for special types of paper products. **D 1968, D06**
- fiber, *n***—any material in a form such that it has a minimum length to average maximum transverse dimension of 10 to 1, a maximum cross-sectional area of $5.06 \times 10^{-2} \text{ mm}^2$ (corresponding to a circular cross section of 0.254 mm in diameter) and a maximum transverse dimension of 0.254 mm. **D 2946, C17**
- fiber, *n***—one or more filaments in an ordered assemblage. **D 3878, D30**
- fiber adhesion, *n*—for asbestos**, force required to overcome the tendency of fibers to remain affixed to the host rock. **D 2946, C17**
- fiber-axis**—the preferred direction of fiber texture. **E 7, E04**
- fiber beard, *n*—in length testing of fibers**, fibers caught randomly on a comb which are subsequently straightened and parallelized without stretching or damaging. **D 123, D13**
- fiber beard, *n*—in length testing of fibers**, fibers caught randomly on a comb which are subsequently straightened and parallelized without stretching or damaging. **D 4849, D13**
- fiber birefringence, *n***—the algebraic difference of the index of refraction of the fiber for plane polarized light vibrating parallel to the longitudinal axis of the fiber and the index of refraction for light vibrating perpendicular to the long axis. (See also **birefringence**.) **D 123, D13**
- fiberboard**—See **containerboard**. **D 996, D10**
- fiberboard container**—See **container**. **D 996, D10**
- fiberboard nail**—bright or electroplated, regular-stock-steel or hardened-steel 1 by 0.054 to 2 by 0.062-in. nails with flat $\frac{3}{32}$ or $\frac{7}{64}$ -in. head and medium needle point. **F 547, F16**
- fiberboard partitions**—a set of corrugated or solid fiberboard or paperboard pieces slotted so they will interlock when assembled to form a number of cells into which articles may be placed for shipment. (See also **divider**.) **D 996, D10**
- fiberboard tube**—See **tube**. **D 996, D10**
- fiber bridging**—reinforcing fiber material that is found bridging across on an inside radius of a pultruded product.
NOTE—This condition is caused by shrinkage stresses around such a radius during cure. **D 3918, D20**
- fiber bundle, *n***—group of ultimate fibers which are held together in the flax stem by pectins, lignins or any combination thereof. **D 123, D13**
- fiber bundle**—the heart of the permeator consisting of the hollow fiber polymer membrane, epoxy tube sheet, nub and feed distributor. **D 6161, D19**
- fiber bundle, *n*—in flax**, group of ultimate fibers which are held together in the flax stem by pectins, lignins or any combination thereof. **D 6798, D13**
- fiber-cement products, *n***—manufactured thin section composites of hydraulic cementitious matrices and discrete non-asbestos fibers. **C 1154, C17**
- fiber channel, *n***—a component of an open-end spinning machine through which the fibers are conveyed by an air current from the opening device to the rotor. (See also **opening device**.) **D 123, D13**
- fiber channel, *n***—a component of an open-end spinning machine through which the fibers are conveyed by an air current from the opening device to the rotor. (*Syn.* fiber transport tube.) (See also **opening device**.) **D 3888, D13**
- fiber chip, *n*—inmanufactured textiles**, staple fibers that are massed together as a unit and that maintain a single geometry or alignment textiles. **D 123, D13**
- fiber chip, *n*—in manufactured textiles**, staple fibers that are massed together as a unit and that maintain a single geometry or alignment. **D 4849, D13**
- fiber cohesion, *n*—in textiles** the resistance to separation of fibers in contact with one another. **D 123, D13**

fiber cohesion, *n*

fiber cohesion, *n*—*for asbestos*, force required to separate fibers from each other. **D 2946, C17**

fiber cohesion, *n*—in textiles, the resistance to separation of fibers in contact with one another. **D 4849, D13**

fiber content—the amount of fiber present in a composite expressed either as percent by weight or percent by volume. This is sometimes stated as a fraction, that is, fiber volume fraction. **D 3878, D30**

fiber content—the amount of fiber present in a composite, usually expressed as volume percent of the composite. **E 631, E06**

fiber content—the amount of fiber present in a composite, usually expressed as volume percent of the composite. **E 1749, E06**

fiber density, *n*—mass per unit volume of the solid matter of which a fiber is composed, measured under specified conditions. **D 123, D13**

fiber (fibre)—a structural feature of wrought metal revealed by directional properties, manifested by the appearance of an etched longitudinal section, by the appearance of a fracture, or by an X-ray pattern of crystal orientations. **E 7, E04**

fiberfill, *n*—manufactured fibers especially engineered as to linear density, cut length, and crimp for use as a textile filling material. **D 123, D13**

fiberfill, *n*—manufactured fibers especially engineered as to linear density, cut length, and crimp for use as a textile filling material. **D 7022, D13**

fiberglass, reinforcement—continuously formed fibers added to enhance the overall performance of a matrix. Fiber glasses used for specific chemical or physical properties, or both, include:

A-glass—compositions typically with lower electrical resistivity, strength, and durability than E-glass.

AR-glass—compositions resistant to corrosion by alkali.

C-glass—compositions resistant to corrosion by most acids.

D-glass—compositions with a low dielectric constant.

E-glass—compositions with electrical properties, strength, and durability appropriate for most applications.

E-CR-glass—E-glass compositions modified for improved resistance to corrosion by most acids.

R-glass—compositions with high tensile strength, resistant to corrosion by most acids.

S-glass—compositions with high tensile strength, elastic modulus and service temperature. **C 162, C14**

fiber length—when applied to a pulp, this applies to the mean fiber length and both the experimental details and the calculations must be specified. **D 1695, D01**

fiber length distribution—the frequency distribution of the individual fiber lengths in a material about the mean fiber length. **D 1695, D01**

fiber-mat reinforced products, *n*—manufactured thin section composites of hydraulic cementitious matrices and non-asbestos fibers in two-dimensional scrim(s). **C 1154, C17**

fiber, optical—a fiber with high transmittance, low scattering, and minimal transverse loss of light. **C 162, C14**

fiber optic buffer, *n*—material placed on or around a clad optical fiber to protect it from mechanical damage. **E 131, E13**

fiber optic chemical sensor, *n*—a fiber optic sensor that responds to a chemical stimulus. **E 131, E13**

fiber optics, *n*—the branch of science and technology devoted to the transmission of radiant energy through fibers made of transparent materials. **E 131, E13**

fiber optics—method by which light is transmitted through thin transparent fibers. **E 1316, E07**

fiber optic sensor, *n*—a device that responds to an external stimulus and transmits through an optical fiber a modulated optical signal, indicating one or more characteristics of the stimulus. **E 131, E13**

fiber or frit-type reference electrode—a reference electrode in

which the filling solution contacts the sample solution by means of asbestos fibers or a small sintered piece of porous glass.

D 4127, D19

fiber orientation—the direction or alignment of the longitudinal axis of the fiber with respect to a stated reference axis. **E 631, E06**

fiber orientation—the direction or alignment of the longitudinal axis of the fiber with respect to a stated reference axis. **E 1749, E06**

fiber pick, *n*—the delaminating, splitting, or tearing of paper surface fibers that occurs when the force between the paper and blanket exceeds the surface strength of the paper. **D 6488, D01**

fiber prominence—a visible and measurable pattern of the reinforcing material on the surface of a pultruded plastic part. **D 3918, D20**

fiber-reinforced, *adj*—imparting improved properties to hydraulic cement matrices due to the inclusion of fibers. **C 1154, C17**

fiber-reinforced plastic (FRP), *n*—a plastic that contains fibers in various forms such as cloth, mat, strands, or chopped to enhance properties. **D 907, D14**

fiber rope, *n*—a rope produced primarily from textile fibers. **D 123, D13**

fibers, *n*—slender filaments, which may be discrete or in the form of bundles, networks, or strands of natural or manufactured materials, which can be distributed uniformly throughout a fresh cementitious mixture. **C 125, C09**

fibers—the slender threadlike elements or groups of wood fibers or similar cellulosic material resulting from chemical or mechanical defiberization, or both, and sometimes referred to as fiber bundles. **D 1554, D07**

fibers, *n*—particulate matter with a length of 100 μm or greater and a length-to-width ratio of 10 to 1 or greater. **G 126, G04**

fiber saturation point—the moisture content at which the cell walls are saturated with water (bound water) and no water is held in the cell cavities by capillary forces. It usually is taken as 25 to 30 % moisture content, based on weight when oven-dry. **D 9, D07**

fiber saturation point—the moisture content in the absorption of water by cellulose when the cell walls are saturated, but virtually no free water is present in the grosser capillary structure. The concept is based on the hypothesis that a discontinuity occurs in the sorption curve at this point. Some careful studies of the region have failed to show a discontinuity, but it is still possible to define "fiber saturation point" as an extrapolation of the adsorption curve. In any case, it should only be used with reference to the method of determination. **D 1695, D01**

fiber show, *n*—strands or bundles of fibers not covered by resin which are at or above the surface of a reinforced plastic. **D 883, D20**

fiber show—strands or bundles of fibers that are not covered by resin and that are at or above the surface of a reinforced plastic pultrusion. **D 3918, D20**

fiber spicule—rod-like piece composed of asbestos fibers that are in close-packed parallel orientation, undisturbed from their natural relative positions, and sufficiently numerous to render the piece inflexible. **D 2946, C17**

fiber strength unit—see **strengthunit**. **D 2946, C17**

fiber structure—the morphological structure of a fiber at the visual or microscopic level. (see also **fine structure**) **D 1695, D01**

fiber tear, *n*—in an FRP adhesively bonded joint, failure occurring exclusively within the fiber reinforced plastic matrix, characterized by the appearance of reinforcing fibers on both ruptured surfaces. (Also called *fiber tear failure*.) **D 907, D14**

*fiber-tear failure, *n**—in an FRP adhesively bonded joint—see **fiber tear**. **D 907, D14**

fiber texture—a texture characterized by having only one preferred crystallographic direction. **E 7, E04**

fiber volume fraction—see **fiber content**. **D 3878, D30**

Fiberweigh, *n*—an instrument having a capacity for weighing a 51-grain (3.30-g) specimen with a sensitivity of at least 0.2 % of the mass being weighed. **D 123, D13**

Fiberweigh, *n*—an instrument having a capacity for weighing a

- 51-grain (3.30-g) specimen with a sensitivity of at least 0.2 % of the mass being weighed. **D 7139, D13**
- fiber, wood**—a comparatively long (1/25 in. or less to 1/3 in.), narrow, tapering wood cell closed at both ends. **D 9, D07**
- fibric peat**—peat in which the original plant fibers are slightly decomposed (greater than 67 % fibers). **D 653, D18**
- fibril**—a fiberlike bundle of molecules, oriented in one direction either with the fiber axis or spirally around it. It makes up the fibrous structural unit of the single fiber. The cellulose fibrils are crystalline as shown by X-ray diffraction. **D 1695, D01**
- fibril, n**—*for asbestos*, a fiber composed of a single crystal. **D 2946, C17**
- fibrogram, n**—*intesting cotton fibers for length*, the curve representing the second cumulation of the length distribution of the fibers sensed by the length measuring instrument in scanning the fiber board. **D 123, D13**
- fibrogram, n**—*in testing cotton fibers for length*, the curve representing the second cumulation of the length distribution of the fibers sensed by the length measuring instrument in scanning the fiber board. **D 7139, D13**
- Fibronaire, n**—an instrument which determines the micronaire reading of raw cotton fibers using the “porous-plug” air flow technique. **D 123, D13**
- Fibronaire, n**—an instrument which determines the micronaire reading of raw cotton fibers using the “porous-plug” air flow technique. **D 7139, D13**
- fibrous, adj**—pertaining to, consisting of, or containing fibers. **C 1154, C17**
- fibrous, adj**—*for asbestos*, pertaining to fine acicular (needle-like), flexible crystalline morphology associated with the subdivision of macro-assemblages of an asbestiform mineral. **D 2946, C17**
- fibrous-felted boards**—a felted wood-base panel material manufactured of refined or partly refined lignocellulosic fibers characterized by an integral bond produced by an interfelting of fibers and in the case of certain densities and control of conditions of manufacture by ligneous bond, and to which other materials may have been added during manufacture to improve certain properties. **D 1554, D07**
- fibrous glass, n**—A synthetic vitreous fiber insulation made by melting predominantly silica sand and other inorganic materials, and then physically forming the melt into fibers. **C 168, C16**
- fibrous particulate, n**—*for asbestos*, fiber, fiber fragment, or fiber agglomerate. **D 2946, C17**
- fibrous peat**—see **fibric peat**. **D 653, D18**
- Fick's laws of diffusion, n**—mathematical descriptions of the movement of one type of molecule through another. **F 1494, F23**
- fid, n**—a wooden or hard plastic tool used as an aid in rope splicing. **D 123, D13**
- fiduciary**—individual or institution responsible for holding or administering property owned by another. An executor, guardian, trustee, and administrator are examples of a fiduciary. **E 2135, E53**
- fiduciary accounting**—proper accounting for property that is entrusted to the fiduciary acting under the conditions set forth in a deed. **E 2135, E53**
- field**—the portion of the object in view. **E 7, E04**
- field, n**—that portion of the surface of a specimen that is illuminated by the illuminator or viewed by the receiver. **E 284, E12**
- field**—any group of characters defined as a unit of information. **F 149, F05**
- field adaption**—the forced recovery of excited electrons (as in dark adaption) by means of an externally applied electrical field such as a charging corona. **F 335, F05**
- field angle**—the included angle between those points on opposite sides of a light beam at which the luminous intensity is 10 % of the maximum value. **E 1316, E07**
- field, bipolar**—longitudinal magnetic field within a part that has two poles. **E 1316, E07**
- field blank**—blank sample prepared at the field sampling location. **E 631, E06**
- field blank**—a wipe that is exposed to the same handling as field samples except that no sample is collected (no surface is actually wiped). Analysis results from field blanks provide information on the analyte background level in the wipe combined with the potential contamination experienced by samples collected within the batch resulting from handling. **E 631, E06**
- field blank**—a sample that is handled in exactly the same way that field samples are handled, except that no air is drawn through it. **E 631, E06**
- field blank**—blank sample prepared at the field sampling location. **E 1605, E06**
- field-box nail**—coated, barbed, regular-stock-steel, 2 by 0.099 to 2¼ by 0.106-in. nails with ¼-in. oval head and medium diamond point. **F 547, F16**
- field check**—(1) a survey of existing conditions at a construction site (also called *field observation*). (2) verification of an existing structure and its dimensions compared with those shown on drawings (also called *field measure*). **E 631, E06**
- field, circular magnetic**—generally, the magnetic field surrounding any electrical conductor or part resulting from a current being passed through the part or conductor from one end to another. **E 1316, E07**
- field delimiter—See **field separator**. **F 149, F05**
- field joint**—See **joints**. **E 631, E06**
- field joint**—a connection between adjoining members or parts, made at the time of installation. Compare **construction joint**. **E 631, E06**
- field latex, n**—See **latex, field**. **D 1566, D11**
- field lens**—the lens nearest the field diaphragm in an eyepiece. **E 7, E04**
- field, longitudinal magnetic**—magnetic field wherein the flux lines traverse the component in a direction essentially parallel with its longitudinal axis. **E 1316, E07**
- field, magnetic**—the space, within and surrounding a magnetized part or a conductor carrying current, in which the magnetic force is exerted. **E 1316, E07**
- field, magnetic leakage**—the magnetic field that leaves or enters the surface of a part at a discontinuity or change in section configuration of a magnetic circuit. **E 1316, E07**
- field mark—See **field separator**. **F 149, F05**
- field measure**—See **field check**. **E 631, E06**
- field measurement, in image analysis**—the aggregate measurement of the detected features in a field of view. **E 7, E04**
- field mix, n**—a material that is mixed in the field with other components or water, or both. **E 2110, E06**
- field moisture equivalent**—see **moisture equivalent**. **D 653, D18**
- field of testing**—broad sphere of science, engineering, or technology used to describe a general area of testing for classification purposes only. (For accreditation purposes, fields of testing are subdivided into specific tests, groups of tests, or product areas.) **E 1187, E36**
- field of view, n**—area of a subject's surface that exchanges thermal radiation with the sensor. **E 344, E20**
- field of view, n**—the lineal dimension defining the length of a bar code that can be read in one scan, particularly significant in moving beam and array technologies. **F 1294, F05**
- field of view (FOV)**—the shape and angular dimensions of the cone or the pyramid which define the object space imaged by the system; for example, rectangular, 4° wide by 3° high. **E 1316, E07**
- field operation laboratory**—a laboratory that uses portable technology to provide analytical services in the field near the sampling site. **E 1605, E06**
- field requirements, n**—*in construction design planning and estimating*, the nonpermanent portion of construction cost that is essential to permit implementation of the construction work in the field. **E 833, E06**
- field, residual magnetic**—the field that remains in a piece of

field, residual magnetic

- magnetizable material after the magnetizing force has been removed. **E 1316, E07**
- field, resultant magnetic**—(sometimes called vector): a magnetic field that is the result of two magnetizing forces impressed upon the same area of a magnetizable object. **E 1316, E07**
- field separator**—a mark or symbol printed in scan ink that identifies fields to the scanner (Syn. *field mark*). **F 149, F05**
- field sound transmission class, FSTC**—sound transmission class calculated in accordance with Classification E 413 using values of field transmission loss. **C 634, E33**
- fieldstone, n**—natural building stone as found in the field. **E 631, E06**
- field stop, n**—the physical diameter that limits the angular field of view of an optical system. **E 284, E12**
- field strength**—see **magnetic field strength**. **E 1316, E07**
- field testing, n**—testing performed in the field under actual conditions of temperature and exposure to the fluids for which the immersion testing is being performed. **D 4439, D35**
- field transmission loss, FTL**—sound transmission loss measured in accordance with Annex A1 of Test Method E 336. **C 634, E33**
- figure**—the pattern produced in a wood surface by annual growth rings, rays, knots, deviations from regular grain such as interlocked and wavy grain, and irregular coloration. **D 9, D07**
- figured glass**—flat glass having a pattern on one or both surfaces. **C 162, C14**
- figure-of-merit**—a performance characteristic of a method believed to be useful when deciding its applicability for a specific measurement situation. **E 2161, E37**
- figure of merit, magnetic, $\mu'/\cot \gamma$** —the ratio of the real part of the complex relative permeability to the dissipation factor of a ferromagnetic material.
- NOTE—The figure of merit index of the magnetic efficiency of the core in various ac electromagnetic devices. **A 340, A06**
- filament**—a single glass fiber of indefinite length. **C 162, C14**
- filament, n**—a long flexible thread of small cross section, usually extruded or drawn. **C 1145, C28**
- filament, n—in textiles**, a continuous fiber of extremely long length. **D 123, D13**
- filament, n—in steelcord**, the individual element in a steel strand or cord. **D 123, D13**
- filament, n**—a fibrous form of matter with an aspect ratio >10 and an effective diameter <1 mm. (See also **monofilament**.) **D 3878, D30**
- filament**—an electrically heated wire used as a source of a radiation, such as electrons, or as a source of heat, such as in the vaporization of a metal. **E 7, E04**
- filament**—a variety of fibers characterized by extreme length. Also known as *fibers* and used interchangeably. **E 631, E06**
- filament**—a variety of fibers characterized by extreme length. Also known as *fibers* and used interchangeably. **E 1749, E06**
- filamentary composites**—See **composite, filamentary**. **E 631, E06**
- filamentary composites**—See **composite, filamentary**. **E 1749, E06**
- filament count**—number of filaments in the cross section of a fiber bundle. **D 3878, D30**
- filament yarn, n**—a yarn composed of (continuous) filaments assembled with or without twist. **D 123, D13**
- filament yarn, n**—a yarn composed of (continuous) filaments assembled with or without twist. **D 4849, D13**
- filar micrometer or filar eyepiece**—an eyepiece equipped with a fiducial line in its focal plane, which is movable by means of a calibrated micrometer screw, in order to make accurate measurements of length. **E 7, E04**
- file-grip nail, file-thread nail**—terms applied to helically threaded nails provided with file threads. (See **thread**.) **F 547, F16**
- file specimen, n**—portion of the material to be tested which is stored under conditions in which it is stable, and is used for comparison between exposed and original state. **G 113, G03**
- file thread, file-grip thread**—large number of fine, closely spaced helical threads, with large or extra large lead angle, rolled onto shank. Usually applied to certain aluminum asbestos-shingle face nails. **F 547, F16**
- filiform corrosion**—corrosion that occurs under some coatings in the form of randomly distributed threadlike filaments. **G 15, G01**
- filiform corrosion resistance, n**—the ability of a coating to resist that type of corrosion of metal substrates characterized by a definite thread-like structure and directional growth that occurs under coatings. **D 16, D01**
- fill**—the unit charge of batch into a melter or pot. **C 162, C14**
- fill**—man-made deposits of natural soils or rock products and waste materials. **D 653, D18**
- fill, n—in a woven fabric**, the yarn running from selvage to selvage at right angles to the warp. **D 3878, D30**
- fill**—deprecated term, see **filling**. **D 4439, D35**
- filled candle, n**—a candle produced and used within the same vessel. **F 1972, F15**
- filler**—a material used to increase the bulk of a product without adding to its effectiveness in functional performance. **B 374, B08**
- filler, n—in manufactured carbon and graphite product technology**, carbonaceous particles comprising the base aggregate in an unbaked green-mix formulation. **C 709, D02**
- filler, n**—an inert inorganic material used as an extender or mineral diluent in the constituents of products which does not add to the cementitious value of the cement. **C 1154, C17**
- filler, n**—a pigmented composition for filling pores or irregularities in a surface preparatory to application of other finishes. **D 16, D01**
- filler, n**—nonfibrous material, such as insoluble clays or gypsum, together with starches, gums, etc., added to a fabric to increase its weight or to modify the appearance or handle of the fabric. (Syn. back-sizing.) **D 123, D13**
- filler**—a material added to soap or other detergent that does not improve its attractiveness or its effectiveness under the conditions of use. **D 459, D12**
- filler, n**—a relatively inert material added to a plastic to modify its strength, permanence, working properties, or other qualities, or to lower costs. (See also **reinforced plastic**.) **D 883, D20**
- filler, n**—a relatively inert solid material added to an adhesive to modify its strength, permanence, working properties, or other qualities, or to lower cost. **D 907, D14**
- filler, n**—a solid compounding material, usually in finely divided form, which may be added in relatively large proportions to a polymer for technical or economic reasons. **D 1566, D11**
- filler, n—for paper or paperboard**, a material, generally nonfibrous and inorganic, added to the fiber furnish. **D 1968, D06**
- filler, n—for paperboard**, the inner ply or plies of a multi-ply sheet. **D 1968, D06**
- filler**—inert inorganic material used as an extender or diluent in the furnish of asbestos-cement which does not add to the cementitious value of the cement. **D 2946, C17**
- filler**—in composite materials, a primarily inert solid constituent added to the matrix to modify the composite properties or to lower cost. **D 3878, D30**
- filler, n—in manufactured carbon and graphite product technology**, carbonaceous particles comprising the base aggregate in an unbaked green-mix formulation. **D 4175, D02**
- filler, n—in testing sewn seams** nonfibrous material, such as insoluble clays or gypsum, together with starches, gums, and so forth, added to a fabric to increase its weight or to modify the appearance or handle of the fabric. (Syn. back-sizing.) (Compare **sizing**.) **D 4850, D13**
- filler, n**—a substance added to a system or product to increase bulk, weight, viscosity, opacity, or strength. **E 2201, E50**
- filler, n**—a relatively inert material added to a plastic to modify its strength, permanence, working properties, or other qualities or to lower costs. (See also **reinforced plastic**.) (D20) **F 412, F17**
- filler, n**—a relatively inert material added to a plastic to modify its strength, performance, working properties, or other qualities, or to lower costs. (See also **reinforced plastic**.) **F 1251, F04**

- filler character, n**—a character inserted to extend an item of data to achieve a desired length. (See also **pad character**.) **F 1294, F05**
- filler, inert, n**—a filler having no reinforcing effect. **D 1566, D11**
- filler pad**—See **cushioning material**. **D 996, D10**
- filler phase, n**—as used in *Test Method D 5061*, a discontinuous solid formed from coal macerals and minerals that do not deform thermoplastically during carbonization.
- fine coal, n**—that portion of a coal sample being subject to a washability study that is smaller than the predetermined particle size, generally between 2.36 mm (No. 8 USA Standard Sieve Series) and 9.5 mm ($\frac{3}{8}$ in.) round in diameter, which is specified in *Test Method D 4371*. **D 121, D05**
- filler sheet, n**—sheet of deformable or resilient material which, when placed between the assembly to be bonded and the pressure applicator, or when distributed within a stack of assemblies, aids in providing uniform application of pressure over the area to be bonded. **D 907, D14**
- filler strip**—See **lock-strip**, the preferred term. **C 717, C24**
- fillet, n**—that portion of an adhesive which fills the corner or angle formed where two adherends are joined. **D 907, D14**
- fillet**—curved intersection of head and shank, specified by its radius. **F 547, F16**
- fillet bead joint, n**—Use **fillet sealant joint** (preferred term). **C 717, C24**
- fillet head**—head with extra large curved intersection of head and shank. **F 547, F16**
- fillet seal**—a seal applied at the juncture of two adjoining parts or surfaces and along the edges of faying surfaces as a continuous bead of sealing material. **E 631, E06**
- fillet seal**—a seal applied at the juncture of two adjoining parts or surfaces and along the edges of faying surfaces as a continuous bead of sealing material. **E 1749, E06**
- fillet sealant joint, n**—in *building construction*, a joint where sealant is applied over the joint to the face of substrates that are approximately perpendicular to each other. **C 717, C24**
- fill factor**—the ratio of the weight of a given length of a stranded conductor to the weight of the solid conductor of the same diameter, length, and material. It may also be expressed by the ratio of the nominal area of the conductor times (1 plus the stranding factor) and the area of the circle that encloses the strands of the conductor. **B 354, B01**
- fill factor**—for internal probe electromagnetic testing, the ratio of the effective cross-sectional area of the primary internal probe coil to the cross-sectional area of the tube interior. **E 1316, E07**
- fill factor**—for encircling coil electromagnetic testing, the ratio of the cross-sectional area of the test specimen to the effective cross-sectional core area of the primary encircling coil (outside diameter of coil form, not inside diameter which is adjacent to specimen). **E 1316, E07**
- fill factor**—in magnetic particle examination, the ratio of the cross sectional area of the part being tested to the cross sectional area of the encircling coil. **E 1316, E07**
- fill factor, n**—of a photovoltaic device, the ratio of maximum power to the product of open-circuit voltage and short-circuit current. **E 1328, E44**
- fill in, n**—a condition where the halftone dots and fine type lose definition because the non-image areas of the plate between the dots or characters become plugged with dry ink or a mixture of dry ink and paper fibers. **D 6488, D01**
- fill-in**—image spread within nonimage areas of characters, digits, or designs. **F 549, F05**
- filling**—the application of materials, often cements or synthetic resins, into natural voids in a stone during fabrication. **C 119, C18**
- filling, n**—yarn running from selvage to selvage at right angles to the warp in a woven fabric. **D 123, D13**
- filling**—generally, the material occupying the space between joint surfaces, faults, and other rock discontinuities. The filling material may be clay, gouge, various natural cementing agents, or alteration products of the adjacent rock. (ISRM) **D 653, D18**
- filling, n**—yarn running from selvage to selvage at right angles to the warp in a woven fabric. **D 4439, D35**
- filling, n**—in *woven fabric*, an individual yarn running from selvage to selvage at right angles to the warp in a woven fabric. **D 4850, D13**
- filling band, n**—in *woven fabrics*, a visual defect across the width due to a change occurring in the yarn for a large number of picks. (Compare **filling bar**) **D 123, D13**
- filling band, n**—in *woven fabrics*, a visual defect across the width due to a change occurring in the yarn for a large number of picks. (Compare **filling bar**) **D 3990, D13**
- filling bar, n**—in *woven fabrics*, a visual defect across the width which contains a limited number of picks of different appearance than normal. (Compare **filling band**) **D 123, D13**
- filling bar, n**—in *woven fabrics*, a visual defect across the width which contains a limited number of picks of different appearance than normal. (Compare **filling band**) **D 3990, D13**
- filling bar, n**—for *inflatable restraint fabrics*, a temporary change in the filling-wise density of the weave pattern. (Syn: *stop/start mark*.) **D 6799, D13**
- filling elongation and tension, n**—stretch or tension measured at right angles to the warp direction of the fabric. **D 123, D13**
- filling elongation and tension, n**—stretch or tension measured at right angles to the warp direction of the fabric. **D 4850, D13**
- filling-faced twill, n**—a weave in which filling yarns float over warp yarns, to produce a diagonal effect in the resulting fabric. (See also **twill weave** and **warp faced twill**.) **D 123, D13**
- filling-faced twill, n**—a weave in which filling yarns float over warp yarns, to produce a diagonal effect in the resulting fabric. (See also **twill weave** and **warp faced twill**.) **D 4850, D13**
- filling material, n**—for *feathers or down*, the contents of an industry product containing feathers or down of any kind or type, with or without natural or synthetic materials. **D 123, D13**
- filling material, n**—for *feathers or down*, the contents of an industry product containing feathers or down of any kind or type, with or without natural or synthetic materials. **D 7022, D13**
- filling point**—the level at which a glass bottle has the nominal capacity. **C 162, C14**
- filling run-out**—See **broken pick**. **D 3990, D13**
- filling solution**—the solution inside a sensing or reference electrode that is replenished periodically. Solutions that are permanently sealed within the electrode (like the buffer inside a pH electrode) are usually called internal reference solutions to differentiate them from filling solutions. **D 4127, D19**
- filling tests, n**—in *fabric testing*, tests in which the filling yarns are torn. **D 123, D13**
- filling tests, n**—in *fabric testing*, tests in which the filling yarns are torn. **D 4850, D13**
- filling-to-filling seam, n**—a sewn seam in which the yarns in the filling direction on both sides of the sewn seam are perpendicular to the seam. **D 123, D13**
- filling-to-filling seam, n**—a sewn seam in which the yarns in the filling direction on both sides of the sewn seam are perpendicular to the seam. **D 4850, D13**
- fill leakage, n**—in *comforters*, either partial or total penetration of the stuffing material through the outer or face fabric. **D 123, D13**
- fill leakage, n**—in *comforters*, either partial or total penetration of the stuffing material through the outer or face fabric. **D 7023, D13**
- fill material, n**—material used in the construction of a structural fill. **D 5681, D34**
- fill pin, n**—the part of the compact in the spout used to fill the can; it is usually integral to the part produced. **B 899, B02**
- fill ratio, n**—see **compression ratio**. **B 243, B09**
- film, n**—a thin coating or layer of a substance over the surface of another material. **C 1145, C28**
- film, n**—in plastics, an optional term for sheeting having a nominal thickness not greater than 0.25 mm (0.01 in.). **D 883, D20**

film

film—sheeting, including that composed of cellulose or its derivatives, having nominal thickness not greater than 10 mils. (see also **films**) **D 1695, D01**

film, n—in plastics, term for sheeting having a nominal thickness not greater than 0.25 mm (0.01 in.). (See also **sheeting**.) **F 1251, F04**

film cassette—See **cassette**. **E 7, E04**

film clarity—characteristic of a deposited film which permits an unobstructed view of the substrate. **D 2825, D21**

film contrast—a qualitative expression of the slope or steepness of the characteristic curve of a film; that property of a photographic material which is related to the magnitude of the density difference resulting from a given exposure difference. **E 1316, E07**

film master, n—a master negative or positive film transparency of a specific bar code symbol from which a printing plate is made. **F 1294, F05**

film resistance—that portion of the contact resistance that is due to the presence of contaminants on one or both of the contact members. **B 542, B02**

films—transparent sheeting. If this is used as a generic term, regardless of sheet thickness, the plural should be used and the singular restricted to a specified size. (see also **film**) **D 1695, D01**

films, n—trimmed mica split to specific ranges of thickness under 0.15 mm processed from block and thins. **D 1711, D09**

film speed—a numerical value expressing the response of an image receptor to the energy of penetrating radiation under specified conditions. **E 1316, E07**

film strength—the relative resistance of the bisque to mechanical damage. **C 286, B08**

film weight—in the classification of film adhesives, weight per unit area of film adhesive usually expressed in pounds per square foot, kilograms per square metre, etc. **E 631, E06**

film weight—in the classification of film adhesives, weight per unit area of film adhesive usually expressed in pounds per square foot, kilograms per square metre, etc. **E 1749, E06**

filter—see **plugging compound**. **C 286, B08**

filter, n—a porous medium for collecting particulate matter.

absolute filter, n—a filter or filter medium of ultra-high collection efficiency for very small particles (submicrometre size) so that essentially all particles of interest or of concern are collected.

controlled-pore filter, n—a filter of various plastics or metals having a structure of controlled uniform pore size. **D 1356, D22**

filter—a device which modifies the light coming from the light source either chromatically or with regard to intensity.

(1) **color**—a device which transmits principally a predetermined range of wavelengths.

(2) **contrast**—a color filter, usually with strong absorption, whose function is to utilize the spectral absorption bands of the subject to control the contrast of the image by exaggerating or diminishing the brightness difference between areas of different color. Maximum contrast is obtained when the transmission of the filter is entirely within the absorption band of an area but not of its surroundings.

(3) **interference**—a combination of several thin optical films to form a layered coating for transmitting or reflecting a narrow band of wavelengths by virtue of interference effects.

(4) **neutral**—(a) a color filter that reduces the intensity of the transmitted illumination without affecting its hue.

(b) a color filter having identical transmission at all wavelengths throughout the spectrum. Such an ideal filter does not exist in practice.

(5) **orthochromatic**—a color filter whose function is to modify the illumination quality reaching the film so that the brightness of colored objects will be relatively the same in the resultant black-and-white positive.

(6) **photometric**—a color filter whose function is to convert the quality of illumination from that of one source to that of another. Most frequently the term is used for a filter altering the illumina-

tion quality from that of one color temperature to that of another.

(7) **X-Ray**—a material that preferentially absorbs certain wavelengths. **E 7, E04**

filter—a substance that attenuates the radiant power reaching the detector in a definite manner with respect to spectral distribution. **E 131, E13**

filter, n—in atomic spectrometry, a substance that attenuates the radiant power in a definite manner with respect to spectral distribution.

neutral, n—a filter that attenuates the radiant power reaching the detector by the same factor at all wavelengths within a prescribed wavelength region.

nonselective—not recommended, see **filter, neutral**. **E 135, E01**

filter—a network that passes electromagnetic wave energy over a described range of frequencies and attenuates energy at all other frequencies. **E 1316, E07**

filter—uniform layer of material, usually of higher atomic number than the specimen, placed between the radiation source and the film for the purpose of preferentially absorbing the softer radiations. **E 1316, E07**

filter—a processing component or function that excludes, passes or amplifies a selected kind of signal or part of a signal. **E 1316, E07**

filter aid—an inert, insoluble material, more or less finely divided, used as a filter medium or to assist in filtration by preventing excessive packing of the filter cake. **B 374, B08**

filter bedding stone—(generally 6-in. minus material) stone placed under graded riprap stone or armor stone in a layer or combination of layers designed and installed in such a manner as to prevent the loss of underlying soil or finer bedding materials due to moving water. **D 653, D18**

filter block—a cellular vitrified clay block unit, of proprietary configuration, designed to underbed the media in trickling filters. **C 896, C04**

filter cake—the accumulated particles on a filter surface, usually from a slurry mixture. **D 6161, D19**

filter coefficients—values which define a mask filter in image processing. **E 1316, E07**

filter holder—a plastic holder that supports the filter medium upon which airborne particulate matter is collected. **E 631, E06**

filtering, n—*indata acquisition*, a means of attenuating signals in a given frequency range. They can be mechanical (volume tank, spring, mass) or electrical (capacitance, inductance) or digital (mathematical formulas), or a combination thereof. Typically, a low-pass filter attenuates the unwanted high frequency noise. **D 4175, D02**

filter, neutral—a filter that attenuates the radiant power reaching the detector by the same factor at all wavelengths within a prescribed wavelength region. **E 131, E13**

filter (protective filter)—a layer or combination of layers of pervious materials designed and installed in such a manner as to provide drainage, yet prevent the movement of soil particles due to flowing water. **D 653, D18**

filtrate—the fluid that has passed through a filter. **D 4410, D19**

filtrate—the portion of the feed stream which has passed through a filter. **D 6161, D19**

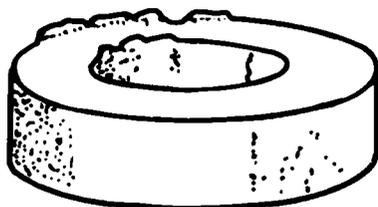
filtration—the process of passing a liquid through a porous medium for the removal of suspended matter. **D 4410, D19**

fin—(1) an imperfection caused by entrance of glass into a seam between mold parts during forming.

(2) the feather edge obtained when cutting flat glass.

C 162, C14

fin—fine feather-edge protrusion from the surface (Syn. *flash*).



- fin**—thin projection from cut edge of point, a defect. Occasionally found on rim of head. **F 109, C21**
F 547, F16
- fin**—See **burr**. **F 547, F16**
- fin**—portion of the boom membrane above the float. **F 818, F20**
- final boiling point (FBP)**—the point at which a cumulative volume count equal to 99.5 % of the total volume count under the chromatogram is obtained. **D 4175, D02**
- final cover, *n***—cover material that is applied as part of closure of a landfill or surface impoundment. **E 2201, E50**
- final inspection**—inspection by a qualified inspector, industrial hygienist, or local public health official to determine whether abatement and cleanup meet applicable standards. **E 631, E06**
- final remedy, *n***—site restoration. **D 5681, D34**
- final sample, *n***—sample obtained at the final stage of multi-stage sampling. **E 1402, E11**
- final set**—*in grouting*, a degree of stiffening of a grout mixture greater than initial set, generally stated as an empirical value indicating the time in hours and minutes that is required for cement paste to stiffen sufficiently to resist the penetration of a weighted test needle. **D 653, D18**
- final twist, *n***—the number of turns per unit length in a single yarn component of a plied yarn or the plied yarn component of a cabled yarn as the component lies in the more complex structure. **D 123, D13**
- final twist, *n***—the number of turns per unit length in a single yarn component of a plied yarn or the plied yarn component of a cabled yarn as the component lies in the more complex structure. (syn. “as-is” twist) **D 4849, D13**
- financial management rate-of-return (FMRR)**—See **adjusted internal rate-of-return (AIRR)**. **E 631, E06**
- financial management rate-of-return (FMRR), *n***—See **adjusted internal rate-of-return (AIRR)**. **E 833, E06**
- financing lease**—a capital lease. **E 2135, E53**
- finder patterns, *n***—a unique pattern, containing no data, that is specific to each symbology, whose purpose is to locate the symbol within the reader’s field of view. **F 1294, F05**
- Finders’ sole leather**—one of the two principal types of sole leather. It has less flexibility and compressibility than factory sole leather and is more suitable for use in shoe repair. (See also **factory sole leather**.) **D 1517, D31**
- fine aggregate, *n***—(1) aggregate passing the 3/8-in. (9.5-mm) sieve and almost entirely passing the 4.75-mm (No. 4) sieve and predominantly retained on the 75- μ m (No. 200) sieve: or (2) that portion of an aggregate passing the 4.75-mm (No. 4) sieve and retained on the 75- μ m (No. 200) sieve. **D 8, D04**
- fine annealing**—to attain more uniform structure than ordinarily required, maximizing homogeneity of physical properties by minimizing prior thermally induced variations. **C 162, C14**
- fine end, *n***—a smaller than normal diameter warp end. (Syn. light end, thin end. (Compare **coarse end**.) **D 123, D13**
- fine end, *n***—a smaller than normal diameter warp end. (Syn. light end, thin end) (Compare **coarse end**) **D 3990, D13**
- fine filling**—See **thin filling**. **D 3990, D13**
- fine grain practice, *n***—a steelmaking practice for other than **stainless steel** that is intended to produce a **killed steel** that is capable of meeting the requirements specified for fine austenitic grain size. **A 941, A01**

fine hackle—See **mist**.

C 162, C14

fine material—material finer than No. 200 (75- μ m) U.S. standard sieve. **D 5681, D34**

fine-material load—that part of the total sediment load that is composed of particles of a finer size than the particles present in appreciable quantities in the bed material; normally, the fine-material load consists of material finer than 0.062 mm.

D 4410, D19

fine mineral surfacing—water-insoluble inorganic material, more than 50 % of which passes the 500- μ m (No. 35) sieve, used on the surface of roofing. **D 1079, D08**

fine mist pump, *n*—a mechanical pump dispenser that atomizes liquid into a fine mist. An accumulative pump is the most common type of fine mist pump. **D 6655, D10**

fine nail—slender, bright, regular-stock-steel, 1/2 by 0.035 to 1 1/8 by 0.072-in. nails with flat 1/8 to 1/64-in. head and medium diamond point. Also, slender, electroplated, hardened-steel, 1/4 by 0.054 to 2 1/2 by 0.083-in. nails with brad head and short diamond point.

F 547, F16

fineness, *n*—a measure of the purity of precious metals expressed in parts per thousand. **B 899, B02**

fineness—a measurement number designating the particle size of a material, usually reported as percent passing a screen of a particular standard size. **C 242, C21**

fineness, *n*—a measurement number designating the particle size of a material, usually reported as passing a screen of a particular standard size. **C 1145, C28**

fineness, *n*—of *fibers*, a relative measure of size, diameter, linear density, or mass per unit length expressed in a variety of units.

D 123, D13

fineness—a measure of particle-size.

D 653, D18

fineness, *n*—of *textile fibers*, a relative measure of size, diameter, linear density or mass per unit length expressed in a variety of units. **D 4845, D13**

fineness modulus, *n*—an empirical factor obtained by adding total percentages of a sample of aggregate retained on each of a specified series of sieves and dividing by 100. The sieve sizes used are: No. 100 (150 μ m), No. 50 (300 μ m), No. 30 (600 μ m), No. 16 (1.18 mm), No. 8 (2.36 mm), No. 4 (4.75 mm), 3/8 in. (9.5 mm), 3/4 in. (19.0 mm), 1 1/2 in. (38.1 mm) and larger, increasing in the ratio of 2 to 1. **C 11, C11**

fineness modulus, *n*—a factor obtained by adding the percentages of material in the sample that is coarser than each of the following sieves (cumulative percentages retained), and dividing the sum by 100: 150- μ m (No. 100), 300- μ m (No. 50), 600- μ m (No. 30), 1.18-mm (No. 16), 2.36-mm (No. 8), 4.75-mm (No. 4), 9.5-mm (3/8-in.), 19.0-mm (3/4-in.), 37.5-mm (1 1/2-in.), 75-mm (3-in.), 150-mm (6-in.). **C 125, C09**

fineness modulus—an empirical factor obtained by adding the total percentages of an aggregate sample retained on each of a specified series of sieves, and dividing the sum by 100; in the United States, the U.S. Standard sieve sizes are: No. 100 (149 μ m), No. 50 (297 μ m), No. 30 (590 μ m), No. 16 (1,190 μ m), No. 8 (2,380 μ m), and No. 4 (4,760 μ m) and 3/8 in. (9.5 mm), 3/4 in. (19 mm), 1 1/2 in. (38 mm), 3 in. (76 mm), and 6 in. (150 mm). **D 653, D18**

fineness of enamel—a measurement of the degree to which a frit has been milled in wet or dry form, usually expressed in grams residue retained on a certain mesh screen from a 50-cm³ or a 100-g sample. **C 286, B08**

fine pick—See **thin filling**.

D 3990, D13

fines, *n*—the portion of a powder composed of particles which are smaller than a specified size, currently less than 44 μ m. See also **superfines**. **B 243, B09**

fines—the portions of a powder composed of particles smaller than a specified size. **C 242, C21**

fines, *n*—the portions of a powder composed of particles smaller than a specified size. **C 1145, C28**

fin

fin—portion of a soil finer than a No. 200 (75- μ m) U.S. standard sieve. **D 653, D18**

fin, *n*—particles smaller than the smallest nominal specified particle size. **D 2652, D28**

fin, *n*—*for asbestos*, the class of material having the smallest range of particle size, that is segregated by a particle size classification of asbestos by any relevant test method. **D 2946, C17**

fin, *n*—that portion of pelleted carbon black that passes through a specified sieve under standard conditions. **D 3053, D24**

fine sprays—distribution of droplets with $100\ \mu\text{m} < D_{v,5} \leq 400\ \mu\text{m}$. **E 1102, E35**

fine structure—a generic term denoting the submicroscopic structure that depends on molecular arrangement. **D 1695, D01**

fine transfer—see **material transfer, bridge**. **B 542, B02**

finger blisters—finger shaped blisters or wrinkles in the plies of a built-up roofing or waterproofing membrane. **D 1079, D08**

finger joint, *n*—see *finger joint* under **joint**. **D 907, D14**

finger mark, *n*—an irregular spot showing variation in picks per inch for a limited width. **D 123, D13**

finger mark, *n*—an irregular spot showing variation in picks per inch for a limited width. **D 3990, D13**

finger rings—the feature of both the female and the male members that forms the gripping surface for the surgeon (commonly classified as the ring-handled feature in ISO 7151). **F 921, F04**

finger rings—the feature of the scissors that forms the gripping surface for the surgeon (commonly classified as the ring-handled feature). **F 1078, F04**

fingertip towel, *n*—a textile product with fringes and side hems or selvages which is smaller than a hand towel, generally used as decoration and to dry hands. **D 123, D13**

fingertip towel, *n*—a textile product with fringes and side hems or selvages which is smaller than a hand towel, generally used as decoration and to dry hands. **D 7023, D13**

finger wrinkles—See **finger blisters**. **D 1079, D08**

finial, *n*—an ornamental piece on the top of a post, newel, or railing; frequently in the form of an urn or pineapple, and so named. **E 631, E06**

finial—See **railing systems**. **E 631, E06**

finial, *n*—an ornamental piece on the top of a post, newel, or railing; frequently in the form of an urn or pineapple, and so named. **E 1481, E06**

fining, also refining—the process by which molten glass becomes relatively free of undissolved gases. **C 162, C14**

finish—(1) the part of a bottle for holding the cap or closure.

(2) stage in melting process after glass appears free of seeds.

(3) the quality of a glass surface as influenced by very fine pits and cracks remaining from a grinding and polishing process. **C 162, C14**

finish—the exposed top surface of the plaza deck system, or traffic, or wearing surface. **C 717, C24**

finish, *n*—(1) final coat in a paint system; at the termination of cure or drying (2) sometimes refers to the entire coating system: the texture, color, and smoothness of a surface, and other properties affecting appearance. **D 16, D01**

finish, *n*—*in buttons*, the surface condition or texture. **D 123, D13**

finish, *n*—See **paperboard**. **D 996, D10**

finish—materials applied to the grain and sometimes split surface of the leather to cover blemishes, create smoothness and give uniformity of color and appearance which may vary from dull to glossy. **D 1517, D31**

finish, *n*—(1) the final treatment or coating of a surface, (2) the fine or decorative work required to make a **building** or its parts complete. **E 631, E06**

finish—the final surface visual appearance of the instrument classified as follows:

(1) bright or mirror finish—highly reflective surfaces.

(2) satin, matte, or black finish—reduced reflected surfaces (as compared to bright or mirror finish). **F 921, F04**

finish—the final surface visual appearance of the instrument classified as follows:

(1) **bright or mirror finish**—highly reflective surfaces.

(2) **satin, matte, or black finish**—reduced reflected surfaces (as compared to bright or mirror finish). **F 1078, F04**

finish, *n*—a chemical or mechanical modification, or both, of the fabric for a specific performance result. **F 1494, F23**

finish—the final surface visual appearance of a needle, that may be classified as follows: **F 1840, F04**

finish coat, *n*—the final layer of plaster applied over a basecoat or other substrate. **C 11, C11**

finish coat, *n*—the final wet-state material, which provides color and texture, applied over the reinforced base coat. **E 2110, E06**

finished, *adj*—*forglass laminates*, a descriptive term for woven fabrics that have passed through a treating procedure which is compatible with a resin matrix or facilitates manufacturing, or both. **D 123, D13**

finished, *adj*—*intextile floor covering materials*, the completion of all manufacturing operations. **D 123, D13**

finished, *adj*—*in textile floor covering materials*, the completion of all manufacturing operations. **D 5684, D13**

finished, *adj*—*forinflatable restraint fabrics*, a descriptive term for fabric that has been treated after weaving and that is suitable for coating or piece cutting. **D 6799, D13**

finished, *adj*—*forglass laminates*, a descriptive term for woven fabrics that have passed through a treating procedure which is compatible with a resin matrix or facilitates manufacturing, or both. **D 7018, D13**

finished fabric weight, *n*—mass per unit area expressed in grams per square metre (ounces per square yard), grams per linear metre (ounces per linear yard), or inversely as metres per kilogram (linear yards per pound), or square metres per kilogram (square yards per pound). **D 123, D13**

finished fabric weight, *n*—mass per unit area expressed in grams per square metre (ounces per square yard), grams per linear metre (ounces per linear yard), or inversely as metres per kilogram (linear yards per pound), or square metres per kilogram (square yards per pound). **D 4850, D13**

finished grade—See **grade**. **E 631, E06**

finished grade—the surface elevation of lawns, walks, drives, or other improved surfaces after completion of construction or grading operations. **E 631, E06**

finished metal connector plate—galvanized or chemically surfaced steel connector plate, with or without prepunched holes. **E 631, E06**

finished pile yarn floor covering, *n*—*in textile floor covering materials*, the pile yarn floor covering that has undergone all steps of the manufacturing process. **D 123, D13**

finished pile yarn floor covering, *n*—*in textile floor covering materials*, the pile yarn floor covering that has undergone all of the steps of the manufacturing process. **D 5684, D13**

finished stone—dimension stone with one or more mechanically exposed surfaces. **C 119, C18**

finished thermocouple material—sheathed thermocouple material fabricated in final form, ready for delivery to the purchaser. **E 344, E20**

finished thermocouple material—sheathed thermocouple material in final form, fabricated, and tested in accordance with Specification E 585. **E 344, E20**

finished yield, *n*—*in knitted fabrics*, the number of finished square metres per kilogram (square yards per pound) of finished fabric. **D 123, D13**

finished yield, *n*—*in knitted fabrics*, the number of finished square metres per kilogram (square yards per pound) of finished fabric. **D 4850, D13**

finisher—(1) person in charge of a day-tank during the melting and firing of the glass.
(2) the workman who does the final work, such as polishing or putting the handle or foot on a piece of ware. C 162, C14

finish grinding, *n*—the completion of a grinding operation to obtain a desired surface appearance or accurate dimensions. C 1145, C28

finishing bar, *n*—uneven appearance across the entire fabric width. D 123, D13

finishing bar, *n*—an uneven appearance across the entire fabric width. D 3990, D13

finishing compound, *n*—(sometimes called *topping compound*) a compound specifically formulated and manufactured for use over taping or all purpose compounds to provide a smooth and level surface for the application of decoration. C 11, C11

finishing head—brad head, as found on finishing nail. F 547, F16

finishing hydrated lime—hydrated lime suitable for use in the finish coat of plaster. C 51, C07

finishing nail—slender, bright, regular-stock-steel, 1 by 0.058 to 4 by 0.135-in. nails with flat or cupped 0.086 to 0.177-in. brad head and medium diamond point for countersinking where concealment of head is important. (See also, **fine nail**, **moulding and trim nails**, **wallboard nails**.) F 547, F16

finishing quicklime—quicklime suitable (after slaking to a lime putty) for use in the finish coat of plaster. C 51, C07

finishing technique, *n*—as applies to laundry and dry cleaning procedures, the mechanical means by which the garment is put in its final state (for example, pressing, drying, wrinkle removal, and so forth). F 1494, F23

finish wearing surface—See *traffic surface*. C 717, C24

finite element—one of the regular geometrical shapes into which a figure is subdivided for the purpose of numerical stress analysis. (ISRM) D 653, D18

fire—See *bisque fire*; *decorating fire*; *glost fire*; *single fire* under **firing**. C 242, C21

fire, *n*—as related to *textile flammability*, an uncontrolled conflagration in which materials are destroyed by burning as evidenced by flames of varying size and shape, and a high-intensity heat source of 5 kw or greater, such as burning contents of a room, a burning basket, burning building, or forest fire. D 123, D13

fire, *n*—as related to *textile flammability*, an uncontrolled conflagration in which materials are destroyed by burning as evidenced by flames of varying size and shape, and a high intensity heat source of 5 kw or greater, such as a burning waste basket, grease-fire on a stove, burning building or forest fire. D 4391, D13

fire, *n*—destructive burning as manifested by any or all of the following: light, flame, heat, smoke. E 176, E05

firebrick, *n*—any type of refractory brick specifically fireclay brick. C 71, C08

firebrick, insulating, *n*—a refractory brick characterized by low thermal conductivity and low heat capacity. C 71, C08

fire-characteristic profile, *n*—an array of fire-test-response characteristics, all measured using tests relevant to the same fire scenario, for a material, product, or assembly to address, collectively, the corresponding fire hazard. (See also **fire hazard**, **fire risk**, and **fire-test-response characteristic**.) E 176, E05

fire-characteristic profile, *n*—array of fire-test-response characteristics, all measured using tests relevant to the same fire scenario, for a material product, or assembly to address, collectively, the corresponding fire hazard. E 176, E05

fire check—a check resulting from localized thermal stress during forming. C 162, C14

fire clay, *n*—a sedimentary clay of low flux content. C 43, C15

fireclay, *n*—an earthy or stony mineral aggregate that has as the essential constituent hydrous silicates of aluminum with or without free silica, plastic when sufficiently pulverized and wetted, rigid when subsequently dried, and of suitable refractoriness for use in commercial refractory products. C 71, C08

fire clay—a sedimentary clay of low-flux content. C 896, C04

fire clay—a silicious clay rich in hydrous aluminum silicates. D 653, D18

fireclay, nodular, *n*—a rock containing aluminous or ferruginous nodules, or both, bonded by fireclay. C 71, C08

fireclay, plastic or bond, *n*—a fireclay of sufficient natural plasticity to bond nonplastic materials. C 71, C08

fireclay plastic refractory, *n*—a fireclay material tempered with water and suitable for ramming into place to form a monolithic furnace lining that will attain satisfactory physical properties when subjected to the heat of furnace operation. C 71, C08

fire crack—cracking, frequently intergranular in nature, that occurs in some metallic materials when too rapidly heated or when stressed and heated rapidly. Not to be confused with “quench crack.” E 7, E04

fire cracks—see synonymous term **fire check**. C 162, C14

fire cracks—cracks in glass caused by local temperature shock. E 344, E20

fired bond, *n*—bond developed between particulate constituents of brick solely as the result of the firing process. C 43, C15

fire-door nail—bright, regular-stock-steel, barbed, 1¼ by 0.092-in. nail (3d shingle nail) with flat ¼-in. head and medium diamond point and 2 by 0.099-in. nail (6d box nail) with flat 17/64-in. head and medium diamond point. F 547, F16

fire endurance, *n*—a measure of the elapsed time during which a material or assemblage continues to exhibit fire resistance. E 176, E05

fire exposure, *n*—process by which or extent to which humans, animals, materials, products, or assemblies are subjected to the conditions created by fire. E 176, E05

fire gases, *n*—the airborne products emitted by a material, product, or assembly undergoing pyrolysis or combustion, that exist in the gas phase at the relevant temperature. E 176, E05

fire hazard, *n*—the potential for harm associated with fire. E 176, E05

fire hazard, *n*—the potential for harm associated with fire. E 176, E05

fire limit, *n*—the threshold limit conditions that will just support sustained combustion of a material under a combination of specified conditions and at least one variable parameter. G 126, G04

fire marks—a defect characterized by tiny indentations similar in appearance to shallow pinholes. C 286, B08

fire model, *n*—a physical representation or set of mathematical equations that approximately simulate the dynamics of burning and associated processes. E 176, E05

fire over—idling a melting unit at operating temperature. C 162, C14

fire performance, *n*—response of a material, product, or assembly in a particular fire, other than in a fire test involving controlled conditions (different from **fire-test-response characteristic**). E 176, E05

fire performance, *n*—response of a material, product, or assembly in a specific fire, other than in a fire test involving controlled conditions (different from fire-test-response characteristics, q.v.) E 176, E05

fire performance characteristic, *n*—this term is deprecated. (See **fire-test-response characteristic** and **fire performance** (q.v.)) E 176, E05

fire performance test, *n*—this term is deprecated. (See **fire-test-response characteristic** and **fire performance** (q.v.)) E 176, E05

fire point—the lowest temperature at which a specimen will sustain burning for 5 s under specified conditions of test. D 2864, D27

fire point, *n*—the lowest temperature at which a liquid or solid specimen will sustain burning for 5 s. D 4175, D02

fire point, *n*—*in petroleum products*, the lowest temperature corrected to a barometric pressure of 101.3 kPa (760 mm Hg), at which application of an ignition source causes the vapors of a test specimen of the sample to ignite and sustain burning for a minimum of 5 s under specified conditions of test. D 4175, D02

fire-polish

fire-polish—to make glass smooth, rounded, or glossy by heating the glass surface. C 162, C14

fireproof, *adj*—an inappropriate and misleading term. Do not use. (See commentary in X1.) E 176, E05

fireproofing tile, *n*—tile for use as a protection for structural members against fire. C 43, C15

fire-refined copper—copper of any origin or type finished by furnace refining without having been processed at any stage by electrolytic or chemical refining. Usually when the term fire-refined copper is used alone it refers to fire-refined tough pitch copper. This designation applies to the following:

—copper cast in refinery shapes suitable for hot or cold working or both, and by extension, to fabricators' products made therefrom.

—ingots or ingot bars suitable for remelting. B 846, B05

fire resistance, *n*—the ability of a material, product, or assembly to withstand fire or give protection from it for a period of time. (Contrast **fire resistance rating**.) E 176, E05

fire resistance, *n*—the property of a material or assemblage to withstand fire or give protection from it. E 176, E05

fire resistance—as applied to buildings, the property of a material or assembly to withstand fire or to give protection from it, characterized by the ability to confine a fire or to continue to perform a structural function, or both. E 631, E06

fire-resistance classification, *n*—a standard rating of fire-resistance and protective characteristics of a building construction or assembly. C 11, C11

fire resistance rating, *n*—a measure of the elapsed time during which a material, product, or assembly continues to exhibit fire resistance under specified exposure conditions. (Contrast **fire resistance**.)

E 176, E05

fire resistant, *adj*—See **fire resistive**, the preferred term. E 176, E05

fire resistant boom (aka fire containment boom)—boom intended for containment of burning oil slicks. F 818, F20

fire resistive, *adj*—having fire resistance (TCG-01). E 176, E05

fire-resistive barrier system, *n*—a specific construction of devices, materials, or coatings installed around, or applied to, the electrical system components. E 176, E05

fire resistive joint system, *n*—a device or designed feature that provides a fire separating function along continuous linear openings, including changes in direction, between or bounded by fire separating elements. E 176, E05

fire retardance, *n*—the resistance to combustion of a material when tested under specified conditions. D 123, D13

fire retardant—having or providing comparatively low flammability or flame spread properties. D 9, D07

fire-retardant, *adj*—a descriptive term which implies that the described product, under accepted methods of test, will significantly: (a) reduce the rate of flame spread on the surface of a material to which it has been applied, or (b) resist ignition when exposed to high temperatures, or (c) insulate a substrate to which it has been applied and prolong the time required to reach its ignition, melting, or structural-weakening temperature. D 16, D01

fire-retardant, *adj*—having or providing comparatively low flammability or flame spread properties (E 176, E05). D 996, D10

fire retardant, *adj*—not a defined term. Use as a modifier only with defined compound terms: **fire-retardant barrier**, **fire-retardant chemical**, **fire-retardant coating**, and **fire-retardant treatment**.

E 176, E05

fire-retardant barrier, *n*—a layer of material which, when secured to a combustible material or otherwise interposed between the material and a potential fire source, delays ignition and combustion of the material when the barrier is exposed to fire. E 176, E05

fire-retardant chemical, *n*—a chemical, which when added to a combustible material, delays ignition and combustion of the resulting material when exposed to fire. E 176, E05

fire-retardant coating, *n*—a coating that will do one or more of the following: (1) reduce the flame spread on the substrate over which the coating is applied, sometimes at the sacrifice of the coating (see

intumescent coating);

(2) resist ignition of the substrate when exposed to high temperature; or

(3) insulate the substrate to which the coating is applied and thereby prolong the time required to reach its ignition, melting or structural-weakening temperature. D 16, D01

fire-retardant coating, *n*—a fluid-applied surface covering on a combustible material which delays ignition and combustion of the material when the coating is exposed to fire. (See also **flame-retardant coating**. Compare **fire-retardant barrier**.) E 176, E05

fire retardant, *n*—a deprecated term. Do not use. E 176, E05

fire-retardant treatment, *n*—the use of a fire-retardant chemical or a fire-retardant coating. (See also **flame-retardant treatment**.)

E 176, E05

fire risk, *n*—an estimation of expected fire loss that combines the potential for harm in various fire scenarios that can occur with the probabilities of occurrence of those scenarios. E 176, E05

fire scale—copper oxide subscale formed just under the surface of silver-copper alloys when they are annealed in air. E 7, E04

fire scenario, *n*—a detailed description of conditions, including environmental, of one or more of the stages from before ignition to the completion of combustion in an actual fire, or in a full scale simulation. E 176, E05

fire scenario, *n*—a detailed description of conditions, including environmental, of one or more of the steps from before ignition to the completion of combustion in an actual fire, or in a full-scale simulation. E 176, E05

fire separating element, *n*—floors, walls, and partitions having a period of fire resistance determined in accordance with Test Methods E 119 or E 1529. E 176, E05

fire stop—a through-penetration fire stop is a specific construction consisting of the materials that fill the opening around penetrating items such as cables, cable trays, conduits, ducts, and pipes and their means of support through the wall or floor opening to prevent spread of fire. E 176, E05

fire test, *n*—a procedure, not necessarily a standard test method, in which the response of materials to heat or flame (or both) under controlled conditions is measured or otherwise described.

E 176, E05

fire test exposure severity, *n*—a measure of the degree of fire exposure; specifically in connection with Test Methods E 119, E 152, and E 163, the ratio of the area under the curve of average furnace temperature to the area under the standard time/temperature curve, each from the start of the test to the end or time of failure, and above the base temperatures 68°F (20°C).

E 176, E05

fire-test-response characteristic, *n*—a response characteristic of a material, product, or assembly, to a prescribed source of heat or flame, under controlled fire conditions; such response characteristics may include but are not limited to ease of ignition, flame spread, heat release, mass loss, smoke generation, fire resistance, and toxic potency of smoke. E 176, E05

fire-test-response-characteristic index, *n*—a single quantitative measure that combines two or more fire-test-response characteristics for a material, product, or assembly, all developed under test conditions compatible with a common fire scenario, addressing collectively the corresponding threat. See also **fire-test-response-characteristic profile**, **fire hazard**, **fire risk**, **fire-test-response characteristic**. E 176, E05

fire-test-response-characteristic profile, *n*—array of fire-test-response characteristics for a material, product, or assembly, all developed under test conditions compatible with a common fire scenario, addressing collectively the corresponding threat. See also **fire hazard**, **fire risk**, **fire-test-response characteristic**. E 176, E05

fire window assembly, *n*—a window or glass block configuration, intended for use in walls or partitions, for which a fire endurance rating has been determined in accordance with this fire-test-response standard. E 176, E05

firing, *v*—process of heating the material to elevated temperatures.

C 43, C15

firing—the controlled heat treatment of ceramic ware in a kiln or furnace, during the process of manufacture, to develop the desired properties.

bisque fire—the process of kiln-firing ceramic ware before glazing.

decorating fire—the process of firing ceramic or metallic decorations on the surface of glazed ceramic ware.

firing curve—a diagram or table showing the time and temperature planned or experienced by ware going through a firing operation.

firing cycle—the time required for one complete firing operation (cold-to-cold).

firing range—the range of firing temperature within which a ceramic composition develops properties which render it commercially useful.

glost fire—the process of kiln-firing bisque ware to which glaze has been applied.

single fire—the process of maturing an unfired ceramic body and its glaze in one firing operation.

C 242, C21

firing—the controlled heat treatment of ceramic ware in a kiln or furnace to develop the desired final properties.

C 286, B08

firing, *n*—for the CFR engine, operation of the CFR engine with fuel and ignition.

D 4175, D02

firing expansion, *n*—the increase in the dimensions of a substance or product during thermal treatment.

C 1145, C28

firing range—the time-temperature interval in which a porcelain enamel or ceramic coating is satisfactorily matured.

C 286, B08

firing temperature—the degree of sensible heat attained by the ware during the maturing of the coating.

C 286, B08

firing time—the period during which the ware remains in the firing zone of the furnace to mature the coating.

C 286, B08

firing zone—that portion of the furnace, usually a continuous furnace, through which the ware passes and that remains at or near the firing temperature of the coating.

C 286, B08

first article—preproduction models, initial production samples, test samples, first lots, or pilot samples submitted for testing and evaluation for conformance with specified contract requirements before or in the initial stages of production.

E 2135, E53

first article testing—testing and evaluating the first article for conformance with specified contract requirements before or in the initial stage of production.

E 2135, E53

first cost—costs incurred in placing a building or building subsystem into service, including, but not limited to, costs of planning, design, engineering, site acquisition and preparation, construction, purchase, installation, property taxes and interest during the construction period, and construction related fees (Syn. *initial investment cost, initial cost*).

E 631, E06

first cost, *n*—costs incurred in placing a building or building subsystem into service, including, but not limited to, costs of planning, design, engineering, site acquisition and preparation, construction, purchase, installation, property taxes and interest during the construction period, and construction related fees (Syn. *initial investment cost, initial cost*).

E 833, E06

first cryoscopic constant, *A, n*—a constant of proportionality between the freezing point depression of, and concentration of impurities in, a sample of reference material, given by the ratio of the molar heat of fusion of the pure material, *L*, to the product of the molar gas constant, *R*, and the square of the thermodynamic temperature of fusion, *T*, of the pure material (freezing point):

$$A = \frac{L}{RT^2}$$

E 344, E20

first floor—See **floor**.

E 631, E06

first floor—in a building, (1) (in the United States) the floor of a

building that is at, or closest to, **finished grade** (also used as a synonym for **groundfloor**). (2) (except in the United States) the floor of a building that is next above the floor at, or closest to, **finished grade**.

E 631, E06

first hit location—a zone location method defined by which a channel among a group of channels first detects the signal.

E 1316, E07

first-in, first-out (FIFO)—method of inventory valuation that assumes merchandise is sold in the order of its receipt. The first-price in the first-price out; hence, cost of sales is based on older dollars.

E 2135, E53

first-loss tow/current velocity—minimum tow/current velocity normal to the membrane at which oil escapes past a boom.

F 818, F20

first point of no break—the amount (weight-mass) of porcelain enamel slip retained when it stops sliding off an enameled pick-up panel and is observed to drain smoothly from the panel without showing a wavy pattern on the wet surface (known also as “yield point”).

C 286, B08

first side—{archaic} the surface of plate which is ground and polished first.

C 162, C14

first story—the lowermost story of a building entirely above the average grade (also used as a synonym for **ground floor**).

E 631, E06

first story—See **building space**.

E 631, E06

fishbone—a striation that does not reach entirely across the fracture surface.

C 162, C14

fish-eye, *n*—small globular mass that has not blended completely into the surrounding material. See **gel**.

D 883, D20

fish-eye—a small globular mass that has not blended completely into the surrounding pultruded material.

NOTE—This condition is particularly evident in a transparent or translucent material.

D 3918, D20

fish-eye, *n*—small globular mass that has not blended completely into the surrounding material. (D20)

F 412, F17

“fish-hook-like” thread—See **buttess-type thread**.

F 547, F16

fishhooks, *n*—strands of belt or bead wire exposed from a processed scrap tire or an individual piece of belt or bead wire. (See also *bear claw*).

D 5681, D34

fishing tool—in *grouting*, a device used to retrieve drilling equipment lost or dropped in the hole.

D 653, D18

fishmouth—(1) a half-cylindrical or half-conical opening formed by an edge wrinkle or failure to embed a roofing felt;

(2) in *shingles*, a half-conical opening formed at a cut edge.

D 1079, D08

“fish-mouth” point—incomplete chisel wedge point with two narrow ridges at end, a defect resulting from premature breaking of wire during forming.

F 547, F16

fishscaling—a defect appearing as small half-moon shaped fractures somewhat resembling the scales of a fish.

C 286, B08

fishscaling, delayed—see **delayed fishscaling**.

C 286, B08

fission chamber—an ionization chamber containing one or more surfaces coated with fissionable material.

E 170, E10

fissure—a gapped fracture. (ISRM)

D 653, D18

fissures, *n*—surface defects consisting of narrow openings or cracks.

C 1145, C28

fit, *n*—the quality, state or manner in which the length and closeness of clothing, when worn, relates to the human body.

F 1494, F23

fit, *n*—the ability of the shoe or hosiery to conform to the size, width, shape, and proportion of the foot.

F 1646, F13

fit-for-use, *n*—a product, system, or service that is suitable for its intended use.

D 4175, D02

fitted sheet, *n*—in *textiles*, a product usually made with boxed corners, sometimes elasticized with shape and size to conform to the contours of the mattress and used for covering the mattress on a bed.

D 123, D13

fitted sheet, *n*—in *textiles*, a product usually made with boxed corners, sometimes elasticized with shape and size to conform to

fitted sheet, n

- the contours of the mattress and used for covering the mattress on a bed. **D 7023, D13**
- fitting**—products such as wyes, tees, elbows, adapters, etc. used in the installation of vitrified clay pipelines. **C 896, C04**
- fitting, n—for pipes**, component such as wyes, tees, and adapters for use in laying pipe, such that, when properly installed yields an assembly equivalent in serviceability and strength to the pipe sections. **C 1154, C17**
- fitting, n—for conduit**, component such as adapters, reducers, increasers, bends and bell ends, for use in laying conduit and made to such dimensions as will provide equivalent strength and silt-tight joints when assembled with the conduit. **C 1154, C17**
- fitting, n—for conduit**, component such as adapters, reducers, increasers, bends, and bell ends, for use in laying asbestos-cement conduit and made of equivalent strength and to such dimensions as will provide silt-tight joints when assembled with the conduit. **D 2946, C17**
- fitting, n**—a piping component used to join or terminate sections of pipe or to provide changes of direction or branching in a pipe system. **F 412, F17**
- fittings, n—for pipes**, components such as wyes, tees, elbows, and adapters for use in laying asbestos-cement pipe, such that, when properly installed, yield as an assembly equivalent inserviceability and strength to the pipe sections. **D 2946, C17**
- fitting stool**—a low stool, generally having a forward projection, the top of which recedes at an approximate angle of 30° and is utilized for the fitting of shoes. **F 869, F08**
- fit-up, n (aménagement)**—alterations and improvements to the **base building** and to the **building systems** including demolition, where required, to prepare the accommodation for occupancy. **E 631, E06**
- fit-up, n (aménagement)**—alterations and improvements to the **base building** and to the **building systems** including demolition, where required, to prepare the accommodation for occupancy. **E 1480, E06**
- fixated CCPs, n**—CCPs that are blended with a cementitious binder to induce or enhance a pozzolanic reaction. **E 2201, E50**
- fixation, n**—solidification or stabilization. **E 2201, E50**
- fixed**—See **windows and doors**. **E 631, E06**
- fixed analyzer transmission**—see **electron energy analyzer**. **E 673, E42**
- fixed-angle internal reflection element**—an internal reflection element which is designed to be operated at a fixed angle of incidence. **E 131, E13**
- fixed asset**—item that has physical substance that meets the entity's capitalization thresholds. It is bought for use in the operation of business and not intended for resale to customers. Examples are building, machinery, auto, and land. Fixed assets with the exception of land are subject to **depreciation**. Fixed assets are usually referred to as property, plant, and equipment (PP&E). Fixed assets meet the definition of "assets." **E 2135, E53**
- fixed asset turnover**—measurement that reflects the productivity and efficiency of property, plant, and equipment in generating revenue. A high turnover rate reflects positively on the company's ability to utilize its fixed assets in business operations properly. The turnover equals sales divided by fixed assets. **E 2135, E53**
- fixed asset unit**—element making up the fixed asset account. An example is a specified machine within the machinery account. Referred to as an "asset accountability unit" in CAS 404. **E 2135, E53**
- fixed beam scanner, n**—either a visible light or laser scanner reading in a set plane. **F 1294, F05**
- fixed bed**—a stationary bed of granular particles. **D 2652, D28**
- fixed carbon, n—in the case of coal, coke, and bituminous materials**, the solid residue other than ash, obtained by destructive distillation, determined by definite prescribed methods. **D 121, D05**
- fixed carbon, n**—the ash-free carbonous material that remains after volatile matter is driven off during the proximate analysis of a dry sample. **D 5681, D34**
- fixed carbon**—carbon remaining after heating in a prescribed manner to decompose thermally unstable components and to distill volatiles. **E 1705, E48**
- fixed-feed grinding, n**—the process of feeding a material to be ground to a grinding wheel at a given rate or in specific increments. **C 1145, C28**
- fixed-fixed beam**—a test structure that consists of a freestanding beam that is fixed at both ends. **E 2444, E08**
- fixed-force or fixed-displacement applied K curves**—curves obtained from a fracture mechanics analysis of a specific specimen configuration. **E 1823, E08**
- fixed matter, n**—residues from the ignition of particulate or dissolved matter, or both. **D 1129, D19**
- fixed matter**—residues from the ignition of particulate or dissolved matter, or both. **D 6161, D19**
- fixed mount reader, n**—a bar code reader that is mounted in a stationary fashion to intersect the plane of a bar code symbol passing before the reader. Often employed in conveyor and transport systems. **F 1294, F05**
- fixed pitch, adj**—describes a character set in which all character cells are of equal width. (See **proportional spacing**.) **F 1457, F05**
- fixed point, n—in thermometry**, reproducible temperature of equilibrium of a system of two or more phases under specified conditions. **E 344, E20**
- fixed retainer, n—in zippers**, a device permanently attached to the retainer pin at the bottom of one stringer. **D 123, D13**
- fixed retainer, n**—a device permanently attached to the retainer pin at the bottom of one stringer. **D 2050, D13**
- fixed retarding ratio**—see **electron energy analyzer**. **E 673, E42**
- fixed-site laboratory**—a laboratory that is located in improved real estate such as a building or similar structure. **E 1605, E06**
- fixing**—the process of rendering a developed image permanent. **F 335, F05**
- fixture**—fixed asset whose utility is derived from its physical attachment to a property and that usually cannot be removed without causing loss of value or damage. An example is a lighting fixture. A fixture under the terms of a lease or other agreement can be detached. A fixture is classified as a **fixed asset**. **E 2135, E53**
- fixture**—see **attachment**. **E 2265, E06**
- flagging, n—in sewnseams**, a mode of failure evidenced by slippage of one or more yarns entirely out of the original seam. **D 123, D13**
- flagging, n—in sewnseams**, a mode of failure evidenced by slippage of one or more yarns entirely out of the original seam. **D 4850, D13**
- flake**—a small wood particle of predetermined thickness specifically produced as a primary function of specialized equipment of various types, with the cutting action across the direction of the grain (either radially, tangentially, or at an angle between), the action being such as to produce a particle of uniform thickness, essentially plane of the flakes, in over-all character resembling a small piece of veneer. **D 1554, D07**
- flake-galvanized**—See **hot-galvanized**. **F 547, F16**
- flake-glass**—hot glass squeezed thin between two metal rolls or blown into a thin film, followed by fracturing into small particles. **C 162, C14**
- flake powder, n**—flat or scale-like particles whose thickness is small compared with the other dimensions. **B 243, B09**
- flakes**—in wrought ferrous products, flakes appear as short discontinuous internal cracks attributed to stresses produced by localized transformation and hydrogen solubility effects during cooling after hot working. They appear in a fracture surface as bright silvery areas with a coarse texture. In deep acid-etched transverse section they appear as discontinuities which are usually located in the midway to center location of the section. Known also as shatter cracks and hairline cracks. **E 7, E04**
- flaking**—See **delamination**. **A 902, A05**
- flaking—in protectivecoatings**, the detachment of small pieces of the coating film. **D 4538, D33**

flaking—that phenomenon manifested in film carbon ribbons and carbon paper by the actual detachment of pieces of the ink itself from the substrate. Flaking is the result of loss of adhesion, usually due to strain or extension of the film ribbon substrate due to tension or to contact with ribbon guides or parts other than the type font, or both. Flaking of carbon paper is usually due to stress or cracking of the ink film by folding, handling, etc. **F 221, F05**

flaking resistance, *n*—the ability of a coating to resist the actual detachment of film fragments either from the previously applied coating or the substrate. Flaking is generally preceded by cracking, checking, or blistering and is the result of loss of adhesion. Also known as scaling resistance. **D 16, D01**

flaking (scaling), *n*—phenomenon manifested in paint films by the actual detachment of pieces of the film itself either from its substrate or from paint previously applied. **E 631, E06**

flaking (scaling), *n*—phenomenon manifested in paint films by the actual detachment of pieces of the film itself either from its substrate or from paint previously applied. **E 1605, E06**

flaky finish—appearance of crazing, checking or flaking with or without separation of finish film. **D 1517, D31**

flame, *n*—*as related to ignition of textiles*, a controlled hot, luminous zone of gas or matter in gaseous suspension, or both, of constant size and shape that is undergoing combustion as evidenced by a low-intensity heat flux of less than 1 kw such as candle flame or match flame. (Compare **fire**.) **D 123, D13**

flame, *n*—*as related to textile flammability*, a hot luminous zone of gas or matter in gaseous suspension, or both, that is undergoing combustion, that is relatively constant in size and shape, and that produces a relatively low heat flux. (Compare **fire**.) **D 4391, D13**

flame, *n*—a hot, usually luminous zone of gas that is undergoing combustion. **E 176, E05**

flame, *n*—*as related to ignition of textiles*, a controlled hot luminous zone of gas or matter in gaseous suspension, or both, of constant size and shape that is undergoing combustion as evidenced by a low-intensity heat source of less than 5 kW, such as a burner flame on a gas stove. **F 1494, F23**

flame annealing, *n*—**annealing** in which the heat is applied directly by a flame. **A 941, A01**

flame application time, *n*—the time interval for which the ignition flame is applied to a material. **D 123, D13**

flame front, *n*—the leading edge of a flame propagating through a gaseous mixture or across the surface of a liquid or solid. **E 176, E05**

flame hardening, *n*—a process in which only the surface layer of a suitable steel object is heated by flame to above Ac_3 or Ac_{cm} , and then the object is **quenched**. **A 941, A01**

flame impingement, *n*—direct contact between a flame and a material. **F 1494, F23**

flame-out, *n*—the time at which the last vestige of flame or glow disappears from the surface of the test specimen, frequently accompanied by a final puff of smoke; Time 0 is the time at which the specimen is moved into the chamber and the door closed. **E 176, E05**

flameproof, *adj*—an inappropriate and misleading term. Do not use. **E 176, E05**

flame resistance, *n*—the property of a material whereby flaming combustion is prevented, terminated, or inhibited following application of a flaming or nonflaming source of ignition, with or without subsequent removal of the ignition source. **D 123, D13**

flame resistance, *n*—the property of a material whereby flaming combustion is prevented, terminated, or inhibited following application of a flaming or nonflaming source of ignition, with or without subsequent removal of the ignition source. **D 4391, D13**

flame resistance, *n*—the property of a material whereby flaming combustion is prevented, terminated, or inhibited following application of a flaming or nonflaming source of ignition, with or without subsequent removal of the ignition source. **D 4845, D13**

flame resistance, *n*—that property of a material whereby flaming combustion is prevented, terminated, or inhibited following appli-

cation of a flaming or nonflaming source of ignition, with or without subsequent removal of the ignition source. **D 5684, D13**

flame resistance, *n*—the ability to withstand flame impingement or give protection from it. **E 176, E05**

flame resistance—the property of a material whereby flaming combustion is prevented, terminated, or inhibited following application of a flaming or non-flaming source of ignition, with or without subsequent removal of the ignition source. **E 631, E06**

flame resistance—the property of a material whereby flaming combustion is prevented, terminated, or inhibited following application of a flaming or non-flaming source of ignition, with or without subsequent removal of the ignition source. **E 1749, E06**

flame resistant, *adj*—having flame resistance. **D 123, D13**

flame resistant, *adj*—having flame resistance. **D 4391, D13**

flame resistant, *adj*—having flame resistance. **E 176, E05**

flame resistive, *n*—See **flame resistant**, the preferred term. **E 176, E05**

flame retardant, *n*—a chemical used to impart flame resistance. **D 123, D13**

flame retardant, *adj*—not defined. This term should not be used as an adjective except in the terms “flame-retardant-treated” and “flame-retardant treatment”. **D 4391, D13**

flame retardant, *n*—a chemical used to impart flame resistance. **D 4391, D13**

flame retardant, *n*—a chemical used to impart flame resistance. **D 5684, D13**

flame retardant, *adj*—not a defined term. Use only as a modifier with defined compound terms: **flame-retardant chemical, flame-retardant coating, and flame-retardant treatment**. **E 176, E05**

flame-retardant chemical, *n*—a chemical, which when added to a combustible material, delays ignition and reduces flame spread of the resulting material when exposed to flame impingement. (See also **fire-retardant chemical**.) **E 176, E05**

flame-retardant coating, *n*—a fluid-applied surface covering on a combustible material which delays ignition and reduces flame spread when the covering is exposed to flame impingement. (See also **fire-retardant coating**.) **E 176, E05**

flame retardant, FR, *n*—a substance that markedly retards the propagation of a flame. (See ISO 472.) **D 1600, D20**

flame retardant, *n*—a deprecated term. Do not use. **E 176, E05**

flame-retardant-treated, *adj*—having received a flame-retardant treatment. **D 123, D13**

flame-retardant-treated, *adj*—having received a flame-retardant treatment. **D 4391, D13**

flame-retardant treatment, *n*—a process for incorporating or adding flame retardant(s) to a material or product. **D 123, D13**

flame-retardant treatment, *n*—a process for incorporating or adding flame retardant(s) to a material or product. **D 4391, D13**

flame-retardant treatment, *n*—a process for incorporating or adding flame retardant(s) to a material or product. **D 5684, D13**

flame-retardant treatment, *n*—the use of a flame-retardant chemical or a flame-retardant coating. (See also **fire-retardant treatment**.) **E 176, E05**

flame speed, *n*—the velocity of propagation of a flame front through a gaseous mixture (fuel and oxidizer) relative to a reference point. **E 176, E05**

flame spread, *n*—the propagation of a flame away from the source of ignition. **D 123, D13**

flame spread classification, *n*—a standard rating of relative surface burning characteristics of a building material as compared to a standard material. **C 11, C11**

flame spread index, *n*—a comparative measure expressed as a dimensionless number, derived from visual measurements of the spread of flame versus time in Test Method E 84. **E 176, E05**

flame spread, *n*—See **surface flame spread, volumetric flame spread.** E 176, E05

flame-spread time, *n*—the time taken by a flame on a burning material to travel a specified distance under specified conditions. D 123, D13

flaming debris, *n*—material which continues to flame as it separates and moves away from the flaming source. D 123, D13

flaming mode, *n*—the mode of testing that uses a pilot flame. E 176, E05

flammability, *n*—those characteristics of a material that pertain to its relative ease of ignition and relative ability to sustain combustion. D 123, D13

flammability, *n*—those characteristics of a material that pertain to its relative ease of ignition and relative ability to sustain combustion. D 4391, D13

flammability, *n*—those characteristics of a material that pertain to its ignition and support of combustion. F 1494, F23

flammable, *adj*—(1) capable of burning with a flame under specified conditions, or (2) when used to designate high hazard, subject to easy ignition and rapid flaming combustion. E 176, E05

flammable liquid—a liquid having a flash point below 37.8°C (100°F) and having a vapor pressure not exceeding 40 psi (absolute) at 37.8°C and shall be known as a Class I liquid. E 772, E44

flammable textile, *n*—any combustible textile that burns with a flame. (See also **flammability**. Compare **combustible textile, noncombustible textile**.) D 123, D13

flammable textile, *n*—any combustible textile that burns with a flame. (See also **flammability**.) (Compare **combustible textile, noncombustible textile**.) D 4391, D13

flange—that part of a lock-strip gasket which extends to form one side of a channel. C 717, C24

flange, *n*—See **box**. D 996, D10

flange, *n*—a flat plate or formed piece at the end of a railing or rail element for attachment to the adjoining construction or supporting member. E 631, E06

flange, *n*—a flat plate or formed piece at the end of a railing or rail element for attachment to the adjoining construction or supporting member. E 1481, E06

flange, *n*—that part of the rim which gives lateral support to the tire. F 538, F09

flange—in chain link fencing, a plate or casting for securing a post to a floor or a horizontal rail to a wall. F 552, F14

flange, *n*—the extension of the wrap beyond the core wire or stiffening groove. F 1379, F14

flanged joint—see **joint, flanged**. F 412, F17

flange lock slider, *n*—in **zippers**, a slider with notches in the flanges of the slider that block the shoulders of the elements when the stringers are pulled apart, thus preventing further separation of the chain. D 123, D13

flange lock slider, *n*—a slider with notches in the flanges of the slider that block the shoulders of the elements when the stringers above the slider are pulled apart, thus preventing further separation of the chain. D 2050, D13

flange plate—See **railing systems**. E 631, E06

flanges, *n*—in **zippers**, the edges of the slider formed to contain the chain. D 123, D13

flanges, *n*—the edges of the slider formed to contain the chain. D 2050, D13

flanking transmission—transmission of sound from the source to a receiving location by a path other than that under consideration. C 634, E33

flank, side—surface between root and crest; “leading” flank being on point side of crest and “following” flank being on head side of crest. F 547, F16

flanky—a characteristic of loose grain leather that forms coarse wrinkles on bending with the grain inward. D 1517, D31

flannel, *n*—as **applied to bed sheeting**, a napped fabric used in the fabrication of sheeting products. D 123, D13

flannel, *n*—as **applied to bed sheeting**, a napped fabric used in the fabrication of sheeting products. D 7023, D13

flare, *n*—the spreading of the filament ends or the strand ends at the cut end of a steel tire cord, expressed as the unravelled length. D 123, D13

flare, *n*—the spreading of the filament ends or the strand ends at the cut end of a steel tire cord, expressed as the unraveled length. D 6477, D13

flare—extraneous light in the dark area. F 335, F05

flared—staple legs spread into outward opposite directions 90° with crown plane. F 592, F16

flare decay—image contrast loss due to flare. F 335, F05

flare joint—see **joint, flare**. F 412, F17

flash—as in welding, the metal that protrudes at the weld of the tube, internally, externally, or both, as a result of the pressure applied when a forge-type seam is produced; the two types of flash are internal flash and external flash. B 846, B05

flash, *n*—the excess material protruding from the surface of a molded article at the mold junctions. D 1566, D11

flash, *n*—appearance of a material when viewed close to the angle at which it is lightest. E 284, E12

flash—excess material that forms at the parting line of a mold or die, or the overflow of excess adhesive outside the area of attachment in a bonded assembly. E 631, E06

flash—excess material that forms at the parting line of a mold or die, or the overflow of excess adhesive outside the area of attachment in a bonded assembly. E 1749, E06

flushed finish, *n*—the surface feature resulting when faces have a range of color produced by the control of the atmospheric conditions in the kiln during firing. C 43, C15

flashing—applying a thin layer of opaque or colored glass to the surface of clear glass or vice versa. See also **striking**. C 162, C14

flashing—a generic term describing the transitional area between the waterproofing membrane and surfaces above the wearing surface of the building deck; a terminal closure or barrier to prevent ingress of water into the system. C 717, C24

flashing—the system used to seal membrane edges at walls, expansion joints, drains, gravel stops, and other places where the membrane is interrupted or terminated. Base flashing covers the edges of the membrane. Cap or counterflashing shields the upper edges of the base flashing. D 1079, D08

flashing, *n*—existence of flame on or over the surface of the specimen for periods of less than 1 s. E 176, E05

flashing cement—a trowelable mixture of cutback bitumen and mineral stabilizers including asbestos or other inorganic fibers. D 1079, D08

flash magnetization—magnetization by a current flow of very brief duration. E 1316, E07

flash (or flash plate)—a very thin electrodeposit used for a final coating; for intermediate coatings of the same nature use **strike**. B 374, B08

flashover, *n*—a disruptive electrical discharge at the surface of electrical insulation or in the surrounding medium, which may or may not cause permanent damage to the insulation. D 1711, D09

flashover, *n*—the rapid transition to a state of total surface involvement in a fire of combustible materials within an enclosure. E 176, E05

flashover, *n*—the rapid transition to a state of total surface involvement in a fire of combustible materials within an enclosure. E 176, E05

flashover—the electrical discharge or arc occurring between electrodes and over or around, but not through, the equipment being tested. F 819, F18

flash point, *n*—the lowest temperature of a specimen, corrected to a pressure of 760 mm Hg (101.3 kPa), at which application of an

- ignition source causes any vapor from the specimen to ignite under specified conditions of test. **D 1711, D09**
- flash point**—the lowest temperature corrected to a barometric pressure of 101.3 kPa (760 mm Hg), at which application of a test flame causes the vapor of a specimen to ignite under specified conditions of test. **D 2864, D27**
- flash point**—the lowest temperature corrected to a pressure of 101.3 kPa (760 mm Hg) at which application of an ignition source causes the vapors of a specimen of the sample to ignite under specified conditions of test. **D 4175, D02**
- flash point, *n***—in petroleum products, the lowest temperature corrected to a barometric pressure of 101.3 kPa (760 mm Hg) at which application of an ignition source causes the vapors of a specimen of the sample to ignite under specified conditions of test. **D 4175, D02**
- flash point, *n***—the lowest temperature corrected to a pressure of 101.3 kPa at which application of an ignition source causes the vapors of a specimen of the sample to ignite momentarily under specified conditions of the test. **D 4175, D02**
- flash point**—of a liquid, the minimum temperature at which it gives off vapor in sufficient concentration to form an ignitable mixture with air near the surface of the liquid within the vessel as specified by appropriate test procedure and apparatus. **E 772, E44**
- flash point**—the temperature at which a vapor will ignite in the presence of an ignition source. **E 1316, E07**
- flash point**—the lowest temperature at which vapors above a volatile combustible substance ignite in air when exposed to a flame. **E 1316, E07**
- flash point, *n***—the lowest temperature, corrected to a pressure of 101.3 kPa (760 mm Hg, 1013 mbar), at which application of an ignition source causes the vapors of the specimen to ignite under specified conditions of test. **E 1445, E27**
- flash point**—the temperature at which a combustible liquid ignites. **E 1705, E48**
- flash set*—see **early stiffening** **C 219, C01**
- flash set**—in grouting, the rapid development of rigidity in a freshly mixed grout, usually with the evolution of considerable heat; this rigidity cannot be dispelled nor can the plasticity be regained by further mixing without addition of water; also referred to as quick set or grab set. **D 653, D18**
- flash set (quick set), *n***—the early hardening or stiffness in the working characteristics of Portland-cement paste, mortar, or concrete, usually with the evolution of considerable heat. Stiffness cannot be dispelled nor the plasticity regained by further mixing without addition of water; also known as quick set. **E 2110, E06**
- flat**—See **container**. **D 996, D10**
- flat, *adj***—(1) of a coating material, a material that is capable of imparting a finish free of gloss. **E 284, E12**
- (2) of a surface finish, free of gloss.
- flat, *n***—a rectangular metal bar of width greater than thickness. **E 631, E06**
- flat asphalt**—a roofing asphalt conforming to the requirements of Specification D 312, Type II. **D 1079, D08**
- flat cable, *n***—any cable with two smooth or corrugated, but essentially flat, surfaces. **D 1711, D09**
- flat clinch**—clinch formed by folding staple legs parallel to crown with movable clincher. **F 592, F16**
- flat conductor, *n***—a conductor with a width-to-thickness ratio arbitrarily chosen as 5 to 1 or greater. **D 1711, D09**
- flat conductor cable, *n***—a cable of flat conductors. **D 1711, D09**
- flat crown**—straight staple crown in contrast to rounded, formed, or offset staple crown. **F 592, F16**
- flat cure, *n**—a synonym for **plateau vulcanization**. **D 1566, D11**
- flat duck, *n***—duck fabric having the warp of two single yarns woven as one and either single or plied filling yarn. (See also **duck**.) **D 123, D13**
- flat duck, *n***—duck fabric having the warp of two single yarns woven as one and either single or plied filling yarn. (See also **duck**.) **D 4850, D13**
- flat-felled seam, *n***—a complex seam formed on the outside of an object with raw edges enclosed and two rows of machine stitching visible on the face side. **D 123, D13**
- flat-felled seam, *n***—in home sewing, a complex seam formed on the outside of a product with cut edges enclosed and two rows of machine stitching visible from the face side. **D 4965, D13**
- flat glass**—a general term covering sheet glass, plate glass, float glass, and various forms of rolled glass. See related term **bent glass**. **C 162, C14**
- flat grain*—See **grain**. **D 9, D07**
- flat head**—most common head, having flat, circular, parallel top and bearing surfaces and slightly rounded edge or rim. **F 547, F16**
- flat jet atomizer*—see **flat spray atomizer**. **E 1620, E29**
- flat magnifying lens**—thermometer stem glass in which the numerals, graduations, and lens lie on the same relative surface. It is so named for its approximately flat cross section. **E 344, E20**
- flatness of field**—a qualitative term describing how well the image of a planar specimen is reproduced as a plane in the image field. (See **curvature of field**.) **E 7, E04**
- flat piece (of aggregate), *n***—a particle of aggregate for which the ratio of the width to thickness of its circumscribing rectangular prism is greater than a specified value (see also **elongated piece (of aggregate)**). **C 125, C09**
- flat-platen pressed**—a method of consolidating and hot pressing a panel product in which the applied pressure is perpendicular to the faces. **D 1554, D07**
- flat product**—a rectangular or square solid section of relatively great length in proportion to thickness. Included in the designation “flat product” depending on the width and thickness, are plate, sheet, strip, and bar. Also included is the product known as “flat wire.” **B 846, B05**
- flat-ride**—an amusement ride that operates on a single level whether over a controlled, fixed course or track, or confined to a limited area of operation. **F 747, F24**
- flats**—a longitudinal flat area on a normally convex surface of a pultrusion.
- NOTE—This condition may be caused by shifting in the reinforcement, lack of sufficient reinforcement, or local fouling of the die surface. **D 3918, D20**
- flat sheet, *n***—sheet with sheared, silt, or sawed edges that has been flattened or leveled. **B 899, B02**
- flat sheet, *n***—*intextiles*, a flat, hemmed product, usually rectangular, used for covering the mattress on a bed and used for sleeping on or under. **D 123, D13**
- flat sheet, *n***—*incomforters*, a flat, hemmed product, usually rectangular, used for covering the mattress on a bed and used for sleeping on or under. **D 7023, D13**
- flat sheet membrane**—a sheet type membrane may be coated onto a fabric substrate. **D 6161, D19**
- flat sheets, Type A, *n***—sheet intended for exterior applications, where it may be subjected to the direct action of sun, rain, or snow, and when tested in accordance with Test Methods C 1185, does demonstrate compliance with Specification C 1186. **C 1154, C17**
- flat sheets, Type B, *n***—sheet intended for exterior applications where it will not be subjected to the direct action of sun, rain, or snow, and when tested in accordance with Test Methods C 1185, does demonstrate compliance with Specification C 1186. **C 1154, C17**
- flat spray atomizer**—a fan spray atomizer that produces a planar spray pattern.
- NOTE—In agricultural applications, the spray patterns have tapered edges. **E 1620, E29**
- flattened-shank nail**—round wire nail with portion of shank flattened for a certain distance between point and head to facilitate driving of nail between steel members and wrapping of flattened portion of shank around steel rod during driving. **F 547, F16**

flattened thread, flat-bottom thread

flattened thread, flat-bottom thread—thread having flat root. Flattened thread occasionally referring to flattened thread crest.

F 547, F16

flattening agent, *n*—a material added to paints, varnishes, and other coating materials to reduce the gloss of the dried film. D 16, D01

flat wire—a product up to and including 0.188 in. (4.78 mm) in thickness and up to and including 1¼ in. (31.8 mm) in width.

B 846, B05

flavor, *n*—(1) perception resulting from stimulating a combination of the taste buds, the olfactory organs, and chemesthetic receptors within the oral cavity; (2) the combined effect of taste sensations, aromatics, and chemical feeling factors evoked by a substance in the oral cavity.

E 253, E18

flaw—in dry process enameling, a defect of the ware that is cause for rejection.

C 286, B08

flaw, *n*—a defect sufficiently greater than those typical of the morphology of a carbon or graphite body to influence a property.

C 709, D02

flaw, *n*—a defect sufficiently greater than those typical of the morphology of a carbon or graphite body to influence a property.

D 4175, D02

flaw, *n*—an imperfection or discontinuity that may be detectable by nondestructive testing and is not necessarily rejectable.

E 1316, E07

flaw characterization, *n*—the process of quantifying the size, shape, orientation, location, growth, or other properties, of a flaw based on NDT response.

E 1316, E07

flax, *n*—the generic name for plants that are botanically classified as *Linum usitatissimum*, which are cultivated for seed and/or fiber.

D 123, D13

flax, *n*—the generic name for plants that are botanically classified as *Linum usitatissimum*, which are cultivated for seed and/or fiber.

D 6798, D13

fleece, *n*—the wool of one sheep as obtained by shearing. D 123, D13

fleet—any group of ships, motor vehicles, trucks, buses, airplanes, and so forth acting together or under one control. E 2135, E53

flesh—the inner side of hide or skin. Also, adjective referring to that side.

D 1517, D31

flesher—the flesh split or under-cut of a sheepskin, split before tanning. (See also **chamoisleather**.)

D 1517, D31

flex cracking, *n*—cracking primarily caused by application of mechanical stress-strain cycling.

F 538, F09

flexibility, *n*—that property of a material to endure repeated flexing, bending, or bowing without rupture.

D 123, D13

flexibility—the ability of applied shoe polish to flex and bend in creases of the shoe without powdering, peeling, or cracking, and without damaging the shoe finish.

D 2825, D21

flexibility, *n*—that property of a material to endure repeated flexing, bending, or bowing without rupture.

D 4850, D13

flexibility, *n*—the ability to be bent, turned, or twisted without cracking, breaking or showing other permanent damage and with or without returning of itself to its former shape.

F 141, F06

flexible—easily hand-folded, flexed, twisted, and bent. F 17, F02

flexible—See Terminology F 17.

F 1327, F02

flexible polypropylene, *n*—a material having a 2 % secant modulus of less than 300 MPa (40,000 psi) as determined by Test Method D 5323 produced by polymerization of propylene with or without other alpha olefin monomers.

D 4439, D35

flexion—the condition of decreasing the angle between two body segments; opposite of extension.

F 869, F08

flex life, *n*—the number of cycles required to produce a specified state of failure in a specimen that is flexed in a prescribed method.

D 1566, D11

flex life—the number of cycles required to produce a specified state of failure in a specimen that is flexed in a prescribed method. (D 1566, D11)

F 869, F08

flex life test—a laboratory method used to determine the life of a product when subjected to dynamic bending stresses. F 869, F08

flexometer, *n*—a machine that subjects a test specimen to repeated deformation by compression, tension, shear, bending, torsion, or any combination thereof.

D 1566, D11

flexural rigidity, *n*—

general—resistance to bending.

specific—the couple on either end of a strip of unit width bent into unit curvature in the absence of any tension. D 123, D13

flexural rigidity, *n*—*general*—resistance to bending; *specific*—the couple on either end of a strip of unit width bent into unit curvature in the absence of any tension. D 4850, D13

flexural strength, *n*—the maximum load sustained by a standard specimen of a sheet material when subjected to a bending force.

C 11, C11

flexural strength, *n*—a property of solid material that indicates its ability to withstand a flexural or transverse load. C 709, D02

flexural strength, *n*—a measure of the ultimate strength of a specified beam in bending. C 1145, C28

flexural strength, *n*—a measure of the strength of a specified beam specimen in bending determined at a given stress rate in a particular environment. C 1145, C28

flexural strength, *n*—*in bulkheading*, the transverse breaking load in newtons per meter of width (lbf/ft of width) of saturated sheets when loaded on a span of 1.524 m (5 ft) with the load applied equally and simultaneously at both one-third points of the span.

C 1154, C17

flexural strength, *n*—*in plastic-foam core insulating panels*, the average breaking load in newtons (or lbf) of specimens conditioned at 50 % relative humidity, loaded as simple beams with the load applied equally and simultaneously at both one-third points of the span.

C 1154, C17

flexural strength, *n*—*in flat sheet*, the average breaking load in newtons (or lbf) per metre (foot) of width of dried specimens loaded as simple beams on a span of 254 mm (10 in.) with the load applied at the center of the span. C 1154, C17

flexural strength, *n*—*in corrugated sheets*, the average breaking load in newtons per meter of width (or lbf-ft of width) of dried specimens loaded as simple beams on a 762-mm (30-in.) span with the load applied equally and simultaneously at both one-third points of the span. C 1154, C17

flexural strength, *n*—*in pipe*, the ability of a standard pipe longitudinal section to withstand external loads that bear on the pipe transversely to its longitudinal axis and induce bending.

C 1154, C17

flexural strength, *n*—*for asbestos-cement bulkheading*, the transverse breaking load in newtons per metre of width (lbf/ft of width) of saturated sheets when loaded on a span of 1.524 m (5 ft) with the load applied equally and simultaneously at both one-third points of the span. D 2946, C17

flexural strength, *n*—*for asbestos-cement plastic-foam core insulating panels*, the average breaking load in newtons (or lbf) of specimens conditioned seven days at 23 ± 2°C and 50 ± 10 % relative humidity, loaded as simple beams with the load applied equally and simultaneously at both one-third points of the span. D 2946, C17

flexural strength, *n*—*for corrugated asbestos-cement sheets*, the average breaking load in newtons per metre of width (or lbf/ft of width) of dried specimens loaded as simple beams on a 762 mm (30 in.) span with the load applied equally and simultaneously at both one-third points of the span. D 2946, C17

flexural strength, *n*—*for flat asbestos-cement sheet*, the average breaking load in newtons (or lbf) of dried specimens loaded as simple beams on a span of 254 mm (10 in.) with the load applied equally and simultaneously at both one-third points of the span. D 2946, C17

flexural strength, *n*—*for pipe*, the ability of a standard pipe longitudinal section to withstand external loads that bear on the pipe transversely to its longitudinal axis and induce bending.

D 2946, C17

flexural strength, *n*—for plastic foam core asbestos-cement insulating panels, see **flexural strength, for asbestos-cement/plastic-foam core insulating panels.** D 2946, C17

flexural strength, *n*—property of solid material that indicates its ability to withstand a flexural or transverse bending load. D 2946, C17

flexural strength, *n*—a property of solid material that indicates its ability to withstand a flexural or transverse load. D 4175, D02

flexure plate pivot—a type of pivot or hinge in which the motion occurs through the bending of a thin elastic plate. E 7, E04

flexure stress—the tensile component of the bending stress produced on the surface of a glass section opposite to that experiencing a locally impinging force. C 162, C14

flicker method, in image analysis—the procedure of alternating between the live video image and the detected image while altering the gray-level threshold range to establish the optimum discrimination and detection. E 7, E04

flint—usually in phrases “flint-dried” or “flint hides.” Air or sun-dried without other curing. D 1517, D31

flint fireclay, *n*—a hard or flint-like fireclay occurring as an unstratified massive rock, practically devoid of natural plasticity and showing a conchoidal fracture. C 71, C08

flint glass—(1) a lead-containing glass.

(2) term used by container industry for colorless glass.

C 162, C14

flint glass cullet, *n*—a particulate glass material that contains no more than 0.1 mass percent Fe_2O_3 , or 0.0015 mass percent Cr_2O_3 , as determined by chemical analysis. D 5681, D34

flint glass cullet—a particulate glass material that contains no more than 0.1 weight % Fe_2O_3 , or 0.0015 weight % Cr_2O_3 , as determined by chemical analysis. D 5681, D34

flint optical glass—See **optical flint glass.** C 162, C14

flip—deprecated term, do not use. This term may have various meanings that are not clearly defined. E 284, E12

flitch—a portion of a log sawed on two or more sides and intended for remanufacture into lumber or sliced or sawed veneer. The term is also applied to the resulting sheets of veneer laid together in sequence of cutting. D 9, D07

flitch—a portion of a log sawed on two or more sides and intended for remanufacture into sliced or sawn veneer. The term is also applied to the resulting sheets of veneer stacked together in sequence of cutting. D 1038, D07

float, *n*—in woven fabric, the portion of a warp or filling yarn that extends unbound over two or more filling or warp yarns. D 123, D13

float, *n*—a defect in which a warp or filling yarn extends unbound over the ends with which it should be interlaced. D 123, D13

float, *n*—in woven fabric, the portion of a warp (or fill) yarn that extends unbound over two or more fill (or warp) yarns. D 3878, D30

float, *n*—a defect in which warp or filling yarn extends unbound over the ends with which it should be interlaced. (Syn. harness skip, overshot, skip) D 3990, D13

float, *n*—in woven fabric, the portion of a warp or filling yarn that extends unbound over two or more filling or warp yarns. D 4850, D13

float—separable component of a boom that provides buoyancy. F 818, F20

float bath—a pool of molten metal, commonly tin, contained within a refractory receptacle and protected from oxidation by an inert atmosphere, upon which molten glass is drawn into a flat sheet. See **float glass.** C 162, C14

float finish—a concrete finish provided by consolidating and leveling the concrete with only a power driver or hand float, or both. A floated finish is coarser than a troweled finish. For specifications, See ACI 301-72. C 717, C24

float—(1) a floating clay shape to skim foreign materials or control their passage in a melter.

(2) an object, generally a porous silica brick, introduced into a melting furnace, which will float on the surface of the molten glass for tens of minutes to several hours, thus revealing the surface flow. C 162, C14

float—(2) an object, generally a porous silica brick, introduced into a melting furnace, which will float on the surface of the molten glass for tens of minutes to several hours, thus revealing the surface flow. C 162, C14

floaters—the material floating on the surface of water into which carbon has been added and has been thoroughly wetted. D 2652, D28

float glass—flat glass that has been formed on molten metal, commonly tin. C 162, C14

floating, *v*—the act of spreading, compacting, or consolidating to achieve a specified uniform appearance. C 11, C11

floating controlled load—See **load.** D 996, D10

floating roller peel test—See **test, floating roller peel.** E 631, E06

floating roller peel test—See **test, floating roller peel.** E 1749, E06

floating threshold—any threshold with amplitude established by a time average measure of the input signal. (E 750) E 1316, E07

floats (as in asbestos floats)—air conveyed asbestos fractions such as accumulate in the air filtration system of an asbestos mill. D 2946, C17

float/sink, *n*—a reference to the physical action that particles undergo when immersed in a liquid of a predetermined specific gravity. D 121, D05

floc—loose, open-structured mass formed in a suspension by the aggregation of minute particles. D 653, D18

floc—a loose, open-structured mass produced by the aggregation of minute particles. D 6161, D19

flocculant—an agent that produces flocs or aggregates from small suspended particles. D 4410, D19

flocculate—to aggregate into larger particles, to increase in size to the point where precipitation occurs. B 374, B08

flocculate—a grouping of primary particles, aggregates, or agglomerates having weaker bonding than either the aggregate or agglomerate structures. C 242, C21

flocculating—the thickening of the consistency of a slip by adding a suitable electrolyte. C 286, B08

flocculating agent—a coagulating substance such as alum, ferrous sulfate, or lime which, when added to water, forms a precipitate that expedites the settling of suspended matter. D 4410, D19

flocculation—the process of forming flocs. D 653, D18

flocculation, *n*—synonymous with agglomeration. D 1356, D22

flocculation, *n*—formation (sometimes reversible) of loosely coherent, partially agglomerated rubber, distributed in the liquid phase of a latex. D 1566, D11

flocculation—the process of agglomerating fine particles into larger groupings called flocs. D 6161, D19

flocculent—chemical(s) which, when added to water, form bridges between suspended particles causing them to agglomerate into larger groupings (flocs) which then settle or float by specific gravity differences. D 6161, D19

flocculent structure—see **soil structure.** D 653, D18

flock, *n*—a material obtained by reducing textile fibers to fragments as by cutting, tearing, or grinding, to give various degrees of comminution. D 123, D13

flock, *n*—a material obtained by reducing textile fibers to fragments as by cutting, tearing, or grinding, to give various degrees of comminution. D 7023, D13

flocked blanket, *n*—a blanket made with a fishnet-type scrim sandwiched between two thin layers of foam with flock adhered to the outside of the foam. D 123, D13

flocked blanket, *n*—a blanket made with a fishnet-type scrim sandwiched between two thin layers of foam with flock adhered to the outside of the foam. D 7023, D13

flocs or floccules—masses of solids formed in a liquid by addition of coagulants (flocculants), or through biochemical processes, or by agglomeration of individual particles. D 4410, D19

floor coat

floor coat—the top layer of bitumen used to hold the aggregate on an aggregate-surfaced, built-up roofing membrane. **D 1079, D08**

flooded system—a system which, while being tested, becomes so filled with tracer gas as to make impracticable further leak testing. **E 1316, E07**

flooding—a means of compacting trench backfill by the introduction of water by gravity. **C 896, C04**

flooding nozzle—see **deflector atomizer**. **E 1620, E29**

floor nozzle—see **deflector atomizer**. **E 1620, E29**

floor point, n—(in *column distillation*) the point at which the upflowing vapor flow obstructs the down-coming reflux and the column suddenly loads with liquid. **D 4175, D02**

floor point, n—the point at which the velocity of the upflowing vapors obstructs the downcoming reflux and the column suddenly loads with liquid. **D 4175, D02**

floor, n—the rock material immediately underlying a coal bed. **D 121, D05**

floor—bottom of near horizontal surface of an excavation, approximately parallel and opposite to the roof. (ISRM) **D 653, D18**

floor, n—in a building, a supporting structure (generally horizontal) and constituting the bottom level of each story. **E 631, E06**

floor anchor, n—a belay anchor on the floor. **F 1773, F08**

floor area, n (superficie de plancher):
gross floor area (superficie brute de plancher)—entire area within the inside perimeter of the exterior walls.
net floor area (superficie nette de plancher)—that part of the gross floor area located within occupiable space. **E 1480, E06**

floor brick, n—smooth, dense brick, highly resistant to abrasion, used as finished floor surfaces. See Specification C 410. **C 43, C15**

floor covering, n—an essentially planar material, having a relatively small thickness in comparison to its length or width, which is laid on a floor to enhance the beauty, comfort, and utility of the floor. **D 123, D13**

floor covering, n—an essentially planar material, having a relatively small thickness in comparison to its length or width, that is laid on a floor to enhance the beauty, comfort, and utility of the floor. **D 5684, D13**

floor covering, n—an essentially planar material having a relatively small thickness in comparison to its length or width, which is laid on a floor to enhance the beauty, comfort, and utility of the floor. **E 176, E05**

floor covering system, n—a single material, composite or assembly comprised of the floor covering and related installation components (adhesive, cushion, etc.) if any. **E 176, E05**

flooring—stone used as in interior pedestrian wearing surface. **C 119, C18**

flooring, n—a material used to construct the uppermost layer of a floor. **E 631, E06**

flooring brad—bright, regular-stock-steel, 2 by 0.120 to 4 by 0.192-in. nails with deep (32°) countersunk flat or cupped 0.162 to 0.244-in. head and medium diamond point. Also, slender, bright, regular-stock-steel, 1¼ by 0.076 to 2½ by 0.113-in. nails with deep (32°) countersunk flat or cupped or brad 0.128 to 0.155-in. head and blunt diamond point.

machine flooring brad—bright, regular stock-steel, 1 by 0.072-in. nail with special 0.113-in. brad head with cylindrical rim and medium diamond point. **F 547, F16**

flooring material, n—any pliable planar structure used as a base surface in camping tentage, but excluding such things as rugs or carpets placed in the tent that are not integral parts of the item. **D 123, D13**

flooring nail—bright, stiff-stock or hardened-steel, helically threaded, 1 by 0.072 to 3½ by 0.148-in. nails with flat or checkered ¼ to ½-in. countersunk or casing head and blunt diamond point. **F 547, F16**

floor, n (plancher)—(in a building) supporting structure (generally horizontal) and constituting the bottom level of each story. **E 1480, E06**

floor surface, n—See *walkway surface*. **F 1646, F13**

flop, n—a difference in appearance of a material viewed over two widely different aspecular angles. **E 284, E12**

flop, adj—pertaining to the appearance of a material when viewed from a direction far from the specular angle, typically 70° or more. **E 284, E12**

flop angle, n—the aspecular angle when a material is viewed from a direction far from the specular, typically 70° or more. **E 284, E12**

flop color, n—color of a material when viewed from a specified direction far from the specular angle, typically 70° or more. **E 284, E12**

flop contrast, n—a measure of the degree of dissimilarity in appearance of a specimen when it is viewed at two widely different aspecular angles. **E 284, E12**

flop index, n—a numerical scale of flop obtained by visual experiments. **E 284, E12**

flotation—portion of a boom that provides buoyancy. **F 818, F20**

flotation cell, n—the vessel or compartment in which the flotation test is performed. **D 121, D05**

flounce, n—a ruffled drop on a bedcovering. **D 123, D13**

flounce, n—a ruffled drop on a bedcovering. **D 7023, D13**

flow, v—in *building construction*, the deformation of a tape sealant under stress. **C 717, C24**

flow, n—a laboratory measured mortar property that indicates the percent increase in diameter of the base of the truncated cone of mortar when it is placed on a flow table, and mechanically raised and dropped specified times under specified conditions. **C 1180, C12**

flow, n—movement of an adhesive during the bonding process before the adhesive is set. **D 907, D14**

flow—Same as **flow rate**. **E 1316, E07**

flowable fill, n—a material that flows like a liquid, is self-leveling, requires no compaction or vibration to achieve maximum density, hardens to a predetermined strength and is sometimes a controlled low strength material (CLSM). **E 2201, E50**

flowback nozzle—see **by-pass nozzle**. **E 1620, E29**

flow balancing—the use of an imposed pressure drop (flow balancing tube), to minimize conversion differences of modules operating in parallel. **D 6161, D19**

flow balancing tube—see **flow balancing**. **D 6161, D19**

flow brightening—the melting of an electrodeposit, followed by solidification, especially of tin plate. **B 374, B08**

flow-button—the pellet of frit used in the Fusion Flow Test.

NOTE—See Test Methods C 374. **C 286, B08**

flow cavitation, n—cavitation caused by a decrease in static pressure induced by changes in velocity of a flowing liquid. Typically, this may be caused by flow around an obstacle or through a constriction, or relative to a blade or foil. A cavitation cloud or “cavitating wake” generally trails from some point adjacent to the obstacle or constriction to some distance downstream, the bubbles being formed at one place and collapsing at another. **G 40, G02**

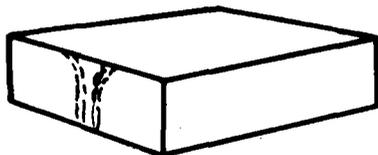
flow channel—the portion of a flow net bounded by two adjacent flow lines. **D 653, D18**

flow coating—the process of coating a metal shape by causing the slip to flow over its surface and allowing it to drain. **C 286, B08**

flow cone—in *grouting*, a device for measurement of grout consistency in which a predetermined volume of grout is permitted to escape through a precisely sized orifice, the time of efflux (flow factor) being used as the indication of consistency. **D 653, D18**

flow curve—the locus of points obtained from a standard liquid limit test and plotted on a graph representing water content as ordinate on an arithmetic scale and the number of blows as abscissa on a logarithmic scale. **D 653, D18**

- flow failure**—failure in which a soil mass moves over relatively long distances in a fluid-like manner. **D 653, D18**
- flow function, FF**—the plot of unconfined yield strength versus major consolidation stress for one specified bulk solid. **D 653, D18**
- flow hole**—(archaic) See **throat**. **C 162, C14**
- flow index, $F_w, I_f (D)$** —the slope of the flow curve obtained from a liquid limit test, expressed as the difference in water contents at 10 blows and at 100 blows. **D 653, D18**
- flowing ground, n** —in *tunneling*, soil or rock of soft and plastic consistency and with very low cohesion that flows into the excavation even through small unsupported areas. See *running ground*. See **running ground**. **D 653, D18**
- flow line, n** —a defect induced by discontinuous flow velocities during forming of molded or extruded bodies. **C 709, D02**
- flow line**—a line formed by the inverts of pipe. **C 822, C13**
- flow line**—the path that a particle of water follows in its course of seepage under laminar flow conditions. **D 653, D18**
- flow line, n** —a defect induced by discontinuous flow velocities during forming of molded or extruded bodies. **D 4175, D02**
- flow line**—one or more streaks distinguished by a difference in light reflectance from the surrounding area, characteristic of injection-molded parts. (See also **weld mark**.)



F 109, C21

- flow lines**—a fiber pattern, frequently observed in wrought metal, which indicates the manner in which the metal flowed during deformation. **E 7, E04**
- flow log**—a borehole geophysical log used to record vertical movement of ground water and movement of water into or out of a well or borehole and between formations within a well. **D 653, D18**
- flow marks, n** —marks or line on a molded product, caused by imperfect fusion of flowing fronts. **D 1566, D11**
- flowmeter, n** —an instrument for measuring the rate of flow of a fluid (that is, liquid or gas) moving through a system. **D 1356, D22**
- flow net**—a graphical representation of flow lines and equipotential (piezometric) lines used in the study of seepage phenomena. **D 653, D18**
- flow path**—represents the area between two flow lines along which ground water can flow. **D 653, D18**
- flow process**—See **gob process**. **C 162, C14**
- flow-proportioned average property value (FPAPV), n** —the average property value of the collected material in the tank or vessel, calculated by using the flow-proportioned average technique described in the practice of all measurements performed on aliquots of the material while it is flowing into the tank or vessel. **D 4175, D02**
- flow-proportioned sample, n** —a sample obtained by collecting an aliquot volume in proportion to the rate of flow of the stream sampled. **D 1129, D19**
- flow rate, n** —the time required for a powder sample of standard weight to flow through an orifice in a standard instrument according to a specified procedure. **B 243, B09**
- flow rate**—in leak testing, (1) the rate at which gas passes a given cross section of a system, determined by the product of the volume passing per unit time and its (partial) pressure at the cross section; (2) a product of the (partial) pressure difference of a gas at the ends of a conduit or across the face of an orifice, and the conductance of the gas for the conduit or orifice. Expressed in pressure-volume per unit time, such as pascal cubic metres per second. **E 1316, E07**
- flow rate**—rate of extrusion, weight per unit of time, g/10 min (kg/s), of molten resins through a die of specified length and diameter,

under prescribed conditions of temperature, load, and piston position in the barrel as the timed measurement is being made.

F 412, F17

- flow slide**—the failure of a sloped bank of soil in which the movement of the soil mass does not take place along a well-defined surface of sliding. **D 653, D18**
- flow steady, n** —a characteristic of a flow system where the specific discharge is constant in time at any point. **D 653, D18**
- flowthrough electrodes**—ion-selective and reference electrodes designed for anaerobic measurements. The two electrodes are connected by plastic tubing to a syringe or peristaltic pump, and the sample is pumped through the electrodes at a constant rate. Ion-selective electrodes can be made in a flow through configuration for the measurement of very small samples (0.2 to 0.3 mL) or samples that must be measured anaerobically. **D 4127, D19**
- flow value, N_ϕ (degrees)**—a quantity equal to $\tan [45 \text{ deg} + (\phi/2)]$. **D 653, D18**
- flow velocity**—see **specificdischarge**. **D 653, D18**
- flue gas conditioning, n** —the process of adding chemicals such as sulfur trioxide or ammonia to the flue gas in order to improve the performance of the electrostatic precipitator (ESP) or reduce the opacity of emissions from the stack. **E 2201, E50**
- flue gas desulfurization (FGD), n** —removal of gaseous sulfur dioxide from boiler exhaust gas. Primary types of FGD processes are wet scrubbers, dry scrubbers and sorbent injection. Sorbents include lime, limestone, sodium-based compounds and high-calcium coal fly ash.
- dry FGD ash, n* —see *dry FGD material*.
- dry FGD material, n* —the product that is produced from dry FGD systems and consists primarily of calcium sulfite, fly ash, portlandite (Ca(OH)_2), and/or calcite.
- fixated FGD material, n* —a designed mixture of dewatered FGD sludge that is primarily calcium sulfite with either a high-lime fly ash or a low lime fly ash combined with a cementitious material. FGD sludge is also known as scrubber sludge, scrubber material, FGD solids, filter cake or centrifuge cake.
- lime spray drier ash, n* —see *dry FGD material*.
- stabilized FGD material, n* —another name for *fixated FGD material*.
- wet FGD products, n* —the product of wet FGD processes or systems. It is composed primarily of water, calcium sulfite/sulfate solids, and small quantities of fly ash. Wet FGD products can be thixotropic.
- FGD gypsum, n* —gypsum formed from an oxidizing and calcium-based flue gas desulfurization process.
- FGD material, n* —a product of an FGD process typically using a high-calcium sorbent such as lime or limestone. Sodium-based sorbent and high-calcium coal fly ashes are also used in some systems. The physical nature of these materials varies from a wet thixotropic sludge to a dry powdered material depending on the process.
- FGD material dry scrubbers, n* —the dry powdered material from dry scrubbers that is collected in a baghouse along with fly ash and consists of a mixture of sulfites, sulfates, and fly ash. **E 2201, E50**
- flue lining**—a manufactured tubular non-load bearing fired clay unit, normally used for conveying hot gases in chimneys. **C 896, C04**
- fluence**—the number of beam particles per unit area, where that area is defined perpendicular to the direction of the beam. **E 673, E42**
- fluff, n** —the fibrous, nonrubber, nonmetal portion of a tire that remains after the scrap tire is processed (that is, cotton, rayon, polyester, fiberglass, or nylon). **D 5681, D34**
- fluid-applied elastomer**—an elastomeric material, fluid at ambient temperature, that dries or cures after application to form a continuous membrane. Such systems normally do not incorporate reinforcement. **D 1079, D08**

fluid carrier, *n*

fluid carrier, *n*—a fluid in which particles are suspended to facilitate their movement or application. C 1145, C28

fluid coke, *n*—petroleum coke with a granular, microscopic layered structure resulting from injection of petroleum feedstock into a flowing, loose bed of coke particles. D 4175, D02

fluid-energy mill, *n*—a size-reduction apparatus in which grinding is achieved by the collision of the particles being ground in a high-velocity stream of air, steam, or other fluid. C 1145, C28

fluidifier—*in grouting*, an admixture employed in grout to increase flowability without changing water content. D 653, D18

fluidity—the reciprocal of viscosity. D 1695, D01

fluidized bed—a bed of particles in which the fluid flows upward at a rate sufficient to suspend the particles completely and randomly in the fluid phase. D 2652, D28

fluidized-bed combustion (FBC) ash, *n*—the fly ash and bed ash produced by an FBC boiler. E 2201, E50

fluidized-bed combustion (FBC) bed ash, *n*—the spent bed material that is produced by an FBC boiler. The bed ash is usually collected separately and can be considered as being equivalent to bottom ash in dry bottom or wet-bottom wall-fired furnace. E 2201, E50

fluidized-bed combustion (FBC) products, *n*—the unburned coal, ash, spent bed material, and unreacted sorbent produced by an FBC boiler. E 2201, E50

fluid migration, *n*—*in building construction*, accumulation of a fluid from a sealant, coating, or membrane on or in an adjacent material. C 717, C24

fluid permeability, *n*—see **permeability**. B 243, B09

fluid temperature (FT), *n*—*in reference to the fusibility of coal and coke ash according to Test Method D 1857*, the temperature at which the fused mass has spread out in a nearly flat layer with a maximum height of 1.6 mm ($\frac{1}{16}$ in.). D 121, D05

fluid temperature, FT, *n*—*in ash fusion determinations*, the temperature at which a fused mass has spread out in a nearly flat layer with maximum height of 1.6 mm ($\frac{1}{16}$ in.). D 5681, D34

fluid temperature, FT—the temperature at which the fused mass has spread out in a nearly flat layer with a maximum height of 1.6 mm ($\frac{1}{16}$ in.). D 5681, D34

fluorescence—photoluminescence in which the emitted optical radiation results from direct transitions from a photo-excited singlet energy level to a lower singlet level, these transitions taking place generally within 10 nanoseconds after excitation. D 2864, D27

fluorescence—the emission of radiant energy from an atom, molecule, or ion resulting from absorption of a photon and a subsequent transition to the ground state without a change in total spin quantum number. E 131, E13

fluorescence, *n*—photoluminescence that ceases when excitation ceases. E 284, E12

fluorescence—the emission of light by a substance as a result of the absorption of some other radiation of shorter wavelengths only as long as the stimulus producing it is maintained. E 1316, E07

fluorescence—the emission of visible radiation by a substance as a result of, and only during, the absorption of black light radiation. E 1316, E07

fluorescence—the emission of visible radiation by a substance as the result of, and only during, the absorption of black light radiation. E 1316, E07

fluorescence—the property of emitting radiation in the visible range as a result of absorption of radiation in the ultraviolet range from some other source. Optical brighteners that have this property are sometimes added to paper to enhance its whiteness or brightness to the eye in normal lighting. The emitted radiation can cause erratic reflectance values. F 149, F05

fluorescent, *adj*—(1) exhibiting fluorescence.

(2) *of a source*, having a primary radiant flux emitter that excites fluorescence in a phosphor to produce light. E 284, E12

fluorescent brightener, *n*—discouraged term for **fluorescent whitening agent**. E 284, E12

fluorescent examination method—the magnetic particle examina-

tion method employing a finely divided fluorescent ferromagnetic inspection medium. E 1316, E07

fluorescent illuminant, *n*—illuminant representing the spectral distribution of the radiation from a specified type of fluorescent lamp. E 284, E12

fluorescent magnetic particle inspection—the magnetic particle inspection process employing a finely divided fluorescent ferromagnetic inspection medium that fluoresces when activated by black light (3200 to 4000 Å (320 to 400 nm)). E 1316, E07

fluorescent penetrant, *n*—an inspection penetrant which fluoresces or glows in ultraviolet light. C 1145, C28

fluorescent screen—a sheet of material which emits visible light when exposed to invisible radiation. E 7, E04

fluorescent screen—alternative term for **intensifying screen (b)**. E 1316, E07

fluorescent ultraviolet lamp, *v*—a lamp in which the irradiance from a low pressure mercury arc is transformed to a longer wavelength UV radiation by a phosphor; the spectral power distribution of a fluorescent lamp is determined by the emission spectrum of the mercury arc light source, the emission spectrum of the phosphor and the UV transmittance of the glass tube. G 113, G03

fluorescent whitening agent, FWA, *n*—fluorescent dye or pigment that absorbs near-ultraviolet radiant flux and re-emits the power as visible light (violet-blue), thereby causing a whiter appearance when added to a yellowish-white material. E 284, E12

fluorescent whitening agents (FWA)—(optical bleach, fluorescent brightener) complex, organic molecules that adhere to fabrics as though they were dyes. Ultraviolet (UV) energy is absorbed, converted, and emitted as visible blue light to enhance fabric appearance and maintain whiteness or brightness. D 459, D12

fluorescent X-rays (fluorescent analysis)—characteristic X-rays excited by radiation of wavelength shorter than the corresponding absorption edge. E 7, E04

fluorite (CaF₂) (fluorspar)—an inorganic mineral of the isometric form, used as a source of fluorine for fluxing of glasses, and glazes. C 242, C21

fluorocarbon plastic, *n*—a plastic based on polymers made with perfluoromonomers. D 883, D20

fluorocarbon plastic, *n*—a plastic based on polymers made with perfluoromonomers. (ISO, D20) F 412, F17

fluorocarbon plastic, *n*—a plastic based on polymers made with monomers composed of fluorine and carbon only. F 1251, F04

fluorohydrocarbon plastic, *n*—a plastic based on polymers made with monomers composed of fluorine, hydrogen, and carbon only. F 1251, F04

fluorohydrocarbon plastics, *n*—plastics based on polymers made with monomers composed of fluorine, hydrogen, and carbon only. (ISO) D 883, D20

fluorohydrocarbon plastics, *n*—plastics based on polymers made with monomers composed of fluorine, hydrogen, and carbon only. (ISO, D20) F 412, F17

fluoroplastic, *n*—a plastic based on polymers made from monomers containing one or more atoms of fluorine, or copolymers of such monomers with other monomers, the fluorine-containing monomer(s) being in greatest amount by mass. D 883, D20

fluoroplastic, *n*—a plastic based on polymers made from monomers containing one or more atoms of fluorine, or copolymers of such monomers with other monomers, the fluorine-containing monomer(s) being in the greatest amount by mass. (D20) F 412, F17

fluoroplastic, *n*—a plastic based on polymers with monomers containing one or more atoms of fluorine or copolymers of such monomers with other monomers, the fluorine-containing monomer(s) being in greatest amount by mass. (See also **fluorocarbon plastic, chlorofluorocarbon plastic, fluorohydrocarbon plastic, and chlorofluorohydrocarbon plastic.**) F 1251, F04

fluoroptic temperature measurement—temperature measurement based on the variation in total luminescence of a fluoroptic phosphor which has been previously calibrated versus a known temperature standard. F 1479, F02

fluoroscopy—the visual observation on a fluorescent screen of the image of an object exposed to penetrating, ionizing radiation.

E 1316, E07

flush installation—anchor that is installed so that its top is flush with the surface of the structural member and does not protrude beyond the surface.

E 2265, E06

flush joint or flush coupled—casing or riser with ends threaded such that a consistent inside and outside diameter is maintained across the threaded joints or couplings.

D 653, D18

flush out, v—the process of reducing or removing VOCs and other airborne contaminants from a building.

E 2114, E06

flute—See **corrugated fiberboard**.

D 996, D10

flute—helical and, sometimes, vertical deformation rolled onto shank.

F 547, F16

fluted—deformed with continuous, symmetrical, helical, or longitudinal depressions. Four or five of these flutes are usually formed onto wire from which fluted nail is made, in contrast to threading where shapes are rolled onto nail shank in a thread-rolling process. Flutes resulting from this manufacturing process extend the full length of the nail shank. (See **roll-grooved** and **mechanically deformed**.)

F 547, F16

flutes—continuous symmetrical depressions along nail shank.

F 547, F16

fluvial sediment—particles derived from rocks, biological materials, or chemical precipitants, that are transported by, suspended in, or deposited by flowing water.

D 4410, D19

flux—an ingredient that reduces batch melting temperature.

C 162, C14

flux—a substance that promotes fusion in a given ceramic mixture.

C 242, C21

flux—a substance that promotes fusion in a given ceramic mixture.

C 286, B08

flux, n—a bituminous material, generally liquid, used for softening other bituminous materials.

D 8, D04

flux—a bituminous material used as a feed stock for further processing and as a material to soften other bituminous materials.

D 1079, D08

flux—the membrane throughput, usually expressed in volume of permeate per unit time per unit area, such as gallons per day per ft² or litres per hour per m². Number of moles, volume or mass of a specified component that is passing per unit of time through a unit of membrane surface area normal to the thickness direction.

D 6161, D19

flux—see **radiant flux, luminous flux**.

E 284, E12

flux—the number of beam particles per unit area per second, where the area is defined to be perpendicular to the direction of the beam.

E 673, E42

flux—the number of particles flowing through a given area per unit time.

E 1620, E29

flux, n—the combining of photons of light energy to create radiant power.

F 1294, F05

flux block—a refractory furnace block used in contact with glass in melting.

C 162, C14

flux-current loop, incremental (biased)—the curve developed by plotting magnetic induction, B , versus magnetic field strength, H , when the magnetic material is cyclically magnetized while under dc bias condition. This loop will not be symmetrical about the B and H axes.

A 340, A06

flux-current loop, normal—the curve developed by plotting magnetic induction, B , versus magnetic field strength, H , when the magnetic material is symmetrically cyclically magnetized.

NOTE—The area of the loop is proportional to the sum of the static hysteresis loss and all dynamic losses.

A 340, A06

flux density, magnetic—the strength of a magnetic field, expressed in flux lines per unit area.

E 1316, E07

fluxing agent, n—any substance which will promote fusion of ceramic materials.

C 1145, C28

fluxing lime—a term referring to quicklime used as an agent in the manufacture of steel or glass.

C 51, C07

flux leakage field—the magnetic field that leaves or enters the surface of a part as the result of a discontinuity or a change in section.

E 1316, E07

flux line—See **metal line**.

C 162, C14

flux lines—see **lines of force**.

E 1316, E07

flux linkage, \mathcal{L} —the sum of all flux lines in a coil.

$$\mathcal{L} = \phi_1 + \phi_2 + \phi_3 + \dots + \phi_N$$

where:

ϕ_1 = flux linking turn 1;

ϕ_2 = flux linking turn 2, and so forth; and

ϕ_N = flux linking the N th turn.

NOTE—When the coupling coefficient, k' , is less than unity, the flux linkage equals the product of the average flux linking the turns and the total number of turns. When the coupling coefficient is equal to unity, the flux linkage equals the product of the total flux linking the coil and the total number of turns.

A 340, A06

flux linkage, mutual, \mathcal{L}_m —the flux linkage existing between two windings on a magnetic circuit. Mutual linkage is maximum when the coupling coefficient is unity.

A 340, A06

flux path length, effective, ℓ_1 —the calculated length of the flux paths in a magnetic core, which is used in the calculations of certain magnetic parameters.

A 340, A06

flux path length, ℓ —the distance along a flux loop.

A 340, A06

flux penetration—the depth to which a magnetic flux exists in a part.

E 1316, E07

flux profile, n —the curve relating incident radiant heat energy on the specimen plane to distance from the point of initiation of flaming ignition, that is, 0 cm.

E 176, E05

flux, radiant—see **radiant flux**.

E 772, E44

flux-sensitive—a sampling process where the magnitude measured responds to the flux of particles through the sampling region.

E 1620, E29

flux size distribution—the size distribution of particles passing through a sampling zone during a given interval of time, wherein individual particles are counted and sized.

E 1620, E29

fluxstone—a term referring to limestone (high-calcium, magnesian, or dolomitic) used as an agent in the manufacture of iron and steel or glass.

C 51, C07

flux volts, E_f —the voltage induced in a winding of a magnetic component when the magnetic material is subjected to repeated magnetization under *SCM* or *CM* conditions.

$$E_f = 4.443 B_{\max} A' N f \times 10^{-8} \text{ V (SCM excitation)}$$

$$E_f = 2.221 \Delta BA' N f \times 10^8 \text{ V (CM excitation)}$$

$$E_f = 1.1107 E_{\text{avg}}$$

which

A' = solid cross-sectional area of the core in cm²,

N = number of winding turns, and

f = the frequency in hertz.

A 340, A06

fly—a part that makes contact with the drive pin for rotation of the tumblers.

F 471, F12

fly ash, n—the finely divided residue that results from the combustion of ground or powdered coal and that is transported by flue gases from the combustion zone to the particle removal system.

C 125, C09

fly ash—the finely divided residue resulting from the combustion of ground or powdered coal and which is transported from the firebox through the boiler by flue gases.

D 653, D18

fly ash, n

fly ash, n—the finely divided particles of ash entrained in flue gases arising from the combustion of fuel. **D 1356, D22**

fly ash, n—residual material that exits a combustion chamber in the flue gas. **D 5681, D34**

fly ash—finely sized ash generated from combustion of pulverized coal. Descriptions and types are listed in Specifications C 593 and C 618. **D 5681, D34**

fly ash, n—coal ash that exits a combustion chamber in the flue gas and is captured by air pollution control equipment such as electrostatic precipitators, Baghouses, and wet scrubbers. **E 2201, E50**

fly ash-lime content, n—the total calcium content of fly ash, including reactive and non-reactive calcium species expressed as calcium oxide (CaO). **E 2201, E50**

flyer—See **loom fly**. **D 3990, D13**

flying, n—the tendency of a printing ink or vehicle to be ejected as large globules from a roller distribution system. **D 6488, D01**

flying spot scanning—in *optical character recognition*, a device employing a moving spot of light to scan a sample space, the intensity of the transmitted or reflected light being sensed by the photoelectric transducer. **F 149, F05**

FMC-2 color difference, n—color difference calculated by use of the Friele-MacAdam-Chickering, Version 2, equations based on the MacAdam chromaticity-difference-perceptibility ellipses and the Munsell value function. **E 284, E12**

foam—a layer of bubbles on the surface of molten glass. **C 162, C14**

foam, n—in *cleaning textiles*, a frothy mass of fine bubbles generated by whipping or agitating a shampoo. **D 123, D13**

foam—a mass of bubbles formed on liquids by agitation. **D 459, D12**

foam, n—in *liquids*, a collection of bubbles formed in the liquid or on (at) its surface in which the air (or gas) is the major component on a volumetric basis. **D 4175, D02**

foam, n—in *liquids*, a collection of bubbles formed in or on the surface of a liquid in which the air or gas is the major component on a volumetric basis. **D 4175, D02**

foam, n—in *cleaning textiles*, a frothy mass of fine bubbles generated by whipping or agitating a shampoo. **D 5253, D13**

foam clean, v—use a prepared foam to clean. **D 5253, D13**

foam cleaning, n—a process in which a prepared foam is applied to a textile product, scrubbed in, allowed to dry, and the encapsulated soil is removed by suction. **D 123, D13**

foam cleaning, n—a process in which a prepared foam is applied to a textile product, scrubbed in, allowed to dry, and the encapsulated soil is removed by suction. **D 5253, D13**

foam core—a lightweight cellular structure (rigid foam) material used in sandwich panel construction; innermost portion of a multilayer adherend assembly. **E 631, E06**

foam core—a lightweight cellular structure (rigid foam) material used in sandwich panel construction; innermost portion of a multilayer adherend assembly. **E 1749, E06**

foamed adhesive, n—an adhesive whose apparent density has been decreased by the presence of numerous gas-filled cells throughout its mass. **D 907, D14**

foamed adhesive—See **adhesive, foamed**. **E 631, E06**

foamed adhesive—See **adhesive, foamed**. **E 1749, E06**

foamed plastics, n—See **cellular plastics** (the preferred terminology). (D20) **F 412, F17**

foamed plastics, n—See **cellular plastics** (the preferred terminology). **D 883, D20**

foam glass—a thermally insulating material consisting of a high volume fraction of gaseous inclusions distributed throughout a glass matrix. **C 162, C14**

foaming agent—a material that increases the stability of a suspension of gas bubbles in a liquid medium. **D 459, D12**

foaming agent—a material that increases the volume or stability of the foam formed in a spray mixture. **E 1519, E35**

foaming agent (latex), n—a substance used to facilitate the formation of suspended gas in latex during the production of latex foam. **D 1566, D11**

foaming tendencies, n—a laboratory test conducted in glassware to evaluate the tendency of an engine coolant to foam under standard conditions of aeration and temperature. **D 4725, D15**

foam-in place cushioning material—See **cushioning material**. **D 996, D10**

foam line—a boundary in a melting furnace beyond which foam no longer appears on the glass surface. **C 162, C14**

foam stabilizer (latex), n—a substance used in the preparation of latex foam, before gelation, drying, and vulcanization to help maintain the foam cell structure. **D 1566, D11**

foam suppressant—See **defoamer**. **E 1519, E35**

foam tear, n—a condition wherein the foam portion of a laminated fabric ruptures prior to the failure of the bond. **D 123, D13**

F.O.B. destination—free on board at destination; that is, the seller or consignor delivers the goods on seller's on consignor's conveyance at destination. Unless the contract provides otherwise, the seller or consignor is responsible for the cost of shipping and the risk of loss. **E 2135, E53**

F.O.B. origin—free on board at origin; that is, the seller or consignor places the goods on the conveyance. Unless the contract provides otherwise, the buyer or consignee is responsible for the cost of shipping and the risk of loss. **E 2135, E53**

focal length—the distance from the second principal point to the point on the axis where parallel rays entering the lens will converge or focus. **E 7, E04**

focal spot—that area on the target of an X-ray tube which is bombarded by electrons. **E 7, E04**

focal spot—for x-ray generators, that area of the anode (target) of an x-ray tube which emits x-ray when bombarded with electrons. **E 1316, E07**

focus—a point at which rays originating from a point in the object converge or from which they diverge or appear to diverge under the influence of a lens or diffracting system. **E 7, E04**

focused beam—converging energy of the sound beam at a specified distance. **E 1316, E07**

focusing camera (X-rays)—a diffraction camera in which the X-ray source of a divergent X-ray beam, specimen (polycrystalline) and film all lie on one circle, which results in the diffracted beams all being focused on the film. **E 7, E04**

focusing device (electrons)—a device which effectively increases the angular aperture of the electron beam illuminating the object, rendering the focusing more critical. **E 7, E04**

focusing magnifier: (1)—a low-power microscope, telescope or simple lens used to observe the electron image formed on a fluorescent screen.

(2) a magnifying lens mounted so that its focal plane is coincident with its base, used to obtain a sharp focus in the plane of the sensitive material in a camera. **E 7, E04**

focusing (X-rays)—the operation of producing a convergent beam in which all rays meet in a point or line. **E 7, E04**

fog, n—a visible aggregate of condensed water vapor or ice crystals suspended in the atmosphere near the earth's surface. **D 1356, D22**

fog—a general term used to denote any increase in optical density of a processed photographic emulsion caused by anything other than direct action of the image forming radiation and due to one or more of the following:

(a) *aging*—deterioration, before or after exposure, or both, resulting from a recording medium that has been stored for too long a period of time, or other improper conditions.

(b) *base*—the minimum uniform density inherent in a processed emulsion without prior exposure.

(c) *chemical*—resulting from unwanted reactions during chemical processing.

(d) *dichroic*—characterized by the production of colloidal silver

within the developed sensitive layer.

(e) *exposure*—arising from any unwanted exposure of an emulsion to ionizing radiation or light at any time between manufacture and final fixing.

(f) *oxidation*—caused by exposure to air during developing.

(g) *photographic*—arising solely from the properties of an emulsion and the processing conditions, for example, the total effect of inherent fog and chemical fog.

(h) *threshold*—the minimum uniform density inherent in a processed emulsion without prior exposure.

fog, *n*—a quiescent cloud near the earth's surface. **E 1316, E07**
fog, *n*—see **background**. **F 335, F05**

fog density—a general term used to denote any increase in the optical density of a processed film caused by anything other than the direct action of the image-forming radiation. **E 1316, E07**

fog nozzle—a high capacity pressure atomizer that produces a dispersion of fine drops. **E 1620, E29**

fog quenching, *n*—**quenching** in a mist. **A 941, A01**

fog room, *n*—a moist room in which the humidity is controlled by atomization of water. **C 219, C01**

fog seal, *n*—a light application of bituminous material to an existing pavement as a seal to inhibit raveling, or to seal the surface, or both; medium and slow-setting bituminous emulsions are usually used and may be diluted with water. **D 8, D04**

foil—a term often applied to thin sheet or strip usually 0.005 in. (0.13 mm) or less in thickness. **B 846, B05**

foil, *n*—rolled wrought product, rectangular in cross section, and of thickness less than 0.006 in. [up through 0.15 mm].

bright two-side foil, *n*—foil having a uniform bright specular finish on both sides.

matte one-side foil, *n*—foil having a diffuse reflecting finish on one side and a bright specular finish on the other. **B 881, B07**

foil—a thin sheet of a material, usually a metal, not exceeding 0.005 in. in thickness. **E 7, E04**

fold—See **lap**. **C 162, C14**

fold—a bend in the strata or other planar structure within the rock mass. (ISRM) **D 653, D18**

fold—doubling over of metal which occurs during forging at or near the intersection of diameter changes which are found on the shoulders, heads, or shanks of bolts and screws, or on nuts at the intersection of diameter changes on the top face or on the bottom face. **F 1789, F16**

folded reinforcement—an unintentional or unspecified misalignment of mat or fabric reinforcing material in relation to the contour of a pultruded section.

NOTE—Such folds may or may not affect the surface appearance of the pultrusion and are chiefly visible in a cut cross section of the product. Such reinforcement irregularities are usually due to shifting and crowding of the reinforcing material during pultrusion.

D 3918, D20

folder stock, *n*—a paperboard used for the manufacture of folders for filing purposes. **D 1968, D06**

folding—see **aliasing**. **E 131, E13**

folding endurance, *n*—of paper, the average of the logarithms to the base 10 of the individual folding numbers. See **folding number**. **D 1968, D06**

folding number, *n*—the number of double folds required to cause failure of a paper test specimen when it is subjected to a prescribed folding procedure. **D 1968, D06**

fold number, *n*—See **folding number**. **D 1968, D06**

folds—defects in metal, usually on or near the surface, caused by continued fabrication of overlapping surfaces. **E 7, E04**

foliar application—application of a chemical to the stems, fruit, leaves, needles, or blades of a plant. **E 1102, E35**

foliar retention agent—a substance that increases the time and agrichemical remains in the targeted foliar zone. **E 1519, E35**

foliation—the somewhat laminated structure resulting from segregation of different minerals into layers parallel to the schistosity. (ISRM) **D 653, D18**

follower—See **pusher**. **F 592, F16**

follow-up expansion—movement of an expansion anchor during tension loading, whereby the expansion sleeve remains stationary and further expands as the anchor body moves axially in response to the load application. **E 2265, E06**

follow-up program, *n*—the sampling, inspection, tests, or other measures conducted by the certification organization on a periodic basis to determine the continued compliance of products that are being made by the manufacturer to the requirements of the standard specification. **F 1494, F23**

font—a set of graphic shapes that may be alphabetic, numeric, or both and may include other symbols. **F 149, F05**

font, *n*—a set of characters that share the same type style and size. **F 1457, F05**

food cutters—machine that uniformly reduces food products to a small particle size for salads, spreads, bread crumbs, and other food service recipes. Reduction of the food product is accomplished by combining the rotation of the product bowl with the perpendicular high speed rotation of a set of stainless steel cutlery knives. **F 1827, F26**

food mixing machines—vertical electric machine that shall be adaptable for mixing, whipping, and beating food products. The size range (as expressed by bowl capacity) from 12 qt to 140 qt and does not include special purpose machines that are intended solely for mixing dough. **F 1827, F26**

food service equipment manuals—manuals for food service equipment shall contain as a minimum, complete installation, operating, preventive maintenance, safety warnings, cleaning, and service instructions, including applicable charts and diagrams. **F 1827, F26**

food simulant—a well-characterized substance used in place of food for investigative studies. **F 1479, F02**

food slicing machines—a machine with electrically-driven rotating slicing blades. **F 1827, F26**

food waste disposal, commercial—a device intended for grinding food waste into small particles that are then flushed by water into a sanitary sewer system. Food wastes can be cooked or noncooked soils from the preparation or serving of foods. Use not intended for grinding glass, china, metals, clam or oyster shells, large bones, wood, paper, cardboard, or plastic. **F 1827, F26**

food waste pulper and waterpress assembly, commercial—a device intended for grinding food waste, food service paper, cardboard products, food service plastic products, documents including computer printouts, general office and retail store paper, and cardboard waste. Materials are ground in a water-filled tank (*pulper*) to produce a slurry which is then passed to the waterpress to be dewatered. Use not intended for grinding glass, china, metal, wood, clam, or oyster shells. Any small pieces of metal inadvertently placed in the pulper, such as cardboard box staples, aluminum refreshment cans, or tin food cans, shall be removable from the outside of the pulper tank. **F 1827, F26**

foot, *n*—the terminal part of the vertebrate leg, including the ankle, upon which an individual stands (see **foot protective device**). **F 1494, F23**

footcandle, *n*—unit of illuminance equal to one lumen per square foot. **E 284, E12**

footcandle (fc)—the illumination on a surface, 1 ft² in area, on which is uniformly distributed a flux of 1 lm (lumen). It equals 10.8 lm/m². **E 1316, E07**

footing—portion of the foundation of a structure that transmits loads directly to the soil. **D 653, D18**

foot length, *n*—in body measurements, with the subject standing barefoot, the distance from the most prominent part of the heel where it touched the floor to the end of the most prominent toe. **D 123, D13**

foot length, *n*—the straight distance from the prominence of the back

foot length, *n*

of the heel to the prominence of the longest toe, taken with the foot on a flat surface without shoes (use stable, flat ruler). **D 5219**, D13

foot portion—the portion of the footwear below the wearer's ankle bone. **F 819**, F18

footprint area [L^2], *n*—the gross contact area of a tire that is loaded (under stated conditions) against a smooth flat surface. **F 538**, F09

foot protective device, *n*—for chain saw cut resistance, an article of personal equipment which is worn over the foot and ankle for the purpose of providing limited protection from injury due to contact with a moving saw chain. **F 1494**, F23

foot traffic units, *n*—for pile floor covering, the number of passes by human walkers over a specific group of carpet samples. **D 123**, D13

footwall—the mass of rock beneath a discontinuity surface. (ISRM) **D 653**, D18

footwear, *n*—a boot or shoe of any construction. **F 1494**, F23

footwear, *n*—wearing apparel for the feet (such as shoes, boots, slippers, or overshoes), excluding hosiery. **F 1646**, F13

foot width, *n*—the straight distance from one side of the foot to the other side at the widest part, taken with the subject standing and without shoes (use stable, flat ruler). **D 5219**, D13

force, *n*—a physical influence exerted by one body on another which produces acceleration of bodies that are free to move and deformation of bodies that are not free to move. (Compare **strength**.) **D 123**, D13

force, *n*—a physical influence exerted by one body on another which produces acceleration of bodies that are free to move and deformation of bodies that are not free to move. (Compare **strength**.) **D 4848**, D13

force account—term describing PHA self-performance of modernization work by the use of employees, as distinct from performance by a contractor. **E 631**, E06

force at break, *n*—See **breaking force**. **D 4848**, D13

force-at-rupture, *n*—the force applied to a material immediately preceding rupture. (Compare **breaking force**. See also **rupture**.) **D 123**, D13

force at rupture, *n*—the force applied to a material immediately preceding rupture. (Compare **breaking force**. See also **rupture**.) **D 4848**, D13

force at specific elongation, **FASE**, *n*—the force associated with a specific elongation on the force-elongation curve. **D 4439**, D35

force-at-specified-elongation (FASE), *n*—the force associated with a specific elongation on the force-extension or force-elongation curve. **D 123**, D13

force at specified elongation (FASE), *n*—the force associated with a specific elongation on the force-extension or force-elongation curve. (*Syn.* **corresponding force**.) **D 4848**, D13

force cycle—See **cycle**. **E 1823**, E08

forced convection—see **convection, forced**. **E 772**, E44

forced drying temperature, *n*—a temperature between room temperature and 150°F (65°C). **D 16**, D01

force-deformation curve, *n*—a graphical representation of the force and deformation relationship of a material under conditions of compression, shear, tension, or torsion. (Compare **force-elongation curve**, **force-extension curve**, and **stress-strain curve**.) **D 123**, D13

force-deformation curve, *n*—a graphical representation of the force and deformation relationship of a material under conditions of compression, shear, tension or torsion. (Compare **force-elongation curve**, **force-extension curve** and **stress-strain curve**.) **D 4848**, D13

forced oxidation, *n*—a process employed to supply additional air in wet FGD systems, resulting in the production of gypsum. **E 2201**, E50

forced vibration (forced oscillation)—vibration that occurs if the response is imposed by the excitation. If the excitation is periodic and continuing, the oscillation is steady-state. **D 653**, D18

force-elongation curve, *n*—a graphical representation of the force

and elongation relationship of a material under tension. (Compare **force-deformation curve**, **force-extension curve**, and **stress-strain curve**.) **D 123**, D13

force-elongation curve, *n*—in a tensile test, a graphical representation of the relationship between the magnitude of an externally applied force and the change in length of the specimen in the direction of the applied force. (*Synonym* for **stress-strain curve**.) **D 4439**, D35

force-elongation curve, *n*—a graphical representation of the force and elongation relationship of a material under tension. (Compare **force-deformation curve**, **force-extension curve** and **stress-strain curve**.) **D 4848**, D13

force-extension curve, *n*—a graphical representation of the force and extension relationship of a material under tension. (Compare **force-deformation curve**, **force-elongation curve**, and **stress-strain curve**.) **D 123**, D13

force-extension curve, *n*—a graphical representation of the force and extension relationship of a material under tension. (Compare **force-deformation curve**, **force-elongation curve** and **stress-strain curve**.) **D 4848**, D13

force [F], *n*—in mechanical testing, a vector quantity of fundamental nature characterized by a magnitude, a direction, a sense, and a discrete point of application, that acts externally upon a test object and creates stresses in it. **E 6**, E28

force [F]—used in Practices E 1049 to denote force, stress, strain, torque, acceleration, or other parameters of interest. **E 1823**, E08

force-line displacement resulting from creep, V_c [L]—displacement at the loading pins from cracking associated with creep strain accumulation. **E 1823**, E08

force, P[F]—the force applied to a test specimen or to a component. **E 1823**, E08

force range, ΔP [FL^{-2}]—in fatigue loading, the algebraic difference between successive valley and peak forces (positive range or increasing force range) or between successive peak and valley forces (negative range or decreasing force range). In constant amplitude loading, the range is given as follows:

$$\Delta P = P_{\max} - P_{\min}$$

E 1823, E08

force ratio (also stress ratio), R, A—in fatigue, the algebraic ratio of the two loading parameters of a cycle. The most widely used ratios are as follows

$$R = \frac{\text{minimum load}}{\text{maximum load}} = \frac{P_{\min}}{P_{\max}} = \frac{S_{\min}}{S_{\max}}, \text{ and}$$

$$A = \frac{\text{loading amplitude}}{\text{mean load}} = \frac{P_a}{P_m} = \frac{S_a}{S_m}$$

E 1823, E08

force-recovery cycle, *n*—in elastic fabric testing, a continuous curve or plot of force versus elongation (with movement stopped momentarily at point of reversal) describing the elongation and recovery of an elastic fabric; also known as the loading and unloading cycle. **D 123**, D13

force-recovery cycle, *n*—in elastic fabric testing, a continuous curve or plot of force versus elongation (with movement stopped momentarily at point of reversal) describing the elongation and recovery of an elastic fabric; also known as the loading and unloading cycle. **D 123**, D13

force-recovery cycle, *n*—in elastic fabric testing, a continuous curve or plot of force versus elongation (with movement stopped momentarily at point of reversal) describing the elongation and recovery of an elastic fabric; also known as the loading and unloading cycle. **D 4850**, D13

force (strain) amplitude, P_a (S_a or ε_a) [F or FL⁻²]—in fatigue loading, one half of the range of a cycle (also known as *alternating force*). **E 1823**, E08

force to actuate (FTA), *n*—the peak force that corresponds to the pressure on the finger that a consumer feels upon fully actuating the mechanical pump dispenser. **D 6655**, D10

force transducer—a device which indicates the applied force by means of an electrical voltage. Usually the electrical voltage increases linearly with applied force. **E 1823, E08**

forehearth—a section of a melting furnace in one of several forms from which glass is taken for forming. **C 162, C14**

foreign matter, n—in cotton, non-lint material commonly referred to as waste or trash such as dust, sand, seed-coat fragments, leaves, and stems normally present in raw and partially processed cotton. **D 123, D13**

foreign matter—in protective coatings, insoluble foreign particles such as sand, lint, dust, and dirt that get mixed with the coating material before, during, or after application; causing the formation of raised specks in the dried film. **D 4538, D33**

foreign matter, n—for inflatable restraint fabrics, an extraneous interwoven fragment whose size, color, or texture indicates that it is not of the same material as the fibers in the base fabric. **D 6799, D13**

foreign matter, n—in cotton, non-lint material commonly referred to as waste or trash such as dust, sand, seed-coat fragments, leaves, and stems normally present in raw and partially processed cotton. **D 7139, D13**

fore-line—in leak testing, the line between a fore pump and the pump it backs. **E 1316, E07**

fore-line valve—in leak testing, a vacuum valve placed in the fore-line to permit isolation of the diffusion pump from its backing pump. **E 1316, E07**

forensic psychophysiology, n—the scientific discipline dealing with the relationship and applications of PDD tests within the legal system. It encompasses the academic discipline that provides the student, the practitioner, and the researcher with the theoretical and applied psychological, physiological, and psychophysiological fundamentals for a thorough understanding of PDD tests, and the skills and qualifications for conducting PDD examinations. The modifier “forensic” delineates and delimits this discipline from the broader discipline of psychophysiology. **E 2035, E52**

forepoling—driving forepoles (pointed boards or steel rods) ahead of the excavation, usually over the last set erected, to furnish temporary overhead protection while installing the next set. (ISRM) **D 653, D18**

forepressure—in leak testing, the total pressure on the outlet side of a pump measured near the outlet port. Sometimes called the back pressure, backing pressure, outlet pressure, exhaust pressure, or discharge pressure. In discussing the action of a vapor jet, the term forepressure may be used to designate the total pressure of the gas against which the jet impinges. **E 1316, E07**

fore pump—in leak testing, the pump that produces the necessary fore vacuum for a pump which is incapable of discharging gases at atmospheric pressure. Sometimes called the backing pump. **E 1316, E07**

foreset bed—the advancing and relatively steep frontal slope of a delta, that progressively covers the bottomset bed and in turn is covered by the topset bed. Foreset beds represent the greater part of the volume of a delta. **D 4410, D19**

forest products laboratory etch—See **FPL etch and sulfochromate etch**. **E 631, E06**

forest products laboratory etch—See **FPL etch and sulfochromate etch**. **E 1749, E06**

forged structure—the macrostructure through a suitable section of a forging which reveals direction of working. **E 7, E04**

forging, n—metal part worked to a predetermined shape by one or more processes such as hammering, upsetting, pressing, rolling, and so forth.

blocker-type forging, n—forging made in a single set of impressions to the general contour of a finished part.

die forging, n—forging formed to the required shape and size by working in impression dies.

hammer forging, n—forging produced by repeated blows of a forging hammer.

hand forging, n—forging, manually-manipulated, which is

worked, through repeated strokes or blows, between flat or simply shaped dies.

rolled ring forging, n—cylindrical product of relatively short height, circumferentially rolled from a hollow section. **B 881, B07**

forging cracks—occur during fastener manufacturing at the cutoff or forging operations and are located on the top of the head or on the raised periphery of indented head bolts and screws. **F 1789, F16**

forging stock, n—wrought or cast rod, bar, or other section suitable for forging. **B 881, B07**

fork—a set of metal equipment used during the firing operation for placing ware in, and removing it from a box furnace. **C 286, B08**

forked blade clincher—special clincher (anvil) for hooking plastic bags to facilitate placement of encircling staple. **F 592, F16**

forking—a mechanism whereby a propagating fracture branches to form two new fractures separated by an acute angle. **C 162, C14**

form—a set of equivalent planes in a crystal. In general, they will have the same spacing but different Miller indices. For example, in the cubic system, the planes (101), (110), (011), etc. are planes of the form (110). In the tetragonal system, however, the planes (101) and (110) belong to different forms. Equivalent directions are also spoken of as directions of a form. **E 7, E04**

form—the descriptive term for categorizing developers with similar characteristics. **E 1316, E07**

formaldehyde tannage—tannage used especially for white leathers and washable glove leathers. **D 1517, D31**

format, n—the established sequence or rules for ordering questions for presentation during testing. **E 2035, E52**

format—preprogrammed identification of fields to be read by an optical scanner. **F 149, F05**

format classification interrogation, n—interactive direct on-line communication between systems which generates cut file interchange and fabric cutting equipment. **D 6963, D13**

formed—See **mechanically deformed**. **F 547, F16**

formed crown—staple crown formed during driving, for example, for carding or fastening wire. **F 592, F16**

former (latex), n—a shaped object on which a rubber article is produced by dipping into a latex, from which the article is subsequently removed. **D 1566, D11**

form factor—a factor used in the calculation of the bending strength of wood members to compensate for nonrectangular shape. Defined as the ratio of the modulus of rupture of a member of desired shape to that of a “standard” member. **D 9, D07**

form factor, ff—the ratio of the rms value of a periodically alternating quantity to its average absolute value.

NOTE—For a sinusoidal variation, the form factor is:

$$\pi / 2\sqrt{2} = 1.1107$$

A 340, A06

forming—the shaping of hot glass. **C 162, C14**

forming—the shaping or molding of ceramic ware. **C 242, C21**

forming, n—a process in which the shape of plastic pieces such as sheets, rods, or tubes is changed to a desired configuration. **D 883, D20**

forming, n—a process in which the shape of plastic pieces such as sheets, rods, or tubes is changed to a desired configuration. **F 412, F17**

forming—primary operation in the fastener industry which includes heading, upsetting, extruding and forging. **F 1789, F16**

forming hood—the partially enclosed volume in which individual glass fibers and groups of fibers are collected into a wool pack. **C 162, C14**

forming rolls—rolls used in forming flat glass. **C 162, C14**

forms of refuse-derived fuel (RDF)—RDF-1—Wastes used as a fuel in as-discarded form.

RDF-2—Wastes processed to coarse particle size with or without ferrous metal separation.

forms of refuse-derived fuel (RDF)

RDF-3—shredded fuel derived from municipal solid waste (MSW) that has been processed to remove metal, glass, and other inorganics. This material has a particle size such that 95 weight % passes through a 2-in. (50-mm) square mesh screen.

RDF-4—Combustible waste processed into powder form, 95 weight % passing 10-mesh screening.

RDF-5—Combustible waste densified (compressed) into the form of pellets, slugs, cubettes, or briquettes.

RDF-6—Combustible waste processed into liquid fuel.

RDF-7—Combustible waste processed into gaseous fuel.

D 5681, D34

formula, *n*—a list of the materials and their amounts used in the preparation of a compound. **D 1566, D11**

formulation—the form in which a chemical is offered to the user. **E 1102, E35**

formulation deposit rate—the amount of formulation deposited per unit area. **E 1102, E35**

formulation rate—the amount of chemical formulation applied per unit treated, expressed in terms of mass or volume per relevant unit treated. (For area treatment, kg/ha, lb/A, or oz/1000 ft of row; for space application, mg/m³, or oz/1000 ft³; for individual units, kg/plant or animal). **E 1102, E35**

formula weight—the weight, in grams, pounds, or other units, obtained by adding the atomic weights of all elemental constituents in a chemical formula. **B 374, B08**

Formvar—a plastic material used for the preparation of replicas, or specimen supporting membranes. Trade name for poly(vinyl formal) 15/95. **E 7, E04**

Formvar replica—See **replica**. **E 7, E04**

forsterite (2MgO·SiO₂)—a magnesium silicate mineral, usually produced synthetically as a ceramic raw material; may be a reaction-produced phase in fired ceramics. **C 242, C21**

forsterite porcelain—See **fosterite porcelain** under **porcelain**. **C 242, C21**

forsterite whiteware—See **fosterite whiteware** under **ceramic whiteware**. **C 242, C21**

forward scattered radiation—radiation which is scattered less than 90° with respect to the incident beam, that is, forward in the general direction of the radiation source. **E 1316, E07**

fossil resin, *n*—under **resin, natural**, see **fossilresin**. **D 16, D01**

fouling—the reduction of flux due to a build-up of solids on the surface or within the pores of the membrane, resulting in changed element performance. **D 6161, D19**

fouling index (FI)—see **SDI**. **D 6161, D19**

foundation—lower part of a structure that transmits the load to the soil or rock. **D 653, D18**

foundation soil—upper part of the earth mass carrying the load of the structure. **D 653, D18**

foundry casting, *n*—a casting process wherein a molten metal is poured by gravity into the cavity of a mold and solidified; also, a product of such a process. **B 899, B02**

foundry nail, smooth foundry nail—bright, regular-stock-steel, ¾ by 0.120 to 9 by 0.162-in. nails with large thin flat ⅞ to ½-in. head and medium diamond point. **F 547, F16**

Fourcault process—the method of making sheet glass by drawing vertically upward from a slotted debiteuse block. **C 162, C14**

Fourdrinier kraft—See **containerboard**. **D 996, D10**

Fourier transform (FT)—the mathematical process used to convert an amplitude-time spectrum to an amplitude-frequency spectrum, or *vice versa*. **E 131, E13**

Fourier transform infrared (FT-IR) spectrometry—a form of infrared spectrometry in which an interferogram is obtained; this interferogram is then subjected to a Fourier transform to obtain an amplitude-wavenumber (or wavelength) spectrum. **E 131, E13**

four-point-¼ point flexure, *n*—configuration of flexural strength testing where a specimen is symmetrically loaded at two locations

that are situated one quarter of the overall span, away from the outer two support bearings. **C 1145, C28**

four-side structural sealant glazing, *n*—in *building construction*, a glazing system wherein all sides of a rectangular-shaped lite or panel are structural sealant glazed. **C 717, C24**

foxing—a shoe component that reinforces or covers the shoe at a point of particular wear or stress, such as the heel area of the joint between sole and upper. **F 869, F08**

foxing, *n*—a piece of material applied to the upper or extending around the outsole of a boot or shoe. **F 1646, F13**

F pilus—a protrusion on *E. coli* that is necessary for mating. The F pilus also contains the receptor for phage M13. **E 1705, E48**

FPL etch—an abbreviation for *forest products laboratory etch*; an etchant used for preparing the surface of aluminum alloys for adhesive bonding. (Syn. **sulfochromate etch**.) **E 631, E06**

FPL etch—an abbreviation for *forest products laboratory etch*; an etchant used for preparing the surface of aluminum alloys for adhesive bonding. (Syn. **sulfochromate etch**.) **E 1749, E06**

FR, *n*—a designation noting that an electrical insulating material has been subjected to a standard test for flammability and has a rating in accordance with that standard. **D 1711, D09**

fraction, *n*—the portion of a powder sample that lies between two stated particle sizes. Synonymous with **cut**. **B 243, B09**

fractional efficiency—See **efficiency**. **D 1356, D22**

fractional evaporation, *n*—the continuous evaporation of the quantity of liquid that results in a progressive increase in the concentration of a less-volatile constituent(s) in the remaining liquid. **G 126, G04**

fractional exposure dose (FED), *n*—the ratio of the Ct product for a gaseous toxicant produced in a given test to that Ct product of the toxicant which has been determined statistically from independent experimental data to produce lethality in 50% of test animals within a specified exposure and postexposure time. Since the time values in this ratio numerically cancel, the FED also is simply the ratio of the average concentration of a gaseous toxicant to its LC₅₀ value for the same exposure time. When not used with reference to a specific toxicant, the term FED represents the summation of FEDs for individual toxicants in a combustion atmosphere. **E 176, E05**

fractional factorial design, *n*—a factorial experiment in which only an adequately chosen fraction of the treatments required for the complete factorial experiment is selected to be run. **E 456, E11**

fractional factorial design, *n*—a factorial experiment in which only an adequately chosen fraction of the treatments required for the complete factorial experiment is selected to be run.

NOTE—This procedure is sometimes called fractional replication.

E 1325, E11

fractional ion yield—*SIMS*, the ratio of the number of secondary ions of a particular species to the total number of secondary ions emitted by a specimen. **E 673, E42**

fractional reflectance, *R_p*, *n*—the ratio of the flux reflected from a specimen in a specified solid angle to that incident on the specimen. **E 284, E12**

fractional transmittance, *T_p*, *n*—the ratio of the flux transmitted through a specimen in a specified solid angle to the incident flux. **E 284, E12**

fractionation, *n*—the process of separating a mixture into components having different properties (as by distillation, precipitation, or screening). **D 1356, D22**

fractionation, elastic, *n*—a process in which soft aggregate is separated from harder aggregate by hurling the composite aggregate against a steel plate, the hard particles rebounding farther from the plate than the softer, more friable particles. **C 1145, C28**

fractography, *n*—means and methods for characterizing a fractured specimen or component. **C 1145, C28**

fracture—a complete break in the stone (see **crack**, **microcrack**, **seam**). **C 119, C18**

fracture—that portion of a vitrified clay pipe from which a fragment

- has been broken. It is distinguished by well-defined fracture faces and sharp edges where the fracture faces meet the surface of the pipe. **C 896, C04**
- fracture**—the general term for any mechanical discontinuity in the rock; it therefore is the collective term for joints, faults, cracks, etc. (ISRM) **D 653, D18**
- fracture**—a break in the mechanical continuity of a body of rock caused by stress exceeding the strength of the rock. Includes joints and faults. **D 653, D18**
- fracture**—a rupture or break of the polish film (usually multiple). **D 2825, D21**
- fracture**—cracks, crazing, or delamination, or a combination thereof, resulting from physical damage to the pultrusion. **D 3918, D20**
- fracture** (*as in fractured asbestos*)—a clearly defined transverse break in the asbestos in situ. **D 2946, C17**
- fractured face, *n***—an angular, rough, or broken surface of an aggregate particle created by crushing, by other artificial means, or by nature. **D 8, D04**
- fracture ductility, ϵ_f , *n***—the true plastic strain at fracture. **E 6, E28**
- fracture frequency**—the number of natural discontinuities in a rock or soil mass per unit length, measured along a core or as exposed in a planar section such as the wall of a tunnel. **D 653, D18**
- fracture grain size**—grain size determined by comparing a fracture of a specimen with a set of standard fractures. For steel, a fully martensitic specimen is generally used and the depth of hardening as well as the prior austenitic grain size is determined. **E 7, E04**
- fracture mirror**—a smooth portion of a fracture surface surrounding the fracture origin. **C 162, C14**
- fracture origin**—the single, unique location at which a fracture system begins. **C 162, C14**
- fracture origin, *n***—the source from which brittle fracture commences. **C 1145, C28**
- fracture pattern**—spatial arrangement of a group of fracture surfaces. (ISRM) **D 653, D18**
- fractures**—internal or external breaks or cracks in the glass. Internal fractures usually occur in the area between the bulb and the constriction. **E 344, E20**
- fracture, spontaneous, *n***—cracking or chipping which occurs without immediately apparent external causes. **C 1145, C28**
- fracture strength**—the load at the beginning of fracture during a tension test divided by the original cross-sectional area. **F 2078, F07**
- fracture strength, S_f [FL^{-2}], *n***—the normal stress at the beginning of fracture. Fracture strength is calculated from the force at the beginning of fracture during a tension test and the original cross-sectional area of the specimen. **E 6, E28**
- fracture stress [FL^{-2}], *n***—the true normal stress on the minimum cross-sectional area at the beginning of fracture. **E 6, E28**
- fracture surface markings**—fracture surface features that may be used to determine the fracture origin location and the nature of the stress that produced the fracture. **C 162, C14**
- fracture system**—that family of related fracture surfaces lying within an object, having a common cause and origin. **C 162, C14**
- fracture test: (1)**—*general* the production of a fracture in a metal sample to determine such things as discontinuities, grain size, and composition.
- (2) *steel*—a test which utilizes a hardened steel disk section prepared from billet or bar stock which is fractured parallel to the grain flow so that, among other things, discontinuities due to inclusion segregates can be detected visually. **E 7, E04**
- fracture toughness, *n***—a generic term for measures of resistance to crack extension. **C 1145, C28**
- fracture toughness**—a conventional fracture mechanics strength parameter indicating the resistance of a material to crack extension. **D 9, D07**
- fracture toughness**—a generic term for measures of resistance to extension of a crack. **E 1823, E08**
- fracturing**—*in grouting*, intrusion of grout fingers, sheets, and lenses along joints, planes of weakness, or between the strata of a formation at sufficient pressure to cause the strata to move away from the grout. **D 653, D18**
- fragmentation**—the breaking of rock in such a way that the bulk of the material is of a convenient size for handling. (ISRM) **D 653, D18**
- fragmic cryogenic fabric**—a distinct soil micromorphology, resulting from processes of freezing and thawing, in which soil particles form discrete units that are densely packed. **D 7099, D18**
- fragmoidal cryogenic fabric**—a distinct soil micromorphology, resulting from the processes of freezing and thawing, in which soil particles form discrete units that are coalescing. **D 7099, D18**
- fragrance**—an odorant used to mask another odor to impart a specific small to a formulation. **E 609, E35**
- frame, *n***—a list, compiled for sampling purposes, which designates the items (units) of a population or universe to be considered in a study. **E 456, E11**
- frame**—See **windows and doors**. **E 631, E06**
- frame hinge**—a fitting that attaches to the gate frame and functions with the post hinge. **F 552, F14**
- framework**—the basic structure supporting installed fabric, namely the posts, rails, and tension wire. **F 552, F14**
- frame yarn, *n***—pile yarn in a Wilton-type carpet. **D 123, D13**
- framing member, *n***—stud, plate, track, joist, furring, and other support to which a gypsum panel product, or metal plaster base is attached. **C 11, C11**
- framing member, *n***—studs, joists, runners (tracks), bridging, bracing, and related accessories manufactured or supplied in wood for hot- or cold-formed steel. **E 2110, E06**
- framing nail**—See **common nail, threaded common nail, threaded nail**. **F 547, F16**
- frayed, *adj*—in textiles**, a worn condition characterized by damaged yarn surfaces, projecting yarn ends, hairiness, etc. **D 123, D13**
- frayed, *adj*—in textiles**, a worn condition characterized by damaged yarn surfaces, projecting yarn ends, hairiness, etc. **D 4849, D13**
- frazil ice**—crystals of ice that form in turbulent streams in cold weather. **D 7099, D18**
- FRC**—free residual chlorine. **D 6161, D19**
- free alkali, *n***—*in lubricating grease*, unreacted basic (alkaline) material present in the product. **D 4175, D02**
- free (available) chlorine**—chlorine existing as hypochlorous acid or its dissociated ions. Chlorine remaining after the demand has been satisfied. **D 6161, D19**
- free bend, *n***—the bend obtained by applying forces to the ends of a specimen without the application of force at the point of maximum bending. **E 6, E28**
- free-blown**—See **offhand glass**. **C 162, C14**
- freeboard**—the space above a filter bed in a filtration vessel to allow for expansion of the bed during back washing. **D 6161, D19**
- freeboard**—minimum vertical height of the boom above the waterline. **F 818, F20**
- freeboard**—the distance between the level of liquid in the kettle and the top of the lip of the kettle. **F 1827, F26**
- free bottom camber, h_F** —the maximum height of the running surface measured from a plane vertical surface with the ski on an edge, free from the deflection caused by its weight. X_{h_F} is the location of h_F from the tail of the ski. **F 472, F27**
- free bottom camber, H_f** —the height of the running surface from a vertical plane surface measured at the highest point, with the snowboard held laterally on edge, free from the effect of the snowboard weight. **F 1107, F27**
- “free-carbon” in tar, *n***—the hydrocarbon fraction that is precipitated from a tar by dilution with carbon disulfide or benzene. **D 8, D04**
- “free carbon” in tars**—the hydrocarbon fraction that is precipitated from a tar by dilution with carbon disulfide. **D 1079, D08**
- free-choice profiling, *n***—a form of sensory profiling in which each assessor independently generates attributes to evaluate a group of samples. The assessors' attributes may be the same or may differ

free-choice profiling, *n*

from sample to sample. The assessors' sensory profiles are combined statistically (for example, by Generalized Procrustes Analysis) to produce a map of the samples. **E 253, E18**

free climbing, *n*—a technique of climbing that uses only the natural features of the surface being climbed. In free climbing, equipment may be utilized to provide protection in the event of a fall, but is not used to assist progress. **F 1773, F08**

free convection—see **convection, natural**. **E 772, E44**

free cyanide: (1) true—the actual concentration of cyanide radical, or equivalent alkali cyanide, not combined in complex ions with metals in solution. **(2) calculated**—the concentration of cyanide, or alkali cyanide, present in solution in excess of that calculated as necessary to form a specified complex ion with a metal or metals present in solution. **(3) analytical**—the free cyanide content of a solution, as determined by a specified analytical method.

NOTE—The true value of free cyanide is rarely known with certainty and is therefore usually only dealt with in discussions of theory. The calculated or analytical value is usually used in practice. **B 374, B08**

free edge, *n*—an unrestrained pavement boundary. **E 867, E17**

free edge, *n*—an unrestrained pavement boundary. **E 1778, E17**

free electrons—an electron, not directly associated with the structure of an atom or molecule, free to move under the influence of an applied electric or magnetic field. **D 2864, D27**

free-energy diagram—a graphical representation of the variation with concentration of the Gibbs Free Energy, at constant pressure and temperature. **E 7, E04**

free-energy surface—in a ternary, or higher order, free energy diagram, the locus of points representing the Gibbs Free Energy as a function of concentration, with pressure and temperature constant. **E 7, E04**

free fatty acid, *n*—in *lubricating grease*, unreacted carboxylic acid(s) present in the product. **D 4175, D02**

free form (unformatted form)—a form on which the data appears in variable length fields. Preprinted symbols and guides are absent or minimal. Field delimiters are entered with the data. **F 149, F05**

free impurity, *n*—the impurities in a coal that exist as individual discrete particles that are not a structural part of the coal and that can be separated from it by coal preparation methods. **D 121, D05**

free lime, *n*—uncombined calcium hydroxide. **C 1154, C17**

free lime, *n*—*forasbestos-cement*, uncombined calcium hydroxide. **D 2946, C17**

free lime, *n*—reactive lime and hydroxide species available to react with a pozzolan to form a cementitious product, usually expressed as a percentage by total weight of the product. **E 2201, E50**

free moisture—that water, which is not chemically bound, and that is loosely bound to a material, but which can be removed by drying at 105°C, for a time to achieve constant weight, expressed as a percent of the initial weight of the material. **C 242, C21**

free moisture—synonym for *surface moisture*. **D 121, D05**

free piston ring, *n*—in *internal combustion engines*, a piston ring that will fall in its groove under its own weight when the piston, with the ring in a horizontal plane, is turned 90° (putting the ring in a vertical plane). **D 4175, D02**

free product—liquid phase contaminants released into the environment. **D 653, D18**

free rolling tire, *n*—a loaded tire rolling without applied driving or braking torque. **F 538, F09**

freestanding candle, *n*—a rigid candle (that is, pillar-shaped, column-shaped, or figurine) recommended to be used on a heat-resistant, nonflammable surface or on a candle accessory. **F 1972, F15**

freestone—a stone having little or no preferential direction of splitting which may be cut freely in any direction without fracture or splitting. **C 119, C18**

free vapor phase—a condition of contaminant residence in which volatilized contaminants occur in porosity that is effective to free

and open gaseous flow and exchange, such porosity generally being macroporosity. **D 653, D18**

free vibration—vibration that occurs in the absence of forced vibration. **D 653, D18**

free vibration (in dynamic mechanical measurement)—a technique for performing dynamic mechanical measurements in which the sample is deformed, released, and allowed to oscillate freely at the system's natural resonant frequency. **D 4092, D20**

free water, *n*—all water contained by gypsum board or plaster in excess of that chemically held as water of crystallization. **C 11, C11**

free water—that portion of the pore water that is free to move between interconnected pores under the influence of gravity. **D 7099, D18**

free water elevation (water table) (ground water surface) (free water surface) (ground water elevation)—elevations at which the pressure in the water is zero with respect to the atmospheric pressure. **D 653, D18**

free water (gravitational water) (ground water) (phreatic water)—water that is free to move through a soil or rock mass under the influence of gravity. **D 653, D18**

freewheeling condition—a piece of equipment under an unloaded condition wherein the electrical energy is dissipated due to friction and windage. **D 5681, D34**

freewheeling power—power requirement of a piece of equipment under unloaded, or freewheeling, conditions. **D 5681, D34**

freeze, *n*—an experiment or test run conducted with a freezing-point cell while the reference material in the cell solidifies. **E 344, E20**

freezeback—refreezing of thawed materials. **D 7099, D18**

freeze-drying—sublimation of water from a frozen aqueous suspension. **E 1705, E48**

freeze protection agent—a material that lowers the freezing point or helps to restore the formulation to its original state after freezing and thawing. **E 609, E35**

freeze recovery agent—a material, which aids in the restoring viscosity, homogeneity and other physical properties of a liquid formulation to the original properties before freezing and thawing. **E 609, E35**

freeze-thaw cycle—the freezing and subsequent thawing of a material. **C 717, C24**

freeze-thaw cycle—the freezing of a material followed by thawing. **D 7099, D18**

freeze thaw resistance, *n*—the ability of masonry to maintain integrity under the forces caused by cyclic action of freezing and thawing in the presence of moisture. **C 1232, C15**

freezing—lowering the temperature of an aqueous suspension to a point at or below the temperature of ice crystal formation. **E 1705, E48**

freezing curve, *n*—the entire time-temperature relation of the reference material in a freezing-point cell during freezing, including initial cooling, undercool, recalescence, freezing plateau, and final cooling to complete solidification. **E 344, E20**

freezing front—the advancing boundary between frozen (or partially frozen) and unfrozen ground. **D 7099, D18**

freezing index—(1) the cumulative number of degree-days below 0°C for a given period; (2) the number of degree-days between 0°C (32°F) and the mean temperature each day. The index is determined from temperatures measured about 1.4 m (4.5 ft) above the ground surface. That determined from temperatures measured at, or immediately below, a surface is known as the **surface freezing index**. **D 7099, D18**

freezing index, *F* (degree-days)—the number of degree-days between the highest and lowest points on the cumulative degree-days—time curve for one freezing season. It is used as a measure of the combined duration and magnitude of below-freezing temperature occurring during any given freezing season. The index determined for air temperatures at 4.5 ft (1.4 m) above the ground is commonly designated as the **air freezing index**, while that

determined for temperatures immediately below a surface is known as the surface freezing index. **D 653, D18**

freezing (of ground)—the changing of phase from water to ice in soil or rock. **D 7099, D18**

freezing plateau, *n*—the period during freezing in which the temperature does not change significantly. **E 344, E20**

freezing point, *n*—*in aviation fuels*, the fuel temperature at which solid hydrocarbon crystals, formed on cooling, disappear when the temperature of the fuel is allowed to rise under specified conditions of test. **D 4175, D02**

freezing point, *n*—the temperature at which crystallization begins in the absence of supercooling, or the maximum temperature reached immediately after initial crystal formation in the case of supercooling, or the temperature at which solid crystals, formed on cooling, disappear when the temperature of the specimen is allowed to rise. **D 4725, D15**

freezing point—the temperature at which the liquid and solid states of a substance are in equilibrium at a given pressure (usually atmospheric). For pure substances it is identical with the melting point of the solid form. **Lange, 10th Ed. D 4790, D16**

freezing point—(1) the temperature at which a pure liquid solidifies under atmospheric pressure; (2) the temperature at which a ground material starts to freeze. **D 7099, D18**

freezing point—See **melting point**. **E 7, E04**

freezing point, *n*—fixed point of a single component system in which liquid and solid phases are in equilibrium at a specified pressure, usually 101 325 Pa, and the system is losing heat slowly. (Compare **melting point**.) **E 344, E20**

freezing-point cell, *n*—a device that contains and protects a sample of reference material in such a manner that the freezing point of the material can establish a reference temperature. **E 344, E20**

freezing-point depression—the number of degrees by which the freezing point of an earth material is depressed below 0°C (32°F). **D 7099, D18**

freezing pressure—the positive pressure developed at ice-water interfaces in a soil as it freezes. **D 7099, D18**

freezing range, *n*—the range of temperature over which most of the reference material in a freezing-point cell solidifies. **E 344, E20**

freezing temperature—see **crystallization temperature**. **E 1142, E37**

French antelope lambskin—when tanned in France, a lustrous suede finish applied to French, Spanish, Algerian, and Balkan skins; in the United States “French antelope finish” is applied to suede leathers made from South American and New Zealand pickled lambskins. **D 1517, D31**

French degree—calcium carbonate equivalents expressed in parts per hundred thousand. Concentration in French degree is calculated by dividing concentration in calcium carbonate equivalents by ten. **D 6161, D19**

French kid—leather tanned from kidskin by an alum or vegetable process. **D 1517, D31**

French or hexagonal method, *n*—*in shingles*, a method of application for asbestos-cement roofing, whereby the shingles have at least three corners clipped so that when they are laid with their diagonals perpendicular to the eave of the roof, they lap at the top and sides to form a hexagonal pattern. **C 1154, C17**

French or hexagonal method—a method of application for asbestos-cement roofing, whereby the shingles have at least three corners clipped so that when they are laid with their diagonals perpendicular to the eaves of the roof, they lap at the top and sides to form a hexagonal pattern. **D 2946, C17**

French seam, *n*—a complex seam formed on the inside of the object with both raw edges enclosed and no stitching rows visible on the face side. (Compare **mock French seam**.) **D 123, D13**

French seam, *n*—*in home sewing*, a complex seam formed on the inside of a product with both cut edges enclosed and no stitching rows visible on the face side. (Compare **mock French seam**.) **D 4965, D13**

frequency, ν —the number of cycles per unit time. **E 131, E13**

frequency, *n*—reciprocal of the period. Symbol; f, ν .

NOTE—When the independent variable is time, the unit of frequency is the hertz. Symbol: Hz (1 Hz = 1 s⁻¹). (This unit is also called “cycle per second,” c/s.) **E 349, E21**

frequency—the number of cycles per second of alternating electric current induced into the tubular product. For eddy-current testing described herein, the frequency is normally 1 to 125 kHz, inclusive. (E 215) **E 1316, E07**

frequency, angular, ω —the number of radians per second traversed by a rotating vector that represents any periodically varying quantity.

NOTE—Angular frequency, ω , is equal to 2π times the cyclic frequency, f . **A 340, A06**

frequency, cyclic, *f*—the number of hertz (cycles/second) of a periodic quantity. **A 340, A06**

frequency distribution, *n*—*of a sample*, a table giving for each value of a discrete variate, or for each group of values of a continuous variate, the corresponding number of observations. **D 123, D13**

frequency distribution, *n*—*of a population*, a function that, for a specific type of distribution, gives for each value of a random discrete variate, or each group of values of a random continuous variate, the corresponding probability of occurrence. **D 123, D13**

frequency distribution—the way in which the frequencies of occurrence of members of a population, or a sample, are distributed in accordance with the values of the variable under consideration. **E 1823, E08**

frequency domain filtering, *n*—a filtering operation performed by first calculating the spectrum of the profile record and then multiplying the spectral components by the frequency response transfer function of the filter. **E 867, E17**

frequency, *f*—the number of cycles per unit time of periodic process. **E 1142, E37**

frequency factor—See **multiplicity factor**. **E 7, E04**

frequency, *f* (T⁻¹)—number of cycles occurring in unit time. **D 653, D18**

frequency (fundamental)—in resonance testing, the frequency at which the wave length is twice the thickness of the examined material. **E 1316, E07**

frequency (inspection)—effective ultrasonic wave frequency of the system used to inspect the material. **E 1316, E07**

frequency profile, *n*—a plot of the dynamic properties of a material, at a constant temperature, as a function of test frequency. **D 4092, D20**

frequency profile—*indynamic mechanical measurement*, plot of the dynamic properties of a material, at a constant temperature, as a function of test frequency, (D 4092, D20). **E 1142, E37**

frequency (pulse repetition)—the number of times per second an electro-acoustic search unit is excited by the pulse generator to produce a pulse of ultrasonic energy. This is also called pulse repetition rate. **E 1316, E07**

frequency (X-ray)—the number of alternations per second of the electric vector of the X-ray beam. It is equal to the velocity divided by the wavelength. **E 7, E04**

fresh concrete, *n*—concrete which possesses enough of its original workability so that it can be placed and consolidated by the intended methods. **C 125, C09**

fresh hide—a recently flayed hide or skin that has not been preserved (such as salt-cured). See **curing**. **D 1517, D31**

fresh water environment, *n*—the aerobic, fresh water environmental compartment. **D 4175, D02**

fresh water environment, *n*—the aerobic, aqueous compartment, characteristically with a salinity of less than five parts per thousand. **D 4175, D02**

fresh water environment, *n*—the aerobic, aqueous compartment, characteristically with a salinity of less than five parts per thousand. **D 6384, D02**

Fresnel fringes—a class of diffraction fringes formed when the

Fresnel fringes

source of illumination and the viewing screen are at a finite distance from a diffracting edge. In the electron microscope these fringes are best seen when the object is slightly out of focus.

E 7, E04

Fresnel lens, circular—a sheet of transparent material into which concentric grooves have been formed in such a pattern that light will be focused as with a lens. (Focusing mirrors of similar design are also available.)

E 772, E44

Fresnel lens, linear—a sheet of transparent material into which parallel grooves have been formed in such a pattern that light will be focused as by a cylindrical lens. (Focusing mirrors of similar design are also available.)

E 772, E44

Fresnel reflection, *n*—the process by which radiant flux is reflected from an optically smooth interface between two dielectric media.

E 284, E12

Fresnel-reflector system—flat mirrors arranged in an array such that they reflect onto a target, the illuminated area of which simulates the shape and size of the flat mirror. (Such an array simulates the ray-tracing of a parabolic trough of the same aperture angle.)

E 772, E44

fresnel-reflector system, *n*—flat mirrors arranged in an array such that they reflect onto a target, the illuminated area of which simulates the size and shape of the flat mirror. Such an array simulates the ray-tracing of a parabolic trough of the same aperture angle.

G 113, G03

fretting, *n*—small amplitude oscillatory motion, usually tangential, between two solid surfaces in contact.

B 542, B02

fretting, *n*—in tribology, small amplitude oscillatory motion, usually tangential, between two solid surfaces in contact.

G 40, G02

fretting corrosion—a form of fretting wear in which corrosion plays a significant role.

B 542, B02

fretting corrosion—the deterioration at the interface between contacting surfaces as the result of corrosion and slight oscillatory slip between the two surfaces.

G 15, G01

fretting corrosion, *n*—a form of fretting wear in which corrosion plays a significant role.

G 40, G02

fretting wear—wear arising as a result of fretting. See **fretting**.

B 542, B02

fretting wear, *n*—a form of attritive wear caused by vibratory or oscillatory motion of limited amplitude characterized by the removal of finely-divided particles from the rubbing surfaces.

D 4175, D02

fretting wear, *n*—wear arising as a result of fretting (see **fretting**).

G 40, G02

Freundlich adsorption isotherm—a logarithmic plot of quantity of component adsorbed per unit of adsorbent versus concentration of that component at equilibrium and at constant temperature, which approximates the straight line postulated by the Freundlich adsorption equation

$$X/M = kC^n$$

where:

- X* = quantity adsorbed,
M = quantity of adsorbent,
C = concentration,
k and *n* = constants.

D 2652, D28

friable, *adj*—in tunneling as applied to rock, easily fragmented, disaggregated, crumbled, or pulverized.

D 653, D18

friable—a condition under which the material is easily broken up under light to moderate pressure.

D 7099, D18

friable permafrost—permafrost in which the soil particles are not held together by ice.

D 7099, D18

Fricke dosimeter—a liquid chemical radiation dosimetry system composed of water and ferrous sulfate or ferrous ammonium sulfate in aqueous sulfuric acid solution and whose response is based quantitatively on the amount of oxidation of ferrous to ferric

ions by ionizing radiation, as analyzed by spectrophotometry. It is considered to be a reference-standard dosimetry system.

E 170, E10

friction—the resistance developed between the physical contacting, but otherwise unconstrained, surfaces of two bodies when there is movement or tendency for movement of one body relative to the other parallel to the plane of contact. (See also **coefficient of friction, dynamic coefficient of friction, in service coefficient of friction, and static coefficient of friction.**)

C 242, C21

friction, *n*—the resistance to the relative motion of one body sliding, rolling, or flowing over another body with which it is in contact.

D 123, D13

friction, *n*—resistance to relative motion between two bodies in contact (*Websters*).

coefficient of friction—the ratio of the force required to move one surface over another, to the total force applied normal to those surfaces.

kinetic coefficient of friction—the ratio of the force required to move one surface over another, to the total force applied normal to those surfaces, once that motion is in progress.

static coefficient of friction—the ratio of the force required to move one surface over another, to the total force applied normal to those surfaces, at the instant motion starts.

D 996, D10

friction, *n*—the resistance to sliding exhibited by two surfaces in contact with each other. Basically there are two frictional properties exhibited by any surface; static friction and kinetic friction.

D 4175, D02

friction, *n*—the resistance to the relative motion of one body sliding, rolling, or flowing over another body with which it is in contact.

D 4849, D13

friction, *n*—resistance to the relative motion of one body sliding, rolling, or flowing over another with which it is in contact.

F 141, F06

friction, *n*—resistance to the relative motion of one body sliding, rolling, or flowing over another with which it is in contact.

F 1646, F13

friction coat, calender, *n*—a layer of rubber compound applied to a fabric by shearing action so that it impregnates the fabric.

D 1566, D11

friction coating, *n*—applying a rubber coat (friction coat) on a textile by shearing action so that the coat impregnates the textile.

D 1566, D11

friction force, *n*—the resisting force tangential to the interface between two bodies when, under the action of an external force, one body moves or tends to move relative to the other.

D 4175, D02

friction force, *n*—the resisting force tangential to the interface between two bodies when, under the action of an external force, one body moves or tends to move relative to the other. (See also **coefficient of friction.**)

G 40, G02

friction polymerization—the process by which organic compounds (such as adsorbed air pollutants) on mating surfaces that move relative to each other polymerize to yield compounds of high molecular weight.

NOTE—When this occurs on electrical contacts and the materials formed remain on the surface, contact resistance may increase substantially. The solid materials that are produced by the polymerization process are called “friction polymers” or “frictional polymers.”

B 542, B02

friction ratio, *n*—ratio of surface speeds of two adjacent rolls (mill, calender, or refiner).

D 1566, D11

friction surface, *n*—an interior or exterior surface that is subject to abrasion or friction, including, but not limited to, certain surfaces of windows, floors, and stairs.

E 1605, E06

frictive track—a series of crescent cracks lying along a common axis, paralleling the direction of frictive contact; also known as a chatter sleek.

C 162, C14

frigorifico hides—cattlehides from South American slaughtering and freezing plants, cured in brine and salted. **D 1517, D31**

fringe, *n*—one of the light or dark bands produced by the interference of the light scattered by the real object and the virtual image of the object. **E 1316, E07**

fringe effect—toner deposition in non-printed areas adjacent to the printed areas, such as heading and tailing. **F 335, F05**

frit, *n*—glass in particulate form, generally of controlled size distribution. **C 162, C14**

frit, *v*—(1) the process of pouring molten glass into water or between cooled rollers. See **shrend, dry gage**.

(2) to decorate or seal with glass in particulate form.

C 162, C14

frit—a product made by quenching and breaking up a glass of a specific composition, used customarily used as a component of a glaze, body, or porcelain enamel. **C 242, C21**

frit, *n*—a porous material permeable to gas flow usually made by sintering microbeads of an appropriate material. **D 1356, D22**

frit, clear—see **clear frit**. **C 286, B08**

frit, colored—see **colored frit**. **C 286, B08**

frit, porcelain enamel—the small friable particles produced by quenching a molten glassy material (see also **clear frit** and **colored frit**). **C 286, B08**

fritted bubbler—See **bubbler**. **D 1356, D22**

fritted glaze—See **fritted glaze** under **glaze**. **C 242, C21**

fritting—the rapid chilling of the molten glassy material to produce frit. **C 286, B08**

fritting (A-fritting)—an electric breakdown between mating metallic contacts, separated by an insulating film, which occurs when the field strength exceeds approximately 1 000 000 V/cm. Metallic bridges are produced through the film if the fritting voltage is above the contact melting voltage. **B 542, B02**

fritting voltage—the voltage at which fritting occurs. **B 542, B02**

frizing (friezing)—in tanning Mocha glove leather, a process of removing the grain surface involving severe liming for not less than a month, during which the elastin structure of the grain layer is destroyed. **D 1517, D31**

frog, *n*—an indentation in a bed surface of a masonry unit. Indentations not exceeding $\frac{3}{8}$ in. are termed a frog, sometimes called a panel or panel frog. Indentations exceeding $\frac{3}{8}$ in. are termed a deep frog. **C 1232, C15**

front—the forepart of a hide or skin. Particularly in horsehide leathers, the front is used for garments, baseballs, etc. It is the part left when the butt is cut off about 22 in. (559 mm) from the root of the tail. **D 1517, D31**

front break-point, *n*—*in anatomy*, the location on the front of the body where the arm separates from the body. **D 123, D13**

front-break point, *n*—the location on the front of the body where the arm separates from the body. **D 5219, D13**

front chest width, *n*—the horizontal distance across the chest from the front break-point, taken with the arms down. **D 5219, D13**

front end breakaway, *n*—*in cornering vehicle*, the point in the curved trajectory of a vehicle when it can no longer be maintained on its intended path because of front wheel departure toward the outside of the curve. **F 538, F09**

front face discharge—makeup air method that is very flexible, but should be directed away from the hood, but the closer the air outlet's lower edge is to the bottom of the hood, the lower the velocity must be to avoid drawing effluent out of the hood. **F 1827, F26**

front high-hip, *n*—*in body measurements*, the distance from one imaginary side seam to the other imaginary side seam at the high-hip level. **D 123, D13**

frost, *n*—ice crystals resulting from the direct sublimation of water vapor onto a surface that is below freezing. **D 1356, D22**

frost—the occurrence of air temperatures below 0°C. **D 7099, D18**

frost action—freezing and thawing of moisture in materials and the

resultant effects on these materials and on structures of which they are a part or with which they are in contact. **D 653, D18**

frost action—the process of alternate freezing and thawing of moisture in soil, rock, and other materials, and the resulting effects on materials and on structures placed on, or in, the ground.

D 7099, D18

frost blister—a seasonal frost mound produced through doming of seasonally frozen ground through a subsurface accumulation of water under elevated hydraulic potential during progressive freezing of the active layer. The areas affected can be quite large.

D 7099, D18

frost boil—(a) softening of soil occurring during a thawing period due to the liberation of water from ice lenses or layers.

(b) the hole formed in flexible pavements by the extrusion of soft soil and melt waters under the action of wheel loads.

(c) breaking of a highway or airfield pavement under traffic and the ejection of subgrade soil in a soft and soupy condition caused by the melting of ice lenses formed by frost action. **D 653, D18**

frost boil—a small mound of soil material, presumed to have been formed through frost action. **D 7099, D18**

frost bulb—a more-or-less symmetrical zone of frozen ground formed around a buried chilled pipeline, or beneath or around a structure maintained at temperatures below 0°C (32°F).

D 7099, D18

frost cracking—fracturing of the ground by thermal contraction at temperatures below 0°C (32°F). **D 7099, D18**

frost creep—the net downslope displacement that occurs when a soil, during a freeze-thaw cycle, expands normal to the ground surface and settles in a nearly vertical direction. **D 7099, D18**

frosted—surface treated to scatter light or to simulate frost.

C 162, C14

frosted area—{archaic} See **hackle**.

C 162, C14

frost heave—the raising of a surface due to the accumulation of ice in the underlying soil or rock. **D 653, D18**

frost-heave extent—the difference between the elevations of the ground surface before and after the occurrence of frost heave.

D 7099, D18

frost heave (heaving)—the upward or outward movement of the ground surface (or objects on, or in the ground), caused by the formation of ice in the soil. **D 7099, D18**

frosting, *n*—a change in color in a limited area of a fabric caused by abrasive wear. **D 123, D13**

frosting, *n*—formation of a matte, whitish appearance on a rubber surface exposed to air, resulting from the action of ozone; often confused with bloom. **D 1566, D11**

frosting, *n*—a change in color in a limited area of a fabric caused by abrasive wear.

D 3990, D13

frosting, *n*—a light-scattering surface resembling fine crystals. See also **chalking, haze, bloom**. (D20) **F 412, F17**

frost jacking—the cumulative upward or outward displacement of slabs or blocks of rock, or of objects embedded in the ground, due to repetitive freezing and thawing. **D 7099, D18**

frost mound—any mound-shaped landform produced by ground freezing combined with accumulation of ground ice due to groundwater movement or the migration of soil moisture.

D 7099, D18

frost penetration—the movement of the freezing front into the ground during freezing. **D 7099, D18**

frost phenomena—the effects on earth material and structures resulting from frost action. **D 7099, D18**

frost point—the temperature at which visible frost begins to deposit on the lower air space glass surface of a sealed insulating glass unit in contact with the measuring surface of the frost point apparatus.

E 631, E06

frost-point hygrometer—See **dew-/frost-point hygrometer** under **hygrometer**. **D 1356, D22**

frost-point temperature—See **temperature**. **D 1356, D22**

frost shattering—the mechanical disintegration of rock caused by the pressure of the freezing of water in pores and along grain boundaries. **D 7099, D18**

frost sorting—the differential movement of soil particles of different size ranges as a result of frost action. **D 7099, D18**

frost-stable ground—soil or rock in which little or no segregated ice forms during seasonal freezing. **D 7099, D18**

frost state—the case where the frost point of a sealed insulating glass unit is above the test temperature specified by the purchaser or user. **E 631, E06**

frost-susceptible ground—soil or rock in which segregated ice will form, causing frost heave, under the required conditions of moisture supply and temperature. **D 7099, D18**

frost weathering—the disintegration and break-up of soil or rock by the combined action of frost shattering, frost wedging, and hydration shattering. **D 7099, D18**

frost wedging—the mechanical disintegration, splitting, or breaking-up of rock caused by the pressure of the freezing of water in cracks, crevices, pores, joint, or bedding planes. **D 7099, D18**

froth, *n*—a collection of bubbles and particles on the surface of a pulp in a froth flotation cell. **D 121, D05**

frother, *n*—a reagent used in froth flotation to control the size and stability of the air bubbles, principally by reducing the surface tension of water. **D 121, D05**

froth flotation, *n*—a process for cleaning fine coal in which hydrophobic particles, generally coal, attach to air bubbles in a water medium and rise to the surface to form a froth. The hydrophilic particles, generally the ash-forming matter, remain in the water phase. **D 121, D05**

Froude number—dimensionless number expressing the ratio of inertial to gravity forces in free-surface flow. It is equal to the average velocity divided by the square root of the product of the average depth and the acceleration due to gravity. **D 4410, D19**

frozen fringe—the zone in a freezing, frost-susceptible soil between the warmest isotherm at which ice exists in pores and the isotherm at which the warmest ice lens is growing. **D 7099, D18**

frozen ground—soil or rock in which all or part of the pore water has turned into ice. **D 7099, D18**

FRP—fiberglass reinforced plastic. **D 6161, D19**

FRP insulating tubes and rods—fiberglass reinforced plastic (FRP) products manufactured so that the tubes and rods produced will meet the electrical and mechanical requirements in the standard. **F 819, F18**

fruit-box nail—coated, regular-stock-steel, 1 $\frac{3}{8}$ by 0.072-in. nail with flat $\frac{7}{32}$ -in. head and medium diamond point. **F 547, F16**

frustrated total reflection (FTR)—the reflection which occurs when a nonabsorbing coupling mechanism acts in the process of total internal reflection to make the reflectance less than unity. **E 131, E13**

fryer—equipment, including a cooking vessel, in which oils are placed to such a depth that the cooking food is essentially supported by displacement of the cooking fluid within a perforated container rather than by the bottom of the vessel. Heat delivery to the cooking oils varies with fryer models. **F 1827, F26**

F-test, *n*—a test of statistical significance based on the use of George W. Snedecor's F-distribution and used to compare two sample variances or a sample variance and a hypothetical value. **D 123, D13**

fuel-air ratio for maximum knock intensity, *n*—for knock testing, that proportion of fuel to air that produces the highest knock intensity for each fuel in the knock testing unit, provided this occurs within specified carburetor fuel level limits. **D 4175, D02**

fuel alcohol—ethyl, methyl, or higher alcohols with impurities

(including water but excluding denaturants) produced for use as a fuel alone or as an addition to other fuels, such as gasoline.

E 772, E44

fuel alcohol—ethyl, methyl, or higher alcohols with impurities (including water but excluding denaturants) produced for use as a fuel alone or as an addition to other fuels, such as gasoline.

E 1705, E48

fuel diluent, *n*—in used oil analysis, unburnt fuel components that enter the engine crankcase causing dilution of the oil. **D 4175, D02**

fuel ethanol—ethanol with impurities (including water but excluding denaturants). **E 1705, E48**

fuel ethanol (Ed75-Ed85), *n*—a blend of ethanol and hydrocarbons of which the ethanol portion is nominally 75 to 85 volume % denatured alcohol. **D 4175, D02**

fuel ethanol manufacturing facility—a manufacturing facility of any size designed to produce fuel ethanol by a fermentation process. **E 1705, E48**

fuel value, *n*—the heat content, as measured in British thermal units (Btu)/lb or cal/g. **D 5681, D34**

full annealing, *n*—annealing a steel object by austenitizing it and then cooling it slowly through the transformation range. **A 941, A01**

full annealing—heating steel above the upper critical transformation temperature, holding it there long enough to fully transform the steel to austenite, and then cooling it at a controlled rate, in a furnace, to below a specified temperature. A full anneal refines grain structure and provides a relatively soft, ductile material that is free of internal stresses. **F 1789, F16**

full cone nozzle—see **solid cone atomizer**. **E 1620, E29**

full cone pattern, *n*—a cone pattern wherein the liquid is distributed throughout the pattern. **E 1620, E29**

full-energy peak—the peak in an energy spectrum recorded by a photon detector that occurs when the full energy of an incident photon is absorbed by the detector. This is sometimes referred to as the photopeak. **E 170, E10**

full-energy peak efficiency—the ratio of the net count rate in the full-energy peak to the emission rate of the photons from a sample giving rise to the peak. The value is dependent on the source-detector-shield geometry and the photon energy. This is sometimes referred to as the photopeak efficiency. **E 170, E10**

full grain—having the original grain surface of the skin. **D 1517, D31**

full-impulse-voltage wave, *n*—an aperiodic transient voltage that rises rapidly to a maximum value, then falls less rapidly to zero. **D 1711, D09**

full length burn, *n*—the outcome of a determination in which the cigarette burns to or past the front plane of the tipping paper, which covers the filter and perhaps a short section of the tobacco column in a filter tip cigarette, or past the tips of the metal pins if the cigarette has no filter. **E 176, E05**

full radiator, *n*—a thermal radiator that completely absorbs all incident radiant flux, whatever the wavelength, direction of incidence, or polarization. **E 284, E12**

full radiator: blackbody (USA), Planckian radiator, *n*—thermal radiator that absorbs completely all incident radiation, whatever the wavelength, the direction of incidence, or the polarization. This radiator has, for any wavelength, the maximum spectral concentration of radiant exitance at a given temperature. **E 349, E21**

full radiator—see **blackbody**. **E 772, E44**

full rich, *n*—condition in which the mixture control is at the full stop position with the fuel flow within manufacturer's recommended settings. **D 4175, D02**

full scale—See **analyzer**. **D 1356, D22**

full scale test, *n*—a test in which the product(s) to be tested is utilized in the same size as its end use. **E 176, E05**

full size specimen—tension test specimen consisting of a completed fastener for testing in the ready to use condition without altering the configuration. **F 1789, F16**

- full thickness skin autograft, n**—a skin [auto]graft consisting of the epidermis and the full thickness of the dermis. **F 2312, F04**
- full-thickness skin wound, n**—a skin wound with the loss of epidermis, and all of the dermis or at least the depth of dermis that includes most or all sources of epidermal cells from epidermal adnexae (glands and follicles). **F 2312, F04**
- full-wave direct current (FWDC)**—a rectified three-phase alternating current. **E 1316, E07**
- fully autonomous, adj**—mode of control of a UAV where the UAV is expected to execute its mission, within the pre-programmed scope, with only monitoring from the pilot-in-command. As a descriptor for *mode of control*, this term includes: (1) fully automatic operation, (2) autonomous functions (like takeoff, landing, or collision avoidance), and (3) “intelligent” fully autonomous operation. **F 2395, F38**
- fully dense material, n**—a material completely free of porosity and voids. **B 243, B09**
- fully nested experiment, n**—a nested experiment in which the second factor is nested within levels (versions) of the first factor and each succeeding factor is nested within versions of the previous factor. **E 456, E11**
- fully nested experiment**—a nested experiment in which the second factor is nested within levels (versions) of the first factor and each succeeding factor is nested within versions of the previous factor. **E 1325, E11**
- fully tempered glass**—flat glass that has been tempered to a high surface or edge compression to meet the requirements of Specification C 1048. See **heat-strengthened glass**. **C 162, C14**
- fumarole, n**—a vent at the earth’s surface that emits steam or gaseous vapor. **E 957, E44**
- fume, n**—properly, the solid particles generated by condensation from the gaseous state, generally after volatilization from melted substances, and often accompanied by a chemical reaction such as oxidation. **D 1356, D22**
- fume stack, n**—a box-like duct with thermocouples and baffles through which flames and hot fumes from a burning specimen pass whose purpose is to permit measurement of the heat release from the burning specimen. **E 176, E05**
- fumigant**—a chemical used in gaseous form to kill or inhibit pests. **E 609, E35**
- function**—a purpose of the entire project or some portion thereof determined by the needs or desires of the user/owner and expressed in two words, an active verb and a measurable noun. **E 631, E06**
- function, n**—a purpose of the entire project or some portion thereof determined by the needs or desires of the user/owner and expressed in two words, an active verb and a measurable noun. **E 833, E06**
- functional barrier**—*in food packaging*, a material that effectively restricts passage of solids, liquids, semi-solids, vapors, or forms of energy such as ultraviolet light through itself, across its borders, or interface with another material or substance. **F 1479, F02**
- functional compatibility, n**—effect of physical or chemical interaction between a consumer product and a specific pump mechanism where problems typically include deformation and degradation of components that result in a lower performance of the mechanical pump dispenser. **D 6655, D10**
- functional element, n**—*in construction planning, design, specification, estimating, and cost analysis*; see **element**. **E 833, E06**
- functional, adj (fonctionnel)**—performing or able to perform a regular function; designed or developed chiefly from the point of view of use. **E 631, E06**
- functional, adj (fonctionnel)**—performing or able to perform a regular function; designed or developed chiefly from the point of view of use. **E 1480, E06**
- functionality, adj**—*of a building*, being suitable for a particular use or function. (E 1480) **E 631, E06**
- functionality, adj (fonctionnalité)**—being suitable for a particular use or function. **E 1480, E06**
- functional program**—See **facility program**. **E 631, E06**
- functional program**—See **facility program**. **E 1480, E06**
- functional program, n (programme fonctionnel)**—document that specifies functional facility serviceability requirements of occupants and owner. **E 631, E06**
- functional properties, n**—those properties of the mineral lubricating oil that are required for satisfactory operation of the machinery. These properties are listed in Section 5. **D 4175, D02**
- functional requirement, n**—See **serviceability requirement**. **E 631, E06**
- functional requirement, n**—See **serviceability requirement**. **E 1480, E06**
- function analysis**—an examination of the project consisting of (1) the determination of the project functions; (2) the examination and sorting of these functions into categories; (3) the selection of the critical functions and arrangement into a logical order; and (4) the determination of the project cost allocated to performing each critical function. **E 631, E06**
- function analysis, n**—an examination of the project consisting of (1) the determination of the project functions; (2) the examination and sorting of these functions into categories; (3) the selection of the critical functions and arrangement into a logical order; and (4) the determination of the project cost allocated to performing each critical function. **E 833, E06**
- function, basic**—a function that is necessary to achieve the primary purpose of a building system or element. **E 631, E06**
- function, basic, n**—a function that is necessary to achieve the primary purpose of a building system or element. **E 833, E06**
- function codes, n**—codes used to control fabric cutter instructions and govern interpretation of subsequent commands and data in a block. **D 6963, D13**
- function, n (fonction)**—the action for which a person or thing is specially fitted or used or for which a thing exists. **E 631, E06**
- function, n (fonction)**—the action for which a person or thing is specially fitted or used or for which a thing exists. **E 1480, E06**
- function performance, n**—See **facility serviceability**. **E 631, E06**
- function performance, n**—See **facility serviceability**. **E 1480, E06**
- fundamental frequency**—lowest frequency of periodic variation. **D 653, D18**
- fundamental resonant frequency, n**—*in linear density testing*, the lowest frequency at which free oscillations can exist in a fiber tensioned between two fixed points. **D 123, D13**
- fundamental resonant frequency, n**—*in linear density testing*, the lowest frequency at which free oscillations can exist in a fiber tensioned between two fixed points. **D 4849, D13**
- fungi resistance**—the ability of plastic pipe to withstand fungi growth or their metabolic products, or both, under normal conditions of service or laboratory tests simulating such conditions. **F 412, F17**
- fungistat**—an agent that inhibits the germination of fungus spores or the development of mycelium. **E 609, E35**
- fungus**—primitive plants distinguished from algae by the absence of chlorophyll. **D 6161, D19**
- fungus (pl. fungi), n**—single cell (yeasts) or filamentous (molds) microorganisms that share the property of having the true intracellular membranes (organelles) that characterize all higher life forms (*Eukaryotes*). **D 4175, D02**
- fungus resistance**—the ability of a sandwich construction to withstand fungi growth or their metabolic products, or both, under normal conditions of service or laboratory test simulating such conditions. **E 631, E06**
- fungus resistance**—the ability of a sandwich construction to withstand fungi growth or their metabolic products, or both, under normal conditions of service or laboratory test simulating such conditions. **E 1749, E06**
- furanic compounds**—a class of chemical compounds characterized by the presence of heterocyclic structures consisting of a five-membered ring containing four carbon atoms and one oxygen atom. These compounds may be found dissolved in electrical

furanic compounds

- insulating fluids, either as residual contaminants of refinery extraction processes in which furfural is used, or from the degradation of cellulose insulation. **D 2864, D27**
- furan plastics**—plastics based on furan resins. (ISO) **D 883, D20**
- furan resin**—a thermosetting catalyzed condensation reaction product from furfuryl alcohol, furfural or combination thereof. **C 904, C03**
- furan resin, n**—a resin in which the furan ring is an integral part of the polymer chain and represents the greatest amount by mass. (ISO) **D 883, D20**
- fur brush development**—development of electrostatic images by transporting the toner to the image area through the use of fur-like fibers. **F 335, F05**
- furfural**—an aldehyde derivative of certain biomass conversion processes, used as a solvent. **E 1705, E48**
- furnace, arc-image, n**—a furnace in which high temperatures are produced by focusing radiation from high-temperature arcs into the furnace chamber. **C 1145, C28**
- furnace, box**—see **box furnace**. **C 286, B08**
- furnace carbon black, n**—type of carbon black produced by the decomposition reaction of hydrocarbons when injected into a high velocity stream of combustion gases under controlled conditions. **D 1566, D11**
- furnace, continuous**—see **continuous furnace**. **C 286, B08**
- furnace, image, n**—a furnace in which high temperatures are generated by focusing radiation from a high-temperature source, such as the sun or an electric arc. **C 1145, C28**
- furnace, recuperative, n**—a furnace equipped with a heat exchanger in which heat is conducted from the combustion products through a system of ducts or through flue walls in a manner so as to preheat the air as it enters the burner to unite with the fuel. **C 1145, C28**
- furnace, regenerative, n**—a furnace having a cyclic heat exchanger which alternately receives heat from gaseous combustion products and transfers heat to the air or gas of the fuel mixture before combustion takes place. **C 1145, C28**
- furnace, solar, n**—an image-type furnace in which solar radiation is focused into a relatively small area as a source of heat producing extremely high temperatures. **C 1145, C28**
- furnace, thermal gradient, n**—a tubular furnace in which a controlled temperature gradient is maintained along its length. **C 1145, C28**
- furnish, n**—in any papermaking process, all of the materials added prior to sheet formation **D 1968, D06**
- furniture and fixtures**—noncurrent depreciable asset consisting of office or store equipment (for example, desks), lighting, and showroom items. **E 2135, E53**
- furniture-carton nail**—bright, regular-stock-steel, $\frac{3}{4}$ to 2-in. nails with circular 1-in. cap head and medium diamond point. (See **cap nail**.) **F 547, F16**
- furniture covering, n**—a general term for attached upholstery fabric, slipcovers and throws. **D 123, D13**
- furniture covering, n**—a general term for attached upholstery fabric, slipcovers and throws. **D 7023, D13**
- furniture mock-up or assembly, n**—a representation of production furniture that uses the same upholstery cover material and upholstery material, constructed in the same manner as in production furniture, but with straight, vertical sides. **E 176, E05**
- furniture nail**—plated, regular-stock-steel or brass, $\frac{3}{8}$ to $\frac{3}{4}$ -in. nails with extra large, decorative head and long diamond or needle point. **F 547, F16**
- furniture unit, n**—in *upholstered furniture*, a complete single piece of upholstered seating, such as a sofa, love seat, lounge chair, rocker, or recliner. **D 123, D13**
- furniture unit, n**—in *upholstered furniture*, a complete single piece of upholstered seating, such as a sofa, love seat, lounge chair, rocker, or recliner. **D 7023, D13**
- furring**—buildup or bristling of magnetic particles due to excessive magnetization of the component under examination resulting in a furry appearance. **E 1316, E07**
- furring nail**—See **self-furring nail**. **F 547, F16**
- furring tile, n**—tile for lining the inside of walls and carrying no superimposed loads. **C 43, C15**
- fusain**—See **fusain** under **coal**. **D 121, D05**
- fuse, v**—to melt or join by the use of heat. **C 1145, C28**
- fuse, v**—(1) to convert plastic powder or pellets into a homogeneous mass through heat and pressure; (2) to make a plastic piping joint by heat and pressure. **F 412, F17**
- fused fabric, n**—a type of bonded fabric made by adhering a fusible fabric to another fabric, such as for use in an interlining. **D 123, D13**
- fused grain refractory, n**—a refractory made predominantly from grain that has solidified from a fused or molten condition. **C 71, C08**
- fused or fusion cast refractory, n**—a solidified material made by melting refractory ingredients and pouring it into molds (see also **molten cast refractory**). **C 71, C08**
- fused quartz**—vitreous silicon dioxide produced by melting silica, generally in the form of granular quartz. See related terms **fused silica** and **vitreous silica**. **C 162, C14**
- fused silica**—vitreous silicon dioxide produced by flame hydrolysis of silicon tetrachloride (or similar compounds) or by thermal consolidation of a silica gel. See related terms **vitreous silica** and **fused quartz**. **C 162, C14**
- fused silica refractory, n**—a product composed predominantly of fused, noncrystalline silica. **C 71, C08**
- fusel oil**—a clear, colorless, poisonous, liquid mixture of alcohols obtained as a by-product of grain fermentation; generally amyl, isoamyl, propyl, isopropyl, butyl, and isobutyl alcohols and acetic and lactic acids. **E 1705, E48**
- fuse oils**—complex group of higher molecular weight materials including ketones and aldehydes produced as a byproduct by the yeast fermentation during ethanol production. **E 1705, E48**
- fusible fabric, n**—a utilitarian fabric which has a thermoplastic adhesive applied to one side, sometimes in a pattern of dots, so that the surface can be bonded to another fabric surface by the use of heat and pressure. **D 123, D13**
- fusing**—see **heat fixing**. **F 335, F05**
- fusinite**—see **fusinite** under **maceral**. **D 121, D05**
- fusion**—the process of melting; usually the result of interaction of two or more materials. **C 242, C21**
- fusion bonded, n**—a method for creating a carpet pile construction by adhering loops or lengths of yarn to the face of a primary backing. **D 123, D13**
- fusion bonded, n**—a method of creating a carpet pile construction by adhering loops or lengths of yarn to the face of a primary backing. **D 5684, D13**
- fusion casting, n**—the process of forming items by casting molten materials in mold. **C 1145, C28**
- fusion flow**—the relative flow of various glasses or frits in the molten state. **C 286, B08**
- fusion point, n**—the temperature or range of temperatures at which melting or softening, as a result of partial melting, of a composition, will occur. **C 1145, C28**
- fusion seal**—a bond formed by combining two or more materials through melting or other means so that the joining layers become indistinguishable at the interface. **F 17, F02**
- fusion seal**—See **Terminology F 17**. **F 1327, F02**
- fusion test, n**—any test to determine the temperature or range of temperatures at which fusion takes place, or to determine the flow or other properties of a material at fusion temperatures. **C 1145, C28**
- fusion test, button**—see **button test**. **C 286, B08**
- fusion welding**—a joining process in which the mating surfaces of two thermoplastic parts are melted by induced heat and rapidly

pressed together while still molten to form a homogeneous bond.

C 904, C03

future value—the value of a benefit or a cost at some point in the future, considering the time value of money (*Syn. future worth*).

E 631, E06

future value, *n*—the value of a benefit or a cost at some point in the future, considering the time value of money (*Syn. future worth*).

E 833, E06

future worth—See **future value**.

E 631, E06

*future worth, *n**—See **future value**.

E 833, E06

fuzz, *n*—untangled fiber ends that protrude from the surface of a yarn or fabric.

D 123, D13

fuzz, *n*—untangled fiber ends that protrude from the surface of a yarn or fabric.

D 4849, D13

fuzz ball, *n*—loose and frayed fibers that have formed into a ball and have then been woven or knitted into the fabric. (Compare **pills**.)

D 123, D13

fuzz ball, *n*—loose and frayed fibers that have formed into a ball and have then been woven or knitted into the fabric. (*Syn. lint ball, snow ball*) (Compare **pills**)

D 3990, D13

fuzz balls—broken or abraded filaments which have collected as loose bundles or balls during the manufacture of impregnated material, occasionally incorporated into the impregnated material.

E 631, E06

fuzz balls—broken or abraded filaments which have collected as loose bundles or balls during the manufacture of impregnated material, occasionally incorporated into the impregnated material.

E 1749, E06

fuzzy, *adj*—characterized by a hairy appearance due to broken fibers or filaments.

D 123, D13

fuzzy, *adj*—characterized by a hairy appearance due to protruding broken fibers or filaments. (*Syn. hairy*)

D 3990, D13

fuzzy, *adj*—characterized by a hairy appearance due to broken fibers or filaments. (*Syn. hairiness*)

D 4849, D13

fuzzy texture—a defect characterized by a myriad of minute bubbles, broken bubbles, and dimples in the porcelain enamel surface.

C 286, B08

FWA buildup—the course of change in fluorescence emission intensity or fluorescence shade or both, using specified exhaust procedure:

(1) for a specified number of successive applications of FWA, or

(2) by varying the FWA concentration in a series of single applications.

D 459, D12

FWA exhaust efficiency—a measure of FWA substantivity as ex-

pressed by:

(1) exhaust coefficient (E.C.)—the ratio of FWA concentration taken up by unprewhitened substrate, (wt of FWA (s)/wt of substrate) to that concentration of FWA remaining in the bath, (wt of FWA (b)/wt of bath) under specified application conditions.

$$\text{E.C.} = \frac{\text{wt FWA (s)/wt substrate}}{\text{wt FWA (b)/wt bath}}$$

D 459, D12

FWA fastness (on substrate)—degree of change in fluorescence emission intensity or fluorescence shade or both, when a substrate containing FWA is exposed for a specific length of time to any specified natural or artificial environment.

D 459, D12

FWA fluorescence emission intensity—the difference between the Z (CIE standard observer) tri-stimulus value of a sample treated with FWA and that of the untreated sample under standardized illumination conditions (D_{65}) and viewing conditions (CIE approved geometry) for any specified substrate and specimen presentation techniques.

D 459, D12

FWA fluorescence shade—(1) the perceived direction of the shift in hue caused by the addition of an FWA to any specified near-white substrate (psychological definition), or (2) the wave length at which an extension of the line connecting the points on a CIE diagram corresponding to the chromaticity coordinates (measured under standardized illumination conditions (D_{65}) (CIE approved geometry)) of the untreated substrate to those of the treated substrate intersects the spectrum locus (psychophysical definition).

D 459, D12

FWA formulation-dependent fluorescence emission intensity ratio—the fluorescence emission intensity obtained with a given FWA on a specified substrate under specified conditions in a designated formulation system relative to that obtained with the same FWA under identical conditions in a different formulation.

D 459, D12

FWA levelness—the uniformity of distribution of FWA on substrate when applied by a specified method.

D 459, D12

FWA rate of exhaust index—the time required for an FWA bath of specified composition to be half-depleted by exhaustion onto a particular substrate under specified conditions.

D 459, D12

FWA stability (in solution)—degree of resistance of FWA in solution under specified exposure condition to specific bath additives.

D 459, D12

FWA substrate selectivity ratio—the fluorescence emission intensity exhibited by a substrate, relative to that obtained on a reference substrate, after treating these in a specified mixed load, using a given FWA, a designated formulation system, and specified conditions.

D 459, D12

G

G—symbol for the dimensionless ratio between an acceleration in length per time-squared units, and the acceleration of gravity in the same units (D 1596).
D 996, D10

g—symbol for the acceleration of gravity at the earth's surface.
D 996, D10

G—shear modulus of the web material, psi (or MPa) **E 631, E06**

G'—shear stiffness of the diaphragm obtained from test (includes shear deformation factor for the connection system), lbf/in. (or N/mm) **E 631, E06**

G—shear stiffness obtained from test, in newtons per metre (pound-force per inch). **E 631, E06**

G'—global shear stiffness, includes rotation and translational displacements as well as diaphragm shear displacement. **E 631, E06**

µg—microgram. **E 631, E06**

g, *n*—a unit of acceleration where 1 *g* is equal to the acceleration of gravity, 9.8 m/s² (32.2 ft/s²). **F 538, F09**

gable wall—[archaic] the charging end wall of a glass-melting furnace. **C 162, C14**

GAC—granular activated carbon. **D 6161, D19**

gaffer—head workman, foreman, or blower of a glass hand shop. **C 162, C14**

gage, *n*—of a tufting machine, the average centerline distance between the needles. **D 123, D13**

gage, *n*—of tufted pile yarn floor covering, the average distance between adjacent binding sites in the widthwise direction. **D 123, D13**

gage, *n*—in knitted fabrics, a measure of fineness expressing the number of needles per unit of width (across the wales). **D 123, D13**

gage, *n*—in full-fashioned hosiery, a measure of fineness expressing the number of needles per 38 m (1.5 in.) on the needle bar. **D 123, D13**

gage, *n*—in warp knitting, for simplex, tricot, milanese, number of needles per English inch; for raschel, kayloom, twice the number of needles per English inch. **D 123, D13**

gage, *n*—in knitted fabrics, a measure of fineness expressing the number of needles per unit of width (across the wales). **D 4850, D13**

gage, *n*—in full-fashioned hosiery, a measure of fineness expressing the number of needles per 38 m (1.5 in.) on the needle bar. **D 4850, D13**

gage, *n*—in warp knitting, for simplex, tricot, milanese, number of needles per English inch; for raschel, kayloom, twice the number of needles per English inch. **D 4850, D13**

gage (also *gauge*), *n*—(1) in metal products, a number designating a specific thickness of metal sheet, or diameter of wire, cable, or fastener shank tabulated in a standardized series, each of which represents a decimal fraction of an inch (or millimetre). (2) distance in inches (or millimetres) between adjacent lines of holes or fasteners. **E 631, E06**

gage height—the height of a water surface above an established or arbitrary datum at a particular gaging station; also termed stage. **D 4410, D19**

gage length, *n*—in cement testing, the nominal length between the innermost ends of metal studs that are molded into a test specimen with the axis of the stud in each end of the test specimen coincident with the longitudinal axis of the test specimen and with each other. **C 219, C01**

gage length, *n*—in tensile testing, the length of a specimen measured between the points of attachment to clamps while under uniform tension. **D 123, D13**

gage length, *n*—the known distance between bench marks. **D 1566, D11**

gage length, *n*—in tensile testing, the length of a specimen measured between the points of attachment to clamps while under uniform tension. **D 4845, D13**

gage length [L], *n*—the original length of that portion of the specimen over which strain or change of length is determined. **E 6, E28**

gage length, *L* (L)—distance over which the deformation measurement is made. **D 653, D18**

gage plate—a device that determines the thickness of an individual slice of food product. **F 1827, F26**

gage plate adjuster—a manually operated dial or a lever that is used by the operator to set the *gage plate*. Usual practice is to indicate the thickness by a graduated scale with a 0 (zero) setting to indicate that the *gage plate* is completely closed. **F 1827, F26**

gage pressure—See **pressure**. **D 1356, D22**

gage pressure—pressure measured from atmospheric pressure as the base. **E 631, E06**

gage pressure—the difference in pressure existing within a system and that of the atmosphere. Zero gage pressure is equal to atmospheric pressure. **E 631, E06**

gage pressure—difference between the absolute pressure and atmospheric pressure. **E 1316, E07**

gage pressure—the difference in pressure existing within a system and that of the atmosphere. Zero gage pressure is equal to atmospheric pressure. **E 1749, E06**

gage protector—in grouting, a device used to transfer grout pressure to a gage without the grout coming in actual contact with the gage. **D 653, D18**

gage saver—see **gage protector**. **D 653, D18**

gaging station—a particular site on a stream, canal, lake, or reservoir at which systematic observations of hydrologic data are obtained. **D 4410, D19**

gaiter, *n*—for chainsaw cut resistance, a foot protective device worn outside the footwear. **F 1494, F23**

gaiting, *n*—in warp knitting, the setting of a guide bar one or more needle spaces to the right or left in order to increase the pattern possibilities. **D 123, D13**

gaiting, *n*—in warp knitting, the setting of a guide bar one or more needle spaces to the right or left in order to increase the pattern possibilities. **D 4850, D13**

galactan—a polysaccharide composed essentially of galactose units. (see also **arabinogalactan**) **D 1695, D01**

galactoglucomannan—one of the hemicelluloses of softwoods, containing three types of sugar units—galactose, glucose, and mannose. **D 1695, D01**

galactomannan—a polysaccharide containing galactose and mannose units. Galactomannans usually have a long chain of mannose units with galactose side chains and are found in seed gums (guar, locust bean). **D 1695, D01**

gall—layer of molten sulfates floating upon glass. **C 162, C14**

galling, *n*—a form of surface damage arising between sliding solids, distinguished by macroscopic, usually localized, roughening and creation of protrusions above the original surface; it often includes plastic flow or material transfer or both. **G 40, G02**

gallon, U. S., *n*—a volume equal to 231 in.³ For paint, varnish, lacquer, and related products this is measured at 77°F (25°C). **D 16, D01**

galvanic anode, *n*—a metal electrode that sacrificially corrodes when coupled to a more noble metal in a conducting medium, thereby supplying a protective electric current to the more noble electrode. **B 899, B02**

galvanic cell—an electrolytic cell capable of producing electrical energy by electrochemical action. **B 374, B08**

galvanic corrosion—accelerated corrosion of a metal because of an electrical contact with a more noble metal or nonmetallic conductor in an electrolyte. **D 6161, D19**

galvanic corrosion—accelerated corrosion of a metal because of an electrical contact with a more noble metal or nonmetallic conductor in a corrosive electrolyte. **E 631, E06**

- galvanic corrosion**—the corrosion of metallic objects in the presence of moisture, caused by electrolytic action. **E 631, E06**
- galvanic corrosion**—accelerated corrosion of a metal because of an electrical contact with a more noble metal or nonmetallic conductor in a corrosive electrolyte. **E 1749, E06**
- galvanic corrosion**—accelerated corrosion of a metal because of an electrical contact with a more noble metal or nonmetallic conductor in a corrosive electrolyte. **G 15, G01**
- galvanic couple**—a pair of dissimilar conductors, commonly metals, in electrical contact. (See **galvanic corrosion**.) **G 15, G01**
- galvanic current**—the electric current between metals or conductive nonmetals in a galvanic couple. **G 15, G01**
- galvanic series**—a list of metals and alloys arranged according to their relative potentials in a given environment. See **electromotive series**. **B 374, B08**
- galvanic series**—a list of metals and alloys arranged according to their relative corrosion potentials in a given environment. **G 15, G01**
- galvanized**—See **zinc-coated**. **F 547, F16**
- galvanized**—pertaining to zinc-coated articles. **F 552, F14**
- galvanized after weaving**—*in chain link fabric*, describes steel fabric that is hot-dip coated with zinc after weaving (see Specification A 392). **F 552, F14**
- galvanized before weaving**—*in chain link fabric*, describes fabric that is woven from steel wire galvanized before weaving. **F 552, F14**
- galvanized coating, *n***—a coating of virtually pure zinc on steel, applied by various methods or processes including hot-dip process and electrodeposition (electrolytic process). **A 902, A05**
- galvanized steel wire**—steel wire coated with zinc. **B 354, B01**
- galvanizing**—application of a coating of zinc. **B 374, B08**
- galvannealed coating, *n***—a coating on steel of zinc-based alloy, containing about 6 to 15 % iron, produced by hot-dip immersion in a high-zinc content coating bath, followed by heating the steel to induce diffusion alloying between the molten zinc coating and the steel. **A 902, A05**
- galvanodynamic**—refers to a technique wherein current, continuously varied at a selected rate, is applied to an electrode in an electrolyte. **G 15, G01**
- galvanostaircase**—refers to a galvanostep technique for polarizing an electrode in a series of constant current steps wherein the time duration and current increments or decrements are equal for each step. **G 15, G01**
- galvanostatic**—an experimental technique whereby an electrode is maintained at a constant current in an electrolyte. **G 15, G01**
- galvanostep**—refers to a technique in which an electrode is polarized in a series of current increments or decrements. **G 15, G01**
- gamma-cellulose**—(1) Historically, a term used to indicate impurities of short chain lengths found in pulps, predominately hemicelluloses. (2) Gamma-cellulose content, as measured by TAPPI Method T 203 om-93, is the pulp fraction soluble in caustic, which remains in solution upon acidification. **D 1695, D01**
- gamma iron (γ Fe)**—solid nonmagnetic phase of pure iron which is stable at temperatures between 910 and 1400°C and possesses the face-centered cubic lattice. **E 7, E04**
- gamma (γ) loss peak, *n***—the third peak in the damping curve below the melt, in the order of decreasing temperature or increasing frequency. **D 4092, D20**
- gamma (γ) loss peak**—*in dynamic mechanical measurement*, third peak in the damping curve below the melt, in the order of decreasing temperature or increasing frequency, (D 4092, D20). **E 1142, E37**
- gamma number**—degree of substitution (DS) \times 100. This term is of widespread use in the cellulose xanthate field. **D 1695, D01**
- gamma (photography)**—the tangent of the angle which the straight-line part of the characteristic curve makes with the log exposure axis and in a photographic film or plate is a measure of the extent of development. **E 7, E04**
- gamma-radiography**—a technique of producing radiographs using gamma-rays. **E 1316, E07**
- gamma ray**—electromagnetic penetrating radiation having its origin in the decay of a radioactive nucleus. **E 1316, E07**
- gamma ray**—electromagnetic radiation having its origin in an atomic nucleus. **E 1316, E07**
- gamma-ray standard field**—a gamma ray field produced by a particular radioactive nuclide (such as ^{60}Co) that is well established and reproducible as to the absorbed dose rate produced in a specific material at a designated location within the field at any given time. **E 170, E10**
- gap**—an open joint or split in the inner plies which results when crossband or center veneers are broken or not tightly butted. **D 1038, D07**
- gap-filling adhesive, *n***—an adhesive capable of forming and maintaining a bond between surfaces that are not close-fitting. **D 907, D14**
- gap length, ℓ_g** —the distance that the flux transverses in the central region of a gap in a core having an “air” (nonmagnetic) gap in the flux path may be considered unity in the gap. **A 340, A06**
- gap ratio**—sweep width divided by boom length. **F 818, F20**
- gap scanning**—short fluid column coupling technique. **E 1316, E07**
- Gardner color scale, *n***—a color scale for clear, light-yellow fluids, defined by the chromaticities of glass standards numbered from 1 for the lightest to 18 for the darkest. **E 284, E12**
- garment, *n***—a single item of clothing (for example, shirt). **F 1494, F23**
- garment leather**—a name covering material for leather coats, jackets, hats, and breeches made most commonly from sheep, cabretta, pig, or goat skins, cattle, or horse hides. **D 1517, D31**
- gas, *n***—one of the states of matter, having neither independent shape nor volume and tending to expand indefinitely. **D 1356, D22**
- gas**—the state of matter in which the molecules are practically unrestricted by intermolecular forces so that the molecules are free to occupy all space within an enclosure. In vacuum technology, the word gas has been loosely applied to the uncondensed gas and vapor within a vacuum system. **E 1316, E07**
- gas atomizer**—see **pneumatic atomizer**. **E 1620, E29**
- gas chromatography, GC**—all chromatographic methods in which the moving phase is gaseous. The stationary phase may be either a dry granular solid or a liquid supported by the granules or by the wall of the column, or both. Separation is achieved by differences in the partition-distribution of the components of a sample between the mobile and stationary phases, causing them to move through the column at different rates and from it at different times. (E 355) **D 2864, D27**
- gas classification, *n***—the separation of powder into particle size fractions by means of a gas stream of controlled velocity. **B 243, B09**
- gas electrode membrane**—a plastic film, permeable to gases but impermeable to water, separating the electrode from the simple solution. **D 4127, D19**
- gaseous hydrogen embrittlement (GHE)**—a distinct form of EHE caused by the presence of external sources of high pressure hydrogen gas; cracking initiates on the outer surface. **F 2078, F07**
- gaseous inclusion**—a round or elongated bubble in the glass. See **blister** and **seed**. **C 162, C14**
- gas holes**—blow holes, channels, or porosity produced by gas evolution, usually during solidification. **E 7, E04**
- gas-house coal tar, *n***—coal tar produced in gas-house retorts in the manufacture of illuminating gas from bituminous coal. **D 8, D04**
- gas hydrate**—a special form of a solid lattice-like structure in which crystal lattice cages or chambers consisting of host molecules (water) enclose guest molecules (of a variety of gases). **D 7099, D18**
- gasification, *n***—transformation of a solid and/or liquid material into a gaseous state. **E 176, E05**

gasification

gasification—any chemical or heat process used to convert a feedstock to a gaseous fuel. **E 1705, E48**

gasifier—a device that converts solid fuel to gas. Generally refers to thermochemical processes. Major types are moving bed (fixed bed), entrained bed, and fluidized bed. **E 1705, E48**

gasket, n—any preformed, deformable device designed to be placed between two adjoining parts to provide a seal. **C 717, C24**

gasket glazing—a method of setting glass or panels in prepared openings, using a preformed gasket to obtain a weathertight seal. **C 717, C24**

gasket joint—see **joint, compression gasket** and **joint, bell-and-spigot gasket**. **F 412, F17**

gasket leather—a collective term sometimes used for the cattlehide leather, either vegetable, chrome or combination tannages, with special stuffing added, and employed in pump valves, as piston packing, and so forth. **D 1517, D31**

gasket, lock-strip, H-type—two channel recesses, of equal or unequal sizes, one on either side of a central web. **C 717, C24**

gasket, lock-strip, reglet-type—a channel recess on the inner edge and a tongue, or spline, on the outer edge, the latter being designed for insertion in a reglet. **C 717, C24**

gasket (mechanical), n—a deformable material clamped between essentially stationary faces to prevent the passage of matter through an opening or joint. **D 1566, D11**

gasket, structural—See **lock-stripgasket**, the preferred term. **C 717, C24**

gasket, zipper—See **lock-stripgasket**, the preferred term. **C 717, C24**

gas-liquid chromatography, GLC—gas chromatographic method utilizing a liquid as the stationary phase, which acts as a solvent for the sample components. **D 2864, D27**

gas-liquid nozzle—see **pneumatic atomizer**. **E 1620, E29**

gas meter, n—an instrument for measuring the quantity of a gas passing through the meter. **D 1356, D22**

gasoline, n—a volatile mixture of liquid hydrocarbons, generally containing small amounts of additives, suitable for use as a fuel in spark-ignition, internal combustion engines. **D 4175, D02**

gasoline-alcohol blend, n—a fuel consisting primarily of gasoline along with a substantial amount (more than 0.35 mass % oxygen, or more than 0.15 mass % oxygen if methanol is the only oxygenate) of one or more alcohols. **D 4175, D02**

gasoline-alcohol blend, n—a spark-ignition engine fuel consisting primarily of gasoline along with a substantial amount of one or more alcohols. **D 4175, D02**

gasoline-ethanol blend, n—a fuel consisting primarily of gasoline along with a substantial amount (more than 0.35 mass % oxygen) of denatured fuel ethanol. **D 4175, D02**

gasoline-ether blend, n—a fuel consisting primarily of gasoline along with a substantial amount (more than 0.35 mass % oxygen) of one or more ethers. **D 4175, D02**

gasoline-ether blend, n—a spark-ignition engine fuel consisting primarily of gasoline along with a substantial amount of one or more ethers. **D 4175, D02**

gasoline-oxygenate blend, n—a fuel consisting primarily of gasoline along with a substantial amount (more than 0.35 mass % oxygen, or more than 0.15 mass % oxygen if methanol is the only oxygenate) of one or more oxygenates. **D 4175, D02**

gasoline-oxygenate blend, n—a spark-ignition engine fuel consisting primarily of gasoline along with a substantial amount of one or more oxygenates. **D 4175, D02**

gasometer, n—an apparatus employing a calibrated volume which is used to calibrate gas-measuring devices. **D 1356, D22**

gas phase ignition, n—ignition of pyrolysis products leaving a heated surface by a pilot flame or other ignition source that does not impinge on nor significantly affect (by re-radiation) the heated surface. **E 176, E05**

gas quality—quality of gaseous fuel, which is defined by its composition and its physical properties. **D 4150, D03**

gassing—the evolution of gases from one or more of the electrodes during electrolysis. **B 374, B08**

gassing—(I) the formation of gas bubbles due to bacterial contamination in the milled porcelain enamel slip.

(2) See **boiling**.

C 286, B08

gassing tendency—the capability of an insulating liquid either to absorb or generate gases when exposed to voltage stress. The measure of the gassing tendency is the volume of gas evolved or absorbed per unit time by an insulating liquid subjected to electrical stress under prescribed conditions (by Test Method D 2300). It is commonly expressed in units of microlitres per minute ($\mu\text{L}/\text{min}$) with a positive value indicating gas is evolved and a negative value indicating gas is absorbed. The SI unit is cubic millimetres per minute (mm^3/min). **D 2864, D27**

gas-solid chromatography, GSC—gas chromatographic method utilizing an active (absorbant) solid as the stationary phase. **D 2864, D27**

gassy surface—a defect characterized by poor gloss and fuzzy surface texture. **C 286, B08**

gate—a shut-off device for flow of glass and combustion gases in a forehearth, more commonly a water-cooled member rather than a refractory body. **C 162, C14**

gate, n—in an injection mold, a constriction in the flow channel between the runner and the mold cavity. **D 883, D20**

gate—a valve placed in a vacuum system to facilitate the isolation of a selected section of the system. **E 7, E04**

gate—same as **rejection level**. **E 1316, E07**

gate—an electronic means of selecting a segment of the time range for monitoring or further processing. **E 1316, E07**

gate, n—in an injection mold, a constriction in the flow channel between the runner and the mold cavity. (D20) **F 412, F17**

gate—a moveable barrier placed in a fence opening (gate opening) which allows the opening to be closed. See Specifications F 654, F 900, and F 1184. **F 552, F14**

gate clip—a galvanized pressed steel or pressed aluminum fitting designed to secure chain link fabric to the vertical sides of a gate frame. **F 552, F14**

gate cover—a component to prevent the lever from entering the tumbler gateway while changing combination. **F 471, F12**

gate frame—the structural member(s) of the gate. **F 552, F14**

gate holdback or keeper—a device to receive and hold the gate leaf in an open position. **F 552, F14**

gate (injection or transfer mold), n—the orifice through which a shaped cavity in a mold is filled with material. **D 1566, D11**

gate latch—a fitting to hold the gate in place when closed. **F 552, F14**

gate leaf—a component of a swing gate which consists of a gate frame covered with chain link fabric and/or other material. See Specifications F 654 and F 900. **F 552, F14**

gate opening—the clear distance between the gate posts. **F 552, F14**

gate post—the post to which a gate is attached via hinges. It may also be used as a terminal post. **F 552, F14**

gate transom—a panel of chain link fabric over the top of a gate opening, framed with top and bottom rail. Typically used in tennis court fence (see Practice F 969). **F 552, F14**

gather, n—the mass of glass picked up by the hand shop working on the punty or blowing iron. **C 162, C14**

gather, v—to get glass from a pot or day-tank on the pipe or punty. **C 162, C14**

gauge, gage—instrument used to measure wire diameter. (See **wire gage**.) **F 547, F16**

gauging plaster, n—a calcined gypsum plaster designed to be mixed with lime putty. **C 11, C11**

gauntlet—the area of a glove between the wrist and the reinforced edge of the opening. **F 819, F18**

gaussmeter, n—a device that measures magnetic flux density or magnetic induction (a quantity directly related to magnetic field

- strength or magnetic force); also known as a Tesla Meter or Magnetometer. **E 1316, E07**
- gaussmeter (electronic), *n***—a gaussmeter that uses a hall effect probe to measure magnetic flux density. **E 1316, E07**
- gauss (plural gauss), *G***—the unit of magnetic induction in the cgs-emu system of units. The gauss is equal to 1 maxwell per square centimetre of 10^{-4} tesla. See **magnetic induction (flux density)**. **A 340, A06**
- GC**—gas chromatography. **D 5681, D34**
- GC/MS**—gas chromatography with mass spectrometric detection. **D 5681, D34**
- GD**—gallons per day. See **GPD**. **D 6161, D19**
- GDF, *n***—growth and differentiation factor. **F 2312, F04**
- GE**—graphic escape. **F 1457, F05**
- Geiger-Müller counter**—See **counter**. **E 7, E04**
- gel, *n***—a semisolid system consisting of a network of solid aggregates in which liquid is held. **C 1145, C28**
- gel**—*in grouting*, the condition where a liquid grout begins to exhibit measurable shear strength. **D 653, D18**
- gel, *n***—(1) a semisolid system consisting of a network of solid aggregates in which liquid is held.
(2) the initial jelly-like solid phase that develops during the formation of a resin from a liquid.
(3) with respect to vinyl plastisols, gel is a state between liquid and solid that occurs in the initial states of heating, or upon prolonged storage. **D 883, D20**
- gel, *n***—a semisolid system consisting of a network of solid aggregates in which liquid is held. **D 907, D14**
- gel, *n***—(1) a semisolid system consisting of a network of solid aggregates in which liquid is held; (2) the initial jelly-like solid phase that develops during the formation of a resin from a liquid; (3) with respect to vinyl plastisols, gel is a state between liquid and solid that occurs in the initial stages of heating, or upon prolonged storage. (D20) **F 412, F17**
- gel, *n***—*in polymer*, a semisolid system consisting of a network of solid aggregates in which liquid is held. **F 1251, F04**
- gel, *n***—*in polymerization*, the initial jelly-like solid phase that develops during the formation of a resin from a liquid. **F 1251, F04**
- gel, *n***—*with vinylplastisols*, a state between liquid and solid that occurs in the initial stages of heating, or upon prolonged storage. **F 1251, F04**
- gel, *n***—the three-dimensional network structure arising from intermolecular polymer chain interactions. **F 2312, F04**
- gelatinization**—treatment of starch grains with heat and water to cause the swelling and expansion of the starting material. **E 1705, E48**
- gelatin replica**—See **replica**. **E 7, E04**
- gelation, *n***—formation of a gel. **D 907, D14**
- gel, dry rubber, *n***—the portion of unvulcanized rubber insoluble in a chosen solvent. **D 1566, D11**
- gel fouling layer**—highly swollen fouling layer comprising a three-dimensional. Possibly network, structure residing at the surface of a membrane. **D 6161, D19**
- gelification**—the slow downslope flow of unfrozen earth materials on a frozen substrate. **D 7099, D18**
- gelisol**—perennially frozen soil that contain permafrost within 2 m of the surface. **D 7099, D18**
- gel, latex, *n***—a semi-solid system consisting of a network of aggregates in which liquid is held. **D 1566, D11**
- gelling (latex), *n***—the formation of a uniform coagulum from which the aqueous phase has not been separated. **D 1566, D11**
- gel point, *n***—the stage at which a liquid begins to exhibit pseudo-elastic properties. **D 883, D20**
- gel point**—the stage at which a liquid begins to exhibit pseudo-elastic properties. **F 412, F17**
- gel time**—*in grouting*, the measured time interval between the mixing of a grout system and the formation of a gel. **D 653, D18**
- gel time, *n***—the period of time from the initial mixing of the reactants of a liquid material composition to the time when gelation occurs, as defined by a specific test method. **D 883, D20**
- gel time, *n***—the period of time from the initial mixing of the reactants of a plastic or rubber composition to the time when gelation occurs as defined by a specified test. **D 1566, D11**
- gel time, *n***—*of solventless varnish*, the time required, at a specified temperature, for a solventless varnish to be transformed from a liquid state to a gel, as measured with a suitable gel time apparatus. **D 1711, D09**
- gel time, *n***—*in thermosetting polymers*, the period of time from a predetermined starting point to the onset of gelation as determined by a specific test method. **D 3878, D30**
- gel time**—the time after mixing at which an adhesive begins to increase in viscosity and becomes resistant to flow. **E 2265, E06**
- gel time**—the time from the initial mixing of the reactants of a plastic or rubber composition to the time when gelation occurs, as measured by a specific test. **F 412, F17**
- gel type candle, *n***—a candle where the primary fuel is a liquid, such as mineral oil, terpene type chemicals, or modified hydrocarbons that are not mineral oil based, which may or may not contain organic functional groups; it also contains a chemical agent to increase the viscosity (thicken) to a point where the candle has a quasi-rigid property. **F 1972, F15**
- general indices of metamerism, *n***—see **indices of metamerism potential**. **E 284, E12**
- general overhead, *n***—the fixed cost associated with operation of the corporate or main office, plant, equipment, and staffing maintained by a contractor for general business operations. **E 833, E06**
- general precipitate**—a precipitate which is dispersed throughout the matrix. **E 7, E04**
- general-purpose nail**—See **common nail**. **F 547, F16**
- general rate law**— $dC/dt = k(1 - C)^n$ where *C* is fractional conversion, *t* is the time in minutes, and *n* is the reaction order. **E 1445, E27**
- general shear failure**—see **shear failure**. **D 653, D18**
- generic class, *n***—*as used with textile fibers*, a grouping having similar chemical compositions or specific chemical characteristics. **D 123, D13**
- generic class, *n***—*as used with textile fibers*, a grouping having similar chemical compositions or specific chemical characteristics. **D 4466, D13**
- generic criteria, *n***—common characteristics pertaining to organizations' human resources, material resources, and quality systems which provide a basis for assessing the qualifications of testing or inspection agencies. **D 1356, D22**
- generic criteria, for laboratory accreditation, *n***—accreditation criteria expressed in general terms which address organization, human and material resources, operating procedures, calibration and quality assurance practices of a laboratory. **E 1187, E36**
- gene therapy, *n***—“is a medical intervention based on modification of the genetic material of living cells. Cells may be modified *ex vivo* for subsequent administration or may be altered *in vivo* by gene therapy products given directly to the subject. When the genetic manipulation is performed *ex vivo* on cells that are then administered to the patient, this is also a type of somatic cell therapy. The genetic manipulation may be intended to prevent, treat, cure, diagnose, or mitigate disease or injuries in humans.”. Gene therapy technologies can be applied in tissue engineering to generate TEMPs. **F 2312, F04**
- gene therapy products, *n***—“are defined for the purpose of this statement as products containing genetic material administered to modify or manipulate the expression of genetic material or to alter the biological properties of living cells.”. **F 2312, F04**
- genetically modified, *vr***—referring to cells, tissues, and organs of any origin that have an altered or modified genetic content. **F 2312, F04**
- genetic material, *n***—is nucleic acid (either deoxyribonucleic acid or ribonucleic acid). **F 2312, F04**

genome (of a virus)

genome (of a virus)—the genetic material consisting of nucleic acid (RNA or DNA). **E 1705, E48**

geochemistry, n—the study of the chemistry of the rocks and fluids of the earth for the purpose of understanding their composition, their temperature, and their origin. **E 957, E44**

geocomposite, n—a product composed of two or more materials, at least one of which is a geosynthetic. **D 4439, D35**

geocryology—the study of earth materials having a temperature below 0°C (32°F). **D 7099, D18**

geofoam, n—block or planar rigid cellular foamed polymeric material used in geotechnical engineering applications. **D 4439, D35**

geogrid, n—a geosynthetic formed by a regular network of integrally connected elements with apertures greater than 6.35 mm (¼ in.) to allow interlocking with surrounding soil, rock, earth, and other surrounding materials to function primarily as reinforcement. **D 4439, D35**

geologic erosion—the erosion process on a given land form that is not associated with the activities of man. **D 4410, D19**

geologic or natural erosion—the erosion process on or in a given land form undisturbed by activities of man and his agents. **D 4410, D19**

geomembrane, n—an essentially impermeable geosynthetic composed of one or more synthetic sheets. **D 4439, D35**

geometric metamerism, n—deprecated term; do not use. The phenomenon it is used to describe does not conform to the internationally accepted definitions of metamerism. Use **gonioappearance**. **E 284, E12**

geometric unsharpness—the penumbral shadow in a radiological image which is dependent upon 1) the radiation source dimensions, 2) the source to object distance, and 3) object to detector distance. **E 1316, E07**

geonet, n—a geosynthetic consisting of integrally connected parallel sets of ribs overlying similar sets at various angles for planar drainage of liquids or gases. **D 4439, D35**

geophysical borehole log—a log obtained by lowering an instrument into a borehole and continuously recording a physical property of native or backfill material and contained fluids. Examples include resistivity, induction, caliper, sonic, and natural gamma logs. **D 653, D18**

geophysical log, n—a graphic record of the measured or computed physical characteristics of the rock section encountered in a borehole, plotted as a continuous function of depth. Measurements are made by a sonde which contains the detectors, as it is withdrawn from the borehole by a wire line. Several measurements are usually made simultaneously, and the resulting curves are displayed side by side on the common depth scale. A common suite of logs used in coal exploration include caliper, density (gamma-gamma), natural gamma, and resistivity.

caliper log, n—a continuous mechanical measurement of the diameter and thus the rugosity of the borehole. The tool identifies zones where swelling or cavings (washouts) have occurred during drilling. The tool's value is in allowing qualitative or quantitative corrections to be made to other geophysical logs which are affected by borehole size (especially density).

density log (gamma-gamma log), n—measures electron density within lithologic units which is related to their bulk density. The wireline tool records the intensity of gamma radiation (in counts per second) from a nuclear source within the tool after it has been attenuated and backscattered by lithologies within the borehole. Due to the distinctly low density of coals, the density log is essential in coal exploration for identifying coal seams and coal-seam partings. The bias/resolution of density logs can be affected by source-detector spacing (closer spacing increases resolution), borehole size, and irregularities (see *caves* or *washouts*), and the presence of casing and logging speed.

natural gamma-ray log, n—a record of the natural radioactivity of the lithologies encountered in the borehole environment.

During recording of geophysical logs, the amount of natural radiation is recorded and presented in either counts per second (CPS) or American Petroleum Institute (API) units. Unlike many other log types, a representative natural gamma log can be obtained where borehole or fluid conditions, or both, are not optimal or where casing is present. The natural gamma log is most often used in the coal environment for identifying clastic lithologies and differentiating coal seams and coal-seam partings.

resistivity log, n—a measure of the voltage differential of strata along the walls of a borehole when electrical current is passed through the strata. The resistivity log requires a fluid-filled hole to provide a conductive medium constantly between electrodes on the tool. The spacing between the electrodes determines the precision of the bed boundary relationships in much the same manner as with the density log. The resistivity log is useful primarily in conjunction with other log types. The logs are affected by casing, logging speed, electrode spacing, formation porosity, and resistivity changes in the borehole fluid. **D 121, D05**

geosynthetic, n—a planar product manufactured from polymeric material used with soil, rock, earth, or other geotechnical engineering related material as an integral part of a man-made project, structure, or system. **D 4439, D35**

geosynthetic clay liner, n—a manufactured hydraulic barrier consisting of clay bonded to a layer or layers of geosynthetic materials. **D 4439, D35**

geotechnical engineering, n—the engineering application of geotechnics. **D 4439, D35**

geotechnics, n—the application of scientific methods and engineering principles to the acquisition, interpretation, and use of knowledge of materials of the earth's crust to the solution of engineering problems. **D 4439, D35**

geotextile, n—a permeable geosynthetic comprised solely of textiles. **D 4439, D35**

geothermal, adj—relating to or derived from the natural heat of the earth. **E 957, E44**

geothermal anomaly, n—a conspicuous deviation of the earth's temperature, geothermal gradient, or heat flow from average values; an area where such a deviation exists. **E 957, E44**

geothermal energy, n—the thermal energy contained in the rocks and fluids of the earth. **E 957, E44**

geothermal facility, n—the physical components necessary for the utilization of geothermal energy, including the reservoir, production and injection wells, pipelines, and the power plant or direct-use facility. **E 957, E44**

geothermal fluid, n—water in a vapor or liquid phase or in a mixture of these phases that exists within or has been emitted from a geothermal reservoir, together with any entrained or dissolved substances. **E 957, E44**

geothermal gradient—the rate of temperature increase with depth in the earth. **D 7099, D18**

geothermal gradient, n—the change in temperature of the earth with depth, expressed either in degrees of temperature per unit depth, or units of depth per degree. **E 957, E44**

geothermal heat flux—the amount of heat moving steadily outward from the interior of the earth through a unit area in unit time. **D 7099, D18**

geothermal heat pump, n—a heat pump that transfers energy to or from the earth. **E 957, E44**

geothermal power plant, n—a facility for the production of electricity using geothermal energy, typically including a turbine, a generator, and associated surface equipment. **E 957, E44**

geothermal reserves, n—the amount of energy anticipated to be economically recoverable from a geothermal facility over a specified time period (e.g., the project life) using existing technology. Geothermal reserves are expressed in units of energy (e.g., terajoules in SI units), which are dimensionally equivalent to units of power multiplied by units of time (e.g., Megawatt-years or

kilowatt-hours). Geothermal reserves may also be expressed as an equivalent amount of another energy source (e.g., barrels of oil equivalent).

Example of Usage:

This facility has geothermal reserves of 4,000 Megawatt-years, recoverable over a project life of 30 years. **E 957, E44**

geothermal reservoir, n—an aquifer of sufficient temperature and permeability to support the economic use of geothermal energy. **E 957, E44**

geothermal steam, n—a geothermal fluid in the vapor phase. **E 957, E44**

geothermometer, n—a method of estimating the temperature of a geothermal reservoir based on the minerals in the reservoir rock or the concentration of chemical species in geothermal fluids that have come from the reservoir. **E 957, E44**

German degree—Calcium oxide equivalents expressed in parts per hundred thousand. Concentration in German degree is calculated by dividing concentration in calcium carbonate equivalents by 17.86 **D 6161, D19**

geyser, n—a spring that intermittently blows forth hot water and steam. **E 957, E44**

GFD (GPDSF)—unit of permeate rate or flux; gallons per day per square foot of effective membrane area. **D 6161, D19**

ghosting, n—a gas-chromatographic interference, showing as a peak, which appears at the same elution time as a component from previous injection. **D 1129, D19**

ghosting, n—the presence of a faint mirror image of a design appearing in areas not intended to receive that portion of the image. **D 6488, D01**

ghosting—an undesired repeat image. Positive ghost image is an undesired image created in a non-printed area Negative ghost is an undesired reverse repeat image created in a printed area that is seen by the difference in contrast. **F 335, F05**

ghosting—in carbonless copy products, the transferring of a secondary image from the CB sheet to the CF sheet. **F 549, F05**

ghosting, chemical, n—the appearance of gloss or dull mirror images that are printed on the reverse side of the sheet. **D 6488, D01**

ghosting, mechanical, n—the appearance of a phantom image on the printed side of the sheet. **D 6488, D01**

ghosting, starvation, n—mechanical ghosting that appears in solids and shadows as either a lighter image or a darker image than the background. **D 6488, D01**

Gibbs free energy—the maximum useful work that can be obtained from a chemical system without net change in temperature or pressure; $\Delta F = \Delta H - T\Delta S$. **E 7, E04**

Gibbs Phase Rule—maximum number of phases (P) that may coexist at equilibrium is equal to two, plus the number of components (C) in the mixture, minus the number of degrees of freedom (F): $P + F = C + 2$ (E 7, E04). **E 1142, E37**

Gibbs triangle—an equilateral triangle, used for plotting composition in a ternary system. **E 7, E04**

gilbert, Gb—the unit of magnetomotive force in the cgs-emu system of units. The gilbert is a magnetomotive force of $4\pi/10$ ampere-turns. See **magnetomotive force**. **A 340, A06**

gill box leather—a leather used in textile machinery, similar to comber leather. **D 1517, D31**

ginned lint, n—cotton fibers that have been separated from their seeds by ginning but not subjected to any further processing after ginning. (See **lint cotton**.) **D 123, D13**

ginned lint, n—cotton fibers that have been separated from their seeds by ginning but not subjected to any further processing after ginning. (See **lint cotton**.) **D 7139, D13**

G'_{int} —internal shear stiffness, includes only the shear displacement of the wall in calculation. **E 631, E06**

girder—a horizontal member used to support heavy loads such as other beams along its length. **D 9, D07**

girth—distance around; circumference.

(a) *joint*—around *metatarso*—phalangeal joint,

(b) *waist*—smallest girth behind joint,

(c) *instep*—smallest girth passing over prominence on middle cuneiform,

(d) *long heel*—seat to instep to give “pass line” in riding boot,

(e) *short heel*—seat to lowest crease in front of ankle,

(f) *ankle*—around and above ankle bones,

(g) calf, thigh as necessary. (manual of shoemaking: c. & k. clark ltd. 1976, p. 44) **F 869, F08**

girth, n—in body measurements, a circumferential measurement around some part of the body, such as neck, chest, waist, and so forth. **F 1494, F23**

glacial till (till)—material deposited by glaciation, usually composed of a wide range of particle sizes, which has not been subjected to the sorting action of water. **D 653, D18**

glacial till (till)—material left after the retreat of glaciers and ice sheets, usually composed of a wide range of particle sizes, which has not been subjected to the sorting action of water. **D 7099, D18**

glaciolacustrine deposits—glaciofluvial deposits that settled in standing water. **D 7099, D18**

glancing angle—the angle (usually small) between an incident X-ray beam and the surface of the specimen. **E 7, E04**

glancing exit—AES, EIA, XPS, geometrical arrangement in which the scattered (or emitted) particles are near 90° from the normal to the specimen surface. This results in improved depth resolution. **E 673, E42**

glancing incidence—AES, EIA, geometrical arrangement in which the incident particles are near 90° from the normal to the specimen surface. This results in improved depth resolution. **E 673, E42**

glare, n—condition of vision in which there is discomfort or a reduction in ability to see details, objects, or both, caused by an unsuitable distribution or range of luminance, or by extreme contrasts in space. **E 284, E12**

glare—See **lighting**. **E 631, E06**

glare—excessive brightness which interferes with clear vision, critical observation, and judgment. **E 1316, E07**

glare—See **lighting**. **E 1480, E06**

glare (éblouissement)—effect of brightness or brightness differences within the visual field sufficiently high to cause annoyance, discomfort, or loss of visual performance. **E 631, E06**

glass—an inorganic product of fusion that has cooled to a rigid condition without crystallizing. **C 162, C14**

glass—a term sometimes used for porcelain enamel or frit. **C 286, B08**

glass—a manufactured fiber in which the fiber-forming substance is glass. **D 123, D13**

glass, n—an inorganic product of fusion which has cooled to a rigid condition without crystallizing. **D 883, D20**

glass block assembly, n—a light transmitting configuration constructed of glass block held together with mortar or other suitable materials. **E 176, E05**

glass blowing—the shaping of hot glass by air pressure. **C 162, C14**

glass ceramic—solid material, partly crystalline and partly glassy, formed by the controlled crystallization of a glass. **C 162, C14**

glass-coated steel, glass-lined steel, glassed steel—designations generally applied to a class of porcelain enamels that have high resistance to chemical attack at elevated temperatures and pressures. **C 286, B08**

glass container—general term applied to glass bottles and jars. **C 162, C14**

glass container—See **container**. **D 996, D10**

glass count, n—an indirect yarn numbering system, equal to the number of 100 yd. lengths per pound. **D 123, D13**

glass electrode—a half cell in which the potential measurements are made through a glass membrane. **B 374, B08**

glass eye—a defect consisting of a large unbroken blister. **C 286, B08**

glass felt

glass felt—glass fibers bonded into a sheet with resin and suitable for impregnation in the manufacture of bituminous waterproofing, roofing membranes, and shingles. **D 1079, D08**

glass fiber, n—fiber manufactured as continuous filament from molten glass, normally used for reinforcement, tissue or textiles. **C 168, C16**

glass finish—a material applied to the surface of glass fibers used to reinforce plastics and intended to improve the physical properties of such reinforced plastics over that obtained using glass reinforcement without finish. **D 883, D20**

glassiness—a glassy, marbled, streaked appearance at the pultruded surface.

NOTE—This condition is visually evident, but reinforcement is in fact fully encapsulated with resin. **D 3918, D20**

glass mat—a thin mat of glass fibers with or without a binder. **D 1079, D08**

glass paper—a glass fiber product made by dispersing chopped glass fibers in a liquid medium followed by settling and drying to produce a thin sheet. **C 162, C14**

glass redox, redox ratio—a measure of the relative oxidation/reduction state of a glass as indicated typically by any one of the ratios: FeO/total iron as Fe₂O₃, FeO/Fe₂O₃, Fe²⁺/Fe³⁺, or Fe²⁺/(Fe₂₊ + Fe³⁺). **C 162, C14**

glass specimen—the glass to be tested, for example, a single pane, an insulating glass unit, laminated glass, etc. (does not include test frame). **E 631, E06**

glass specimen failure—the fracture or cracking of any glass component of a glass specimen. **E 631, E06**

glass transition—the reversible change in an amorphous polymer or in amorphous regions of a partially crystalline polymer from (or to) a viscous or rubbery condition to (or from) a hard and relatively brittle one. **D 883, D20**

glass transition—the reversible change in amorphous polymer, or in amorphous regions of a partially crystalline polymer, from (or to) a viscous or rubbery condition to (or from) a hard and relatively brittle one. **D 4092, D20**

glass transition—reversible change in an amorphous material or in amorphous regions of a partially crystalline material, from (or to) a viscous or rubbery condition to (or from) a hard and relatively brittle one. **E 1142, E37**

glass transition—the reversible change in an amorphous polymer or in amorphous regions of a partially crystalline polymer from (or to) a viscous or rubbery condition to (or from) a hard and relatively brittle one. **F 412, F17**

glass transition temperature—on heating, the temperature at which a glass transforms from an elastic to a viscoelastic material, characterized by the onset of a rapid change in thermal expansivity. **C 162, C14**

glass transition temperature—a temperature chosen to represent the temperature range over which the glass transition takes place. **E 1142, E37**

glass transition temperature (T_g)—the approximate midpoint of the temperature range over which the glass transition takes place. **D 883, D20**

glass transition temperature, T_g—the approximate midpoint of the temperature range over which the glass transition takes place. **D 4092, D20**

glass transition temperature (T_g)—the approximate midpoint of the temperature range over which the glass transition takes place. **F 412, F17**

glassware corrosion test, n—a laboratory screening test for evaluating the corrosion protection properties of engine coolants on metal test specimens under controlled conditions of aeration and temperature. **D 4725, D15**

glass wool, n—See **fibrous glass**. **C 168, C16**

glaze, n—an impervious facial finish composed of ceramic materials, fused during firing with the body of brick or tile, which is a

semivitreous or vitreous surface and may be clear, white, or colored. **C 43, C15**

glaze—a ceramic coating matured to the glassy state on a formed ceramic article, or the material or mixture from which the coating is made.

bright glaze—a colorless or colored ceramic glaze having high gloss.

clear glaze—a colorless or colored transparent ceramic glaze.

crystalline glaze—a glaze containing macroscopic crystals.

fritted glaze—a glaze in which a part or all of the fluxing constituents are prefused.

leadless glaze—a ceramic coating matured to a glassy state on a formed article, or the material or the mixture from which the coating is made, to which no lead has been deliberately added.

mat glaze—a colorless or colored ceramic glaze having low gloss.

opaque glaze—a nontransparent colored or colorless glaze.

raw glaze—a glaze compounded primarily from raw constituents, that is, containing no prefused materials.

semi-mat glaze—a colorless or colored glaze having moderate gloss.

slip glaze—a glaze consisting primarily of a readily fusible clay or silt.

vellum glaze—a semi-mat glaze having a satin-like appearance. **C 242, C21**

glaze—a hard glassy fused coating. **C 896, C04**

glaze, n—a very thin coating of a paint product usually a semi-transparent coating tinted with Van Dyke brown, burnt sienna, or a similar pigment, applied on a previously painted surface to produce a decorative effect. **D 16, D01**

glaze—See **windows and doors**. **E 631, E06**

glaze coat—(1) the top layer of asphalt in a smooth-surfaced built-up roof assembly;

(2) a thin protective coating of bitumen applied to the lower plies or top ply of a built-up membrane, when application of additional felts, or the flood coat and aggregate surfacing are delayed. **D 1079, D08**

glazed ceramic mosaic tile—ceramic mosaic tile with glazed faces. **C 242, C21**

glazed finish—produced by polishing grain surface under heavy pressure of a roller of agate, glass or steel. Infrequently made by a varnish or shellac coating. **D 1517, D31**

glazed (glace) kid—chrome tanned goatskin and kidskin leather, in either black or colors, which has a glazed finish. **D 1517, D31**

glazed manifold, n—a manifold paper having a high gloss, or polish, formed on the surface of the paper by methods such as friction glazing, calendaring, plating, etc. **D 1968, D06**

glazed pot—generally, a new pot coated inside with a thin layer of glass to protect it from the raw batch. **C 162, C14**

glazed tile—tile with a fused impervious facial finish composed of ceramic materials, fused with the body of the tile which may be a nonvitreous, semivitreous, vitreous, or impervious body resulting in a surface that may be clear, white, or colored.

glazed interior tile—a glazed tile with a body that is suitable for interior use and which is usually nonvitreous, and is not required or expected to withstand excessive impact or be subject to freezing and thawing conditions.

glazed tile, extra duty glaze—tile with a durable glaze that is suitable for light-duty floors and all other surfaces on interiors where there is no excessive abrasion or impact. **C 242, C21**

glaze fit—the stress relationship between the glaze and body of a fired ceramic product. **C 242, C21**

glazing, v—in *building construction*, the installation of glass or other materials in prepared openings. **C 717, C24**

glazing—See **windows and doors**. **E 631, E06**

- glazing**, *n*—material instilled in a window sash, ventilator, or panel such as glass, plastic. E 631, E06
- glazing**, *n*—material installed in a window sash, ventilator, or panel such as glass or plastic. E 1605, E06
- glazing bead**—See **windows and doors**. E 631, E06
- glazing compound**, *n*—*in building construction in glazing*, a putty material composed primarily of oil- or resin-based ingredients used for sealing window glass in frames. C 717, C24
- glazing compound**, *n*—a dough-like material consisting of pigment and vehicle, used for sealing window glass in frames. It differs from putty in that it retains its plasticity for an extended period. D 16, D01
- glazing, construction site**, *n*—*in building construction*, the installation of glass or panels into a metal framing system, at a construction site, under generally uncontrolled environmental conditions. C 717, C24
- glazing, factory**, *n*—See **glazing, shop**. C 717, C24
- glazing, field**, *n*—See **glazing, construction site**. C 717, C24
- glazing material**, *n*—transparent or translucent material used in fire window assemblies. E 176, E05
- glazing material**—See **windows and doors**. E 631, E06
- glazing, protective**, *n*—*in building construction*, systems with glazed openings that are designed to mitigate the effects of bomb blasts, projectiles, natural disasters, or forced entry. C 717, C24
- glazing, shop**, *n*—*in building construction*, the installation of glass or panels into a metal framing system under controlled environmental conditions. C 717, C24
- g-level**, *n*—the acceleration of an object relative to the local acceleration of gravity. E 344, E20
- glitch**, *n*—a print defect that displaces the laser scan line so that it appears to start and stop late. F 1457, F05
- glitter**, *n*—the appearance attributable to brilliant reflection from many small, discrete reflecting elements. E 284, E12
- global**—indicates measurements or observations of a total dispersion of particles (such as, a sample representative of an entire liquid spray). E 1620, E29
- global horizontal solar irradiance**, *n*—See **global solar irradiance** in Terminology E 772. E 1328, E44
- global normal solar irradiance**, *n*—solar irradiance from a 2π steradian field-of-view incident upon a surface that is perpendicular to the axis of the solid angle defined by the disk of the sun. E 1328, E44
- global testing**, *n*—testing conducted at two or more laboratories or test sites for the purpose of comparing candidate tire performance at each location for selected characteristic properties. F 538, F09
- global threshold**, GT, *n*—the reflectance level that discriminates bars from spaces in a scan reflectance profile. F 1294, F05
- glory hole**—an opening exposing the hot interior of a furnace used to reheat the ware in hand-working. C 162, C14
- gloss**—the shine or luster of a porcelain enamel. C 286, B08
- gloss**, *n*—the luminous fractional reflectance of a material in the specular direction. (See **specular gloss**) D 123, D13
- gloss**—the geometrically selective reflectance of a surface responsible for its shiny or lustrous appearance. Surface reflectance is commonly at a maximum in or near the geometric directions in which a mirror would reflect light. D 1695, D01
- gloss**, *n*—angular selectivity of reflectance of surface-reflected light responsible for the degree to which reflected highlights or images of objects may be seen as superimposed on a surface. D 2946, C17
- gloss**, *n*—a shiny appearance resulting from the tendency of a surface to reflect light energy at one angle more than at others. (See **reflectance, directional**. For the consensus technical definition, see **gloss** in Terminology E 284.) E 253, E18
- gloss**, *n*—angular selectivity of reflectance, involving surface-reflected light, responsible for the degree to which reflected highlights or images of objects may be seen as superimposed on a surface. (See also **distinctness-of-image gloss**, **haze** (*in reflection*), **luster**, **sheen**, **specular gloss**.) E 284, E12
- glossary**, *n*—a collection of specialized terms and their meanings. E 1992, E02
- glossmeter**—an instrument for measuring the ratio of the light regularly or specularly reflected from a surface to the total light reflected. E 1316, E07
- gloss oil**, *n*—a solution of limed rosin or limed rosin acids in a volatile solvent, used chiefly in surface coatings. (When made from tall oil, the source is usually indicated.) D 804, D01
- gloss reflectance factor**, R_s , *n*—ratio of the specularly reflected part of the (whole) flux reflected from the specimen to the flux reflected from a specified gloss standard under the same geometric and spectral conditions of measurement. E 284, E12
- gloss retention**—maintenance of gloss of a film under normal use conditions. D 2825, D21
- gloss retention**, *n*—the percent of the original gloss retained by the specimen after aging under specified conditions. It is the final gloss divided by the initial gloss, multiplied by 100. D 4175, D02
- gloss retention**, *n*—portion of original gloss retained by a specimen after treatment such as aging or abrasion under specified conditions, calculated by a specified equation. E 284, E12
- gloss, specular**, *n*—see **specular gloss**. D 2946, C17
- glossy, or bright glaze**—a glaze which exhibits essentially full specular reflection. C 242, C21
- glost fire**—See **glost fire** under **firing**. C 242, C21
- glove leather**—term covering two distinct classes:
- (1) the leather used for dress gloves, including those for street, riding, and sports wear. Tanned predominately from hair sheep, wool sheep, and lamb skins and to a lesser degree from deer, pig, goat, and kid skins, and
 - (2) the leather used for utilitarian or work gloves and made of a variety of hides and skins, of which the most important are horsehides, cattlehide splits and bellies, pigskins, and cowhides. D 1517, D31
- glove splits**—split chrome-tanned cattlehide leather used for work gloves. D 1517, D31
- glow**, *n*—visible, flameless combustion of the solid phase of a material. (See also **afterglow** and **smoldering**.) D 123, D13
- glow**, *n*—visible, flameless combustion of the solid phase of a material. (See also **afterglow** and **smoldering**.) D 4391, D13
- glow**, *n*—(1) the visible light emitted by a substance because of its high temperature. (2) visible light, other than from flaming, emitted by a solid undergoing combustion. E 176, E05
- glow**, *n*—visible, flameless combustion of the solid phase of a material. F 1494, F23
- glow discharge**—a self-sustaining discharge characterized by essentially symmetrical electrodes, low current density, and a high cathode fall of about 200 V. B 542, B02
- GLP**—*in laboratory practice*, abbreviation for good laboratory practice. D 4175, D02
- glucan**—a macromolecular substance that can be hydrolyzed to give almost exclusively glucose. D 1695, D01
- glucoamylase**—enzyme that acts specifically to convert dextrans to glucose by hydrolysis. E 1705, E48
- glucmannan**—a hemicellulose consisting essentially of glucose and mannose. D 1695, D01
- glucose**—the most prominent simple sugar (6-membered $C_6H_{12}O_6$) produced from starches and cellulose material by hydrolysis. E 1705, E48
- glucuronoxylan**—a common designation for the xylose-containing hardwood hemicelluloses. (see also **methylglucuronoxylan**) D 1695, D01
- glue**—see **adhesive**. D 907, D14
- glue**, *v*—see **bond**, *v*. D 907, D14
- glue**, *n*—See **adhesive**. D 1038, D07
- glue (archaic)**, *n*—a hard gelatin obtained from hides, tendons, cartilage, bones, etc., of animals, and also an adhesive prepared from this substance by heating with water. D 907, D14

glued seam, *n*

glued seam, *n*—a seam formed by an adhesive. (Compare **sewn seam**, **stapled seam**, **thermally bonded seam**.) D 123, D13

glued seam, *n*—in home sewing, a seam formed by the use of an adhesive. (Compare **sewn seam**, **stapled seam**, **thermally bonded seam**.) D 4965, D13

glue-laminated wood, *n*—see *glue-laminated wood* under **wood laminate**. D 907, D14

glue line, *n*—Synonym for **bondline**. D 907, D14

GLULAM, *n*—Synonym for **structural-glued-laminated timber**. D 907, D14

glulam rivet nail—plain or galvanized, flat, hardened-steel, $2\frac{3}{8}$ by $\frac{1}{4}$ -in. nail with sheared V-shaped point and flat upset wedge-shaped head; designed to be driven through undersize truncated apertures in regular-stock-steel connector plates from which nails cantilever into wood. F 547, F16

glycol-base antifreeze, *n*—in *engine coolants*, ethylene or propylene glycol commonly used in admixture with water and additives to lower the coolant freezing point. D 4175, D02

glycol engine coolant concentrate, *n*—an engine coolant concentrate in which the freeze point depressant is ethylene or propylene glycol, with inhibitors to minimize foaming and corrosion. D 4725, D15

gmax—the maximum value of acceleration experienced during impact expressed in units of *g*'s. F 869, F08

goniomic projection—a projection in which the orientation of a crystal plane at the center of the unit sphere is represented by the point where the plane normal intersects the plane of projection which is tangent to the unit sphere at the zenith. E 7, E04

gob—(1) a portion of hot glass delivered by a feeder.
(2) a portion of hot glass gathered on a punty or pipe. C 162, C14

gob process—a process whereby glass is delivered to a forming unit in "gob" form. C 162, C14

gold decoration—XPS, a method whereby a very thin coat of evaporated gold on an insulator is used as a charge reference; the gold should be deposited as unconnected islands covering the area analyzed. E 673, E42

gonioapparent, *adj*—pertaining to change in appearance with change in illumination angle or viewing angle. E 284, E12

gonioappearance, *n*—the phenomenon in which the appearance of a specimen changes with change in illumination or viewing angle. E 284, E12

goniochromatic match, *n*—match between a pair of specimens that holds under all sets of angular illuminating-viewing conditions. E 284, E12

goniochromatism, *n*—change in any or all attributes of color of a specimen on change in angular illuminating-viewing conditions but without change in light source or observer. E 284, E12

gonio-conditional match, *n*—two samples that match under some but not all geometric conditions. E 284, E12

goniometer—an instrument devised for measuring the angle through which a specimen is rotated. E 7, E04

goniometer, *n*—in *X-ray spectrometry*, a device used to adjust the angular relationships among a sample, crystal, and detector in an X-ray spectrometer. E 135, E01

goniometer, *n*—an instrument for measuring or setting angles. ^A E 284, E12

goniophotometer, *n*—instrument that measures flux as a function of angles of illumination or observation. E 284, E12

goniophotometer, *n*—photometer for measuring the directional light distribution characteristics of sources, lighting fittings, media, and surfaces.

NOTE—A goniophotometer for measuring the spatial distribution of luminous intensity is also called a distribution photometer. E 349, E21

goniospectrophotometer, *n*—spectrophotometer having the capability of measuring with a variety of illuminating and viewing angles

using bidirectional geometry; also known as multi-angle spectrophotometer. E 284, E12

good engineering practices—include design practices and criteria accepted in professional societies (ASTM, AIChE, ASME, ACS, etc.), proved by experience, verified by actual data, etc., that will meet the process, safety, and environmental requirements of the system. E 1705, E48

good laboratory practices (GLP), *n*—guidelines for the management of laboratory experiments which are published by regulatory agencies or other recognized groups and are concerned with the organizational process and the conditions under which laboratory studies are planned, performed, monitored, recorded, and reported. D 4175, D02

good laboratory practices (GLP), *n*—guidelines for the management of laboratory experiments which are published by regulatory agencies or other recognized groups, and are concerned with the organizational process and the conditions under which laboratory studies are planned, performed, monitored, recorded, and reported. D 6384, D02

gouge—a surface defect in which material has been removed (scooped out by a sharp instrument) that causes a decrease in strength in a highly stressed area. E 631, E06

gouge—a surface defect in which material has been removed (scooped out by a sharp instrument) that causes a decrease in strength in a highly stressed area. E 1749, E06

gouge, *n*—a groove or cavity in the flooring surface accompanied by material removal and penetration below the immediate flooring surface. F 141, F06

gouges—see **chips**. D 3918, D20

gout, *n*—foreign matter trapped in a fabric by accident, usually lint or waste. (See also **slug**.) D 123, D13

gout, *n*—foreign matter trapped in a fabric by accident, usually lint or waste. (See also **slug**) D 3990, D13

GPD—unit of flow rate; gallons per day. See **GD**. D 6161, D19

grab bar—See **railing systems**. E 631, E06

grab bar—Synonym for **grab rail**. E 1481, E06

grab rail—See **railing systems**. E 631, E06

grab rail—a short length of rail located for safety or convenience to assist a person in movement at a specific location. (Syn. *grab bar*.) E 631, E06

grab rail—a short length of rail located for safety or convenience to assist a person in movement at a specific location. (Syn. *grab bar*.) E 1481, E06

grab sample, *n*—individual sample collected over a period of time usually not exceeding 15 min and in such a manner as to be representative of conditions at the time of sampling. Grab samples are sometimes called individual or discrete samples. D 5681, D34

grab test, *n*—*infabric testing*, a tensile test in which the central part of the width of the specimen is gripped in the clamps. D 123, D13

grab test, *n*—*infabric testing*, a tension test in which only a part of the width of the specimen is gripped in the clamps. D 4439, D35

grab test, *n*—*infabric testing*, a tensile test in which the central part of the width of the specimen is gripped in the clamps. D 4850, D13

gradation—the distribution of particles of granular material among standard sizes usually expressed in terms of cumulative percentages larger or smaller than each of a series of sieve openings. C 822, C13

gradation, *n*—the particle size distribution of aggregate as determined by separation with standard screens. Gradation of aggregate is expressed in terms of the individual percentages passing standard screens. Sieve analysis and screen analysis are synonyms when referring to gradation of aggregate. C 1180, C12

gradation (grain-size distribution) (texture)—the proportions by mass of a soil or fragmented rock distributed in specified particle-size ranges. D 653, D18

grade, *n*—the designation given a material by a manufacturer such that it is always reproduced to the same specifications established by the manufacturer. C 709, D02

grade, *n*—subdivision of flat sheets based on minimum wet and equilibrium flexural strengths. **C 1154, C17**

grade—the designation of the quality of logs or of a manufactured piece of wood. **D 9, D07**

grade, *n*—*in warpknitting*, a term used to indicate the defect index evaluation of fabric determined by the number of defects per unit, for example per pound, per linear yard, or per square yard.

D 123, D13

grade, *n*—*in wooland mohair*, a numerical designation used in classifying wool and mohair in their raw, semi-processed, and processed forms based on average fiber diameter and variation of fiber diameter. **D 123, D13**

grade, *v*—to assign a numerical value based on number, size, and severity of defects seen during a visual inspection. **D 123, D13**

grade, *n*—*for asbestos*, asbestos fiber that has the same chemical, physical, and mechanical properties and which is designated by a particular code corresponding to any given specifications.

D 2946, C17

grade, *n*—the designation given a material by a manufacturer such that it is always reproduced to the same specifications established by the manufacturer. **D 4175, D02**

grade, *n*—*in wooland mohair*, a numerical designation used in classifying wool and mohair in their raw, semi-processed, and processed forms based on average fiber diameter and variation of fiber diameter. **D 4845, D13**

grade, *n*—*in warpknitting*, a term used to indicate the defect index evaluation of fabric determined by the number of defects per unit, for example per pound, per linear yard, or per square yard.

D 4850, D13

grade, *v*—to assign a numerical value based on number, size, and severity of defects seen during a visual inspection. **D 4850, D13**

grade, *n*—a level or elevation of a land or water surface. **E 631, E06**

graded nest, *n*—a collection of graded piece boundaries that represent every size in the size line for a particular pattern piece.

D 6963, D13

graded sediment—in geology, a sediment consisting chiefly of grains of the same size range. In engineering, a sediment having a uniform or equable distribution of particles from coarse to fine.

D 4410, D19

graded stream—a stream in which a steady state has been reached such that over a period of time the discharge and sediment load entering the system are balanced by the discharge and sediment load leaving the system. **D 4410, D19**

grade identification symbols—inch series standardized symbols denoting the combination of the fastener's base material, its strength properties, its performance capabilities, and the engineering standard against which it was produced. **F 1789, F16**

grade/recovery, *n*—the relationship between quality and quantity of the clean coal product. The quality can be defined in terms of ash, sulfur, or Btu content. The quantity can be designated as yield or heating value recovery (Btu or combustibles). **D 121, D05**

grade reference line, *n*—the horizontal line that defines the *x* axis for the pattern piece. **D 6963, D13**

C 822, C13

grade rings—precast concrete rings used for vertical adjustment at the top of a manhole to set manhole casting to proper grade.

grade rule, *n*—a named set of grade rule values consisting of one grade rule value for each size in the size line. (See **grade rule values**.) **D 6963, D13**

grade rule identifier, *n*—a user defined numeric name given to a grade rule. **D 6963, D13**

grade rule table, *n*—a collection of grade rules. **D 6963, D13**

grade rule table data exchange file, *n*—a text file to communicate grade rule values between different CAD/CAM systems.

D 6963, D13

grade rule table name, *n*—a user defined name given to a grade rule table. **D 6963, D13**

grade rule values, *n*—values that define how an associated data point

on a pattern piece moves from one size to another expressed in delta *XY* units. **D 6963, D13**

gradient furnace—a furnace within which a known temperature gradient is maintained between the two ends. Sometimes known as a Rosenhain Furnace. **E 7, E04**

gradient ratio, *n*—*in geotextiles*, the ratio of the hydraulic gradient through a soil-geotextile system to the hydraulic gradient through the soil alone. **D 4439, D35**

grading, *n*—the procedure used to identify and quantify the number of imperfections in a roll of fabric detected during visual inspection. **D 123, D13**

grading—the degree of mixing of size classes in sedimentary material. **D 4410, D19**

grading, *n*—the procedure used to identify and quantify the number of imperfections in a roll of fabric detected during visual inspection. **D 6799, D13**

grading, *n*—a method of creating multiple sizes from a base or sample size using a grade rule. **D 6963, D13**

graduated glassware—glassware that is marked with one or more graduations for volumetric measuring purposes. **C 162, C14**

graduations—series of lines on the stem of the thermometer which designate the temperature scale intervals. **E 344, E20**

graft, *n*—any tissue or organ for implantation or transplantation.

F 2312, F04

graft copolymer—a copolymer in which polymeric side chains have been attached to the main chain of a polymer of different structure.

D 883, D20

graft copolymer—a copolymer in which polymeric side chains have been attached to the main chain of a polymer of different structure. (D20) **F 412, F17**

graft take, *n*—engraftment. **F 2312, F04**

grain—(1) a distinguishable rock constituent which itself has a distinct identity, for example, a mineral crystal, an oolith, a rock fragment (in sedimentary rocks), or clast.

(2) a direction in a rock body along which it is more easily broken, split, or cut. See rift. **C 119, C18**

grain, *n*—*in manufactured(synthetic) carbon and graphite*, a particle of filler material (usually coke or graphite) in the starting mix formulation. Also referred to as granular material, filler particle, or aggregate material. The term is also used to describe the general texture of a carbon or graphite body, as in the descriptions listed below:

coarse grained, *adj*—containing grains in the starting mix that are substantially greater than 4 mm in size.

fine grained, *adj*—containing grains in the starting mix that are generally less than 100 μm in size.

medium grained, *adj*—containing grains in the starting mix that are generally less than 4 mm in size.

microfine grained, *adj*—containing grains in the starting mix that are generally less than 2 μm in size.

superfine grained, *adj*—containing grains in the starting mix that are generally less than 50 μm in size.

ultrafine grained, *adj*—containing grains in the starting mix that are generally less than 10 μm in size. **C 709, D02**

grain—the direction, size, arrangement, appearance, or quality of the fibers in lumber or other wood products. To have a specific meaning the term must be qualified.

bastard sawn grain—grain pattern in hardwood lumber in which the annual rings make angles of 30 to 60 deg with the surface of the piece.

chipped grain—a machine defect of surfaced lumber, where the grain of the wood has been torn out in small particles by the action of the planer knives.

close grain—(1) narrow, inconspicuous annual rings. The term is sometimes used to designate wood having small and closely spaced pores, but in this sense the term "fine textured" is more often used.

grain

(2) in stress grading, wood averaging on one end or the other of each piece not less than six nor more than 30 annual rings/in. Pieces averaging at least five or more than 30 rings/in. are accepted as close grain if containing one third or more summerwood.

coarse grain—wide conspicuous annual rings in which there is considerable difference between earlywood and latewood. The term is sometimes used to designate wood with large pores, such as oak, ash, chestnut, and walnut, but in this sense the term “coarse textured” is more often used.

cross grain—fiber deviation from a line parallel to the sides of the piece. Cross grain may be either diagonal or spiral grain or a combination of the two.

curly grain—grain distortion with an irregular curled appearance; “birdseye” is an extreme case of curly grain.

diagonal grain—grain pattern in which the annual rings are at an angle with the axis of a piece as a result of sawing at an angle with the bark of the tree or log. A form of *cross grain*.

edge grain—grain pattern in which the wide surfaces of the sawn piece extend approximately at right angles to the annual growth rings. Lumber is considered edge grained when the rings form an angle of 45 to 90 deg with the wide surface of the piece.

end grain—the grain pattern exposed when ends of logs or timbers, dimension, boards, and other wood products are cut perpendicular to the fiber direction.

fine grain—a synonym for *close grain*.

flat grain—the grain pattern resulting when lumber has been sawed in a plane approximately perpendicular to the radius of the log. Lumber is considered flat grained when the annual growth rings make an angle of less than 45 deg with the surface of the piece.

interlocked grain—wood in which the fibers are inclined in one direction in a number of rings of annual growth, then gradually reverse and are inclined in an opposite direction in succeeding growth rings, then reverse again.

loosened grain—a separation or loosening of the earlywood from the latewood due to defects in the wood or processing such as planing.

medium grain—used in stress grading to denote wood averaging on one end or the other of each piece not less than four annual rings/in.

mixed grain—lumber and other wood products unrestricted or unsegregated as to the grain angle.

open grain—(1) common classification related to finishing of woods with large pores, such as oak, ash, and chestnut. Also known as “coarse textured.”

(2) used in stress grading to denote no limitations on rate of growth as measured by annual rings per inch.

plainsawn—a synonym for *flat grain*.

quartersawn—a synonym for *edge grain*.

raised grain—a condition of the surface of dressed lumber in which the hard latewood is raised above the softer earlywood but not torn loose from it.

rift sawn—a synonym for *edge grain*.

slash grain—a synonym for *flat grain*.

spiral grain—wood in which the fibers take a spiral course about the trunk of a tree instead of the normal vertical course. The spiral may extend in a right-handed or left-handed direction around the tree trunk. Spiral grain is a form of cross grain.

straight-grained wood—wood in which the fibers run parallel to the axis of a piece.

torn grain—a machine defect of surfaced lumber, where the fibers of the wood have been torn out around knots and curly places by the action of the planer knives.

vertical grain—a synonym for *edge grain*.

wavy-grained wood—wood in which the fibers form a pattern of fairly uniform waves or undulations. **D 9, D07**

grain, n—an inch-pound unit of weight, equal to 0.002285 avoirdupois oz (0.0648 g). **D 16, D01**

grain, n—in *yarn spinning*, a direct yarn numbering system for sliver, top or roving, equal to the mass in grains of 120 yds. (See **American graincount**) **D 123, D13**

grain, n—in *measuring mass*, $\frac{1}{7000}$ lb avoirdupois. **D 123, D13**

grain—the outer or hair side of a hide or skin. Also used as an adjective referring to that side. **D 1517, D31**

grain, n—anisotropy introduced into rubber during processing operations. **D 1566, D11**

grain, n—the machine direction of paper. **D 1968, D06**

grain, n—in *manufactured (synthetic) carbon and graphite*, a particle of filler material (usually coke or graphite) in the starting mix formulation. Also referred to as granular material, filler particle, or aggregate material. The term is also used to describe the general texture of a carbon or graphite body, as in the descriptions listed below:

coarse grained, adj—containing grains in the starting mix that are substantially greater than 4 mm in size.

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microfine grained, adj—containing grains in the starting mix that are generally less than 2 μm in size.

superfine grained, adj—containing grains in the starting mix that are generally less than 50 μm in size.

ultrafine grained, adj—containing grains in the starting mix that are generally less than 10 μm in size. **D 4175, D02**

grain, n—in *yarn spinning*, a direct yarn numbering system for sliver, top or roving, equal to the mass in grains of 120 yds. (See **American grain count**) **D 4849, D13**

grain, n—in *measuring mass*, $\frac{1}{7000}$ lb avoirdupois **D 4849, D13**

Grain—unit of weight, 0.648 g, 0.000143 lb. **D 6161, D19**

grain—an individual crystallite in metals. **E 7, E04**

grain boundary—an interface separating two grains, where the orientation of the lattice changes from that of one grain to that of the other. When the orientation change is very small the boundary is sometimes referred to as a subboundary. **E 7, E04**

grain drooping—the dislodgement and loss of a grain or grains (crystals) from a metal surface as a result of intergranular corrosion. **G 15, G01**

grained leather—any leather on which the original natural grain, through any method, process, or manipulation, has been changed or altered. **D 1517, D31**

grain growth, n—an increase in the grain size of a steel object, usually as a result of exposure to elevated temperatures. **A 941, A01**

grain growth—an increase in the grain size of a metal usually as a result of heating at an elevated temperature. **E 7, E04**

graininess—the visual impression of nonuniformity of density in a radiographic image typically caused by random, statistical groupings of individual silver particles in processed film. **E 1316, E07**

graining—a process for producing a decorative finish by transferring a pattern to the porcelain enamel surface by means of rolls. **C 286, B08**

graining paste—a mixture of color oxides, fluxes, and oils. **C 286, B08**

graining roll—a specialized type of roll used for transferring the grain pattern to the porcelain enamel. **C 286, B08**

grainline, n—line used to define the horizontal orientation, normally the X-axis, of a piece in a marker. **D 6963, D13**

grain long—paper grain direction in sheets of paper is parallel to the long dimension of the sheet. **F 149, F05**

grain long paper, n—paper in which the machine direction parallels the longest sheet dimension. **D 1968, D06**

grain magnesite, n—see **magnesite, grain**.

C 71, C08

grain short—paper grain direction in sheets of paper is parallel to the short dimension of the sheet.

F 149, F05

grain short paper, n—paper in which the machine direction parallels the shortest sheet dimension.

D 1968, D06

grain size, n—the dimensions of the grains or crystals in a polycrystalline metal, exclusive of twinned regions and subgrains when present.

A 941, A01

grain size—the dimensions of the grains or crystals in a polycrystalline metal exclusive of twinned regions and subgrains when present. Grain size is usually estimated or measured on the cross section of an aggregate of grains. Common units are: (1) average diameter, (2) average area, (3) number of grains per linear unit, (4) number of grains per unit area, and (5) number of grains per unit volume. See Test Methods E 112.

(1) *ASTM grain size number*—a grain size designation bearing a relationship to average intercept distance at 100 diameters magnification according to the equation: $G = \text{ASTM grain size number} = 10.0 - 2 \log_2 \bar{L}$, where \bar{L} is the average intercept distance in millimetres at 100 magnification.

(2) *average grain diameter*—the mean diameter of an equiaxed grain section whose size is representative of all the grain sections in the aggregate being measured.

E 7, E04

grain-size analysis (mechanical analysis) (particle-size analysis)—the process of determining grain-size distribution.

D 653, D18

grain size comparison eyepiece—an eyepiece provided with calibrated patterns representing a series of standard sizes of grains. The eyepiece must be used at a total magnification for which the patterns have been calibrated.

E 7, E04

grains per U.S. gallon (GPG)—number of grains of substance per one U.S. gallon of water. Concentration in GPG is calculated by dividing concentration in ppm of the ion by 17.1. One grain weighs 1/7000 lb and one U.S. gallon weighs 8.3 lb.

D 6161, D19

granic cryogenic fabric—a distinct soil micromorphology, resulting from the processes of freezing and thawing, in which soil particles form discrete loosely packed units.

D 7099, D18

granite (commercial definition)—a visibly granular, igneous rock generally ranging in color from pink to light or dark gray and consisting mostly of quartz and feldspars (Note 1), accompanied by one or more dark minerals. The texture is typically homogeneous but may be gneissic or porphyritic (Note 2). Some dark granular igneous rocks, though not geologically granite, are included in the definition (Note 3).

C 119, C18

graniteware—a one-coat porcelain enameled article with a mottled pattern produced by controlled corrosion of the metal base prior to firing.

C 286, B08

granoidic cryogenic fabric—a distinct soil micromorphology, resulting from the processes of freezing and thawing, in which soil particles form more-or-less discrete loosely packed units.

D 7099, D18

Gran's plot paper—a type of graph paper designed to eliminate calculations when measurements are made by the Gran's plot technique. Electrode potentials in millivolts are plotted on the vertical antilogarithmic axis and either volume of reagent added or sample concentration on the horizontal linear axis. Special Gran's plot papers can be constructed that automatically correct for volume changes occurring during titrations.

D 4127, D19

Gran's plots—a method of plotting apparent concentration (as derived from the electrode potential) versus the volume of reagent added to the sample. Gran's plots are especially useful for plotting titrations that would give poor end-point breaks if plotted conventionally. They can also be used to determine concentration by known addition with greater precision than can be obtained by a single addition measurement.

D 4127, D19

granular—composed of particles visible to the unaided eye. For sedimentary stone, the predominant particle distribution is less than 4 mm in size.

C 119, C18

granular activated carbon—activated carbon in particle sizes predominantly greater than 80 mesh.

D 2652, D28

granular applicator—an apparatus consisting of a hopper, a metering device, and a device for spreading or placing the granules in the target area.

E 1102, E35

granular ice—ice that is composed of coarse, more-or-less equidimensional, crystals that are weakly bonded together.

D 7099, D18

granularity—presence of voids or discontinuities within the image giving the image a grainy appearance.

F 549, F05

granular material—synonym for **bulk solid**.

D 653, D18

granular powder, n—particles having approximately equidimensional nonspherical shapes.

B 243, B09

granulated blast-furnace slag, n—the glassy, granular material formed when molten blast-furnace slag is rapidly chilled, as by immersion in water.

C 125, C09

granulated blast-furnace slag, n—the glassy granular material formed when molten blast-furnace slag is rapidly chilled, as by immersion in water.

C 219, C01

granulated rubber, n—particulate rubber composed of mainly nonspherical particles that span a broad range of maximum "particle dimension" from below 425 μm (40 mesh) to 12 mm (0.47 in.); the key feature of this type of particulate rubber is the fraction of the material in the greater than 1-mm (0.08-in.) up to 12-mm (0.47-in.) maximum "particle dimension" range. See **particulate rubber**.

D 1566, D11

granulated rubber, n—particulate rubber composed of mainly nonspherical particles that span a broad range of maximum particle dimension, from below 425 μm (40 mesh) to 12 mm (also refer to **particulate rubber**).

D 5681, D34

granulation, n—the production of coarse metal particles by pouring the molten metal through a screen into water (shotting) or by violent agitation of the molten metal while solidifying.

B 243, B09

granulations, n—granulation tissue.

F 2312, F04

granulation tissue, n—the newly formed vascular tissue normally produced in the healing of wounds of soft tissue and ultimately forming the cicatrix [scar]; it consists of small, translucent, red, nodular masses or granulations that have a velvety appearance.

F 2312, F04

granule—See **mineral granules**.

D 1079, D08

granules, n—small ceramic or natural colored mineral pellets or grains applied to products to lend color to the surface.

C 1154, C17

granules—small ceramic or colored natural mineral pellets or grains, that may be applied to asbestos-cement products to enhance their surface.

D 2946, C17

graphene layer, n—in *carbon and graphite technology*, a single carbon layer of the graphite structure, describing its nature by analogy to a polycyclic aromatic hydrocarbon of quasi-infinite size.

C 709, D02

graphene layer, n—in *carbon and graphite technology*, a single carbon layer of the graphite structure, describing its nature by analogy to a polycyclic aromatic hydrocarbon of quasi-infinite size.

D 4175, D02

graphic escape, n—an electronic signal sent to the printer to take it out of the graphic mode. (See **GE**.)

F 1457, F05

graphic layer—optional decorated layer of a membrane switch.

F 2112, F01

graphite, n—an allotropic crystalline form of the element carbon, occurring as a mineral, commonly consisting of a hexagonal array of carbon atoms (space group $P 6_3/mmc$) but also known in a rhombohedral form (space group $R 3m$).

C 709, D02

graphite, n—in *carbon and graphite technology*, a material consisting predominantly of the element carbon and possessing extensive long-range three-dimensional crystallographic order as determined by X-ray diffraction studies.

C 709, D02

graphite, n—an allotropic crystalline form of the element carbon, occurring as a mineral, commonly consisting of a hexagonal array of carbon atoms (space group $P 6_3/mmc$) but also known in a rhombohedral form (space group $R 3m$).

D 4175, D02

graphite, n—in *carbon and graphite technology*, a material consisting

graphite, *n*

predominantly of the element carbon and possessing extensive long-range three-dimensional crystallographic order as determined by X-ray diffraction studies. **D 4175, D02**

graphite-base carbon refractory, *n*—see **carbon refractory, graphite-base.** **C 71, C08**

graphite, compacted, *n*—a graphite shape that is intermediate between flake graphite and nodular graphite that typically appears in a polished section as thick flakes with blunt (compacted) ends. **A 644, A04**

graphite flake, *n*—an irregularly shaped particle of graphite, usually appearing in a polished section as curved plates, such as found in gray cast irons. **A 644, A04**

graphite, flake—an irregularly shaped body, usually appearing as long curved plates of graphitic carbon such as found in gray cast irons. **E 7, E04**

graphite foam, *n*—in *carbon and graphite technology*, a porous graphite product containing regularly shaped, predominantly concave, homogeneously dispersed cells which interact to form a three-dimensional array throughout a continuum material of carbon, predominantly in the graphitic state. The final result is either an open or closed cell product. **C 709, D02**

graphite foam, *n*—in *carbon and graphite technology*, a porous graphite product containing regularly shaped, predominantly concave, homogeneously dispersed cells which interact to form a three-dimensional array throughout a continuum material of carbon, predominantly in the graphitic state. The final result is either an open or closed cell product. **D 4175, D02**

graphite, nodular, *n*—spheroidal shaped graphite typically found in ductile irons and compact clusters of graphite typically found in malleable irons. (See **graphite, spheroidal**, and **temper carbon**.) **A 644, A04**

graphite permanent mold casting, *n*—a metal object produced by introducing molten metal by gravity or low pressure into a graphite mold and allowing it to solidify. **B 899, B02**

graphite, primary, *n*—graphite precipitated in cast iron during solidification. **A 644, A04**

graphite rosette, *n*—arrangement of graphite flakes in which the flakes extend radially from centers of crystallization in gray cast iron. **A 644, A04**

graphite, spheroidal, *n*—spheroidal shaped graphite having a polycrystalline radial structure, usually found in ductile iron and to a controlled, limited extent in compacted graphite iron. **A 644, A04**

graphitic, *adj*—in *carbon and graphite technology*, all varieties of substances consisting predominantly of the element carbon in the allotropic form of graphite irrespective of the presence of structural defects. **C 709, D02**

graphitic, *adj*—in *carbon and graphite technology*, all varieties of substances consisting predominantly of the element carbon in the allotropic form of graphite irrespective of the presence of structural defects. **D 4175, D02**

graphitic corrosion—the deterioration of metallic constituents in gray cast iron, which leaves the graphitic particles intact. (The term “graphitization” is commonly used to identify this form of corrosion but is not recommended because of its use in metallurgy for the decomposition of carbide to graphite.) **G 15, G01**

graphitizable carbon, *n*—in *carbon and graphite technology*, a non-graphitic carbon, which, upon graphitization, converts into graphitic carbon (also known as a soft carbon). **C 709, D02**

graphitizable carbon, *n*—in *carbon and graphite technology*, a non-graphitic carbon, which, upon graphitization, converts into graphitic carbon (also known as a soft carbon). **D 4175, D02**

graphitization, *n*—in *carbon and graphite technology*, a solid-state transformation of thermodynamically unstable non-graphitic carbon into graphite by thermal treatment. **C 709, D02**

graphitization, *n*—in *carbon and graphite technology*, a solid-state transformation of thermodynamically unstable non-graphitic carbon into graphite by thermal treatment. **D 4175, D02**

graphitization annealing, *n*—annealing a steel object in such a way that some or all of the carbon is precipitated as graphite. **A 941, A01**

graphitize, *vt*—to precipitate graphite in an iron-carbon alloy. **A 644, A04**

GRAS—materials “generally regarded as safe,” as listed by the FDA. **D 6161, D19**

grassers—calf skins or kips that have a coarser grain due to poor feeding of the animals. **D 1517, D31**

graticule—a scale on glass or other transparent material placed in the eyepiece or at an intermediate plane on the optic axis of a light microscope for the location and measurement of objects (a graticule is different than a reticle, see **reticle**). **E 7, E04**

grating, concave, *n*—a diffraction grating on a concave mirror surface.

diffraction, *n*—a series of a large number of narrow, close, equally spaced, diffracting slits or grooves capable of dispersing light into its spectrum.

plane, *n*—a transmission or reflecting diffraction grating whose surface is flat.

reflection, *n*—a diffraction grating from which the incident light is reflected to form a spectrum.

transmission, *n*—a transparent diffraction grating through which light is transmitted. **E 135, E01**

gravel, *n*—coarse aggregate resulting from natural disintegration and abrasion of rock or processing of weakly bound conglomerate. **C 125, C09**

gravel—rounded or semirounded particles of rock that will pass a 3-in. (76.2-mm) and be retained on a No. 4 (4.75- μ m) U.S. standard sieve. **D 653, D18**

gravel—coarse, granular aggregate, with pieces larger than sand grains, resulting from the natural erosion of rock. **D 1079, D08**

gravel in—to spread aggregate into hot bitumen on the surface of the roofing membrane. **D 1079, D08**

gravel pack—common nomenclature for the terminology, primary filter of a well (see **primary filterpack**). **D 653, D18**

gravel road, *n*—two lane, all-weather, occasionally maintained, hard or loose surface (for example, large rock, paved, crushed rock, gravel) intended for medium-weight, low-density traffic, in accordance with the U.S. Federal Highway Administration. **F 538, F09**

gravel size (fluvial sediment)—between 2.0 and 64 mm in diameter. **D 4410, D19**

gravel stop—a flanged device, frequently metallic, designed to prevent loose aggregate from washing off the roof and to provide a continuous finished edge for the roofing. **D 1079, D08**

gravimetric (total) water content—the ratio, expressed as a percentage, of the mass of the water and ice in a sample to the dry mass of the sample. **D 7099, D18**

gravitational water—see **free water**. **D 653, D18**

gravity filter—a filter through which water flows through it by gravity. **D 6161, D19**

gravity flow, *n*—flow in a direction parallel to the plane of a geotextile or related product driven predominately by a difference in elevation between the inlet and outflow points of a specimen. **D 4439, D35**

gravity grouting—grouting under no applied pressure other than the height of fluid in the hole. **D 653, D18**

gray area—{archaic} See **mist**. **C 162, C14**

graybody, *n*—a body having the same spectral emittance at all wavelengths. **C 168, C16**

gray body, *n*—nonselective radiator whose spectral emissivity is less than one. **E 349, E21**

gray felt, *n*—a blend of white fibers with naturally colored or dyed fibers, or both, that has an overall gray appearance. **D 123, D13**

gray felt, *n*—a blend of white fibers with naturally colored or dyed fibers or both and that has an overall gray appearance. **D 4845, D13**

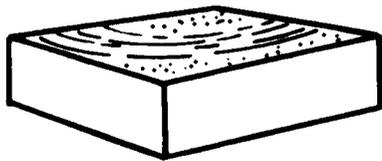
gray iron, *n*—cast iron that has a relatively large proportion of the

- graphitic carbon present in the form of flake graphite. The metal has a gray fracture. **A 644, A04**
- gray level, in image analysis**—a specific neutral color value existing within the range from black to white. **E 7, E04**
- gray scale, n**—the scale consists of nine pairs of standard gray chips each pair representing a difference in color or contrast (shade and strength) corresponding to a numerical fastness rating. The results of colorfastness tests are rated by visually comparing the difference in color represented by the scale. **G 113, G03**
- gray water**—the waste water of a system that may be a combination of the liquid and water-carried wastes except human wastes. **F 412, F17**
- grazing exit (incidence)*—EIA, same as **glancing exit(incidence)**. **E 673, E42**
- grazing incidence**—immersion inspection with the beam directed at a glancing angle to the test surface. **E 1316, E07**
- grease extractors*—a system of components designed for integration within the exhaust hood for the removal of the airborne grease particles and the condensate of grease vapors, or both, for immediate or future disposal. See **exhaust hood**. **F 1827, F26**
- grease removal devices:* **F 1827, F26**
- grease-resistant barrier**—See **barrier material**. **D 996, D10**
- grease wool, n**—wool taken from the living sheep and which has not been commercially scoured. **D 123, D13**
- grease wool, n**—wool taken from the living sheep and which has not been commercially scoured. **D 4845, D13**
- μ (Greek letter Mu)**—in statistics, symbol for true value. **D 4175, D02**
- green, n**—unsintered (not sintered); for example, green compact, green density, green strength. **B 243, B09**
- green, adj**—unsintered (not sintered); for example, green compact, green density, green strength. **B 243, B09**
- green**—(1) freshly sawed wood, or wood that has received no drying; unseasoned. Lumber that may have become wet to above the fiber saturation point may be referred to as being in the “green condition.”
(2) wood above a stipulated moisture content, as lumber above 19 % moisture content in accordance with the American Softwood Lumber Standard. **D 9, D07**
- green, adj**—hue description applied to light of wavelengths from 495 to 550 nm and to visually similar stimuli. **D 2946, C17**
- green*—that temperature at which the intensity of 520 nm light reflected by the liquid crystal is maximum, symbolized as T°520. **E 344, E20**
- green building, n**—a building that provides the specified building performance requirements while minimizing disturbance to and improving the functioning of local, regional, and global ecosystems both during and after its construction and specified service life. **E 2114, E06**
- green carbon, n**—a formed, but unfired carbon body. **C 709, D02**
- green carbon, n**—a formed, but unfired carbon body. **D 4175, D02**
- green coke, n**—as used in *Test Method D 5061*, carbonaceous binder or filler phase material that has exceeded the temperature of thermoplasticity, but has not obtained the temperature of metallurgical coke. **D 121, D05**
- green crack, n**—in a rigid die system, a defect that occurs prior to sintering. **B 243, B09**
- green density, n**—the mass per unit volume of an unsintered compact. **B 243, B09**
- green expansion, n**—the increase in dimensions of an ejected compact relative to the die dimensions, measured at right angles to the direction of pressing. Synonymous with **springback**. **B 243, B09**
- green petroleum coke, n**—same as raw petroleum coke; a solid, carbonaceous residue produced by thermal decomposition of heavy petroleum fractions or cracked stocks, or both. **D 4175, D02**
- green salting**—a process of curing hides in which they are treated with salt on the flesh side and stacked in piles to cure for a period of ten days or more. **D 1517, D31**
- greensand**—a mineral (glauconite), used as a filtration medium. See **manganese greensand**. **D 6161, D19**
- greenstone**—a metamorphic rock of basic or ultrabasic composition, of very fine grain size, ranging in color from medium green to yellowish green to almost black. **C 119, C18**
- greige cord, n**—in tire cords, a cord that has not been adhesive treated, or otherwise treated before use. (See **cord** **D 123, D13**)
- greige cord, n**—in tire cords, a cord that has not been adhesive treated, heat treated, or otherwise treated before use (see *cord*). **D 6477, D13**
- greige goods, n**—textile fabrics that have received no bleaching, dyeing, or finishing treatment after being produced by any textile process. **D 123, D13**
- greige goods, n**—textile fabrics that have received no bleaching, dyeing, or finishing treatment after being produced by any textile process. **D 7018, D13**
- greige thread, n**—undyed or unfinished sewing thread in the state following final plying or equivalent step in processing sequence, such as extruding, texturizing, or braiding. **D 123, D13**
- greige thread, n**—undyed or unfinished sewing thread in the state following final plying or equivalent step in a processing sequence, such as extruding, texturizing or braiding. **D 4849, D13**
- greige tire cord, n**—a tire cord that has not been dip treated or heat treated before use (see *tire cord*). **D 6477, D13**
- greige yield, n**—in knitted fabrics, the number of finished square yards per pound (square metres per kilogram) of greige fabric. **D 123, D13**
- greige yield, n**—in knitted fabrics, the number of finished square yards per pound (square meters per kilogram) of greige fabric. **D 7022, D13**
- grex, n**—an obsolete direct numbering system for fiber yarn or other textile strand equal to the mass in grams per 10 000 m. **D 123, D13**
- grex, n**—an obsolete direct numbering system for fiber yarn or other textile strand equal to the mass in grams per 10 000 m. **D 4849, D13**
- grey, adj**—color description applied to achromatic stimuli of moderate relative luminance. **D 2946, C17**
- griddle**—equipment for cooking food in its own juices or oil by direct contact with a hot surface. **F 1827, F26**
- grid line slope**—an optical distortion evaluation parameter that compares the slope of a deviated grid line to that of a non-deviated grid line, which is expressed as a ratio such as 1 in 8 or 1 in 20 (the visual optical quality improves as the second number of the ratio gets larger). **F 2429, F07**
- grin, v**—in *sewnseams*, to stress a seam so that the individual stitches can be seen. **D 123, D13**
- grindability:**
- absolute grindability index*—a characteristic number expressed as the change in specific surface area of a material per unit of time in a specific comminution system.
- relative grindability index*—a characteristic number expressed as the change in specific surface area or other criteria such as particle size or fineness of a material per unit of time, mill revolutions or other standard with respect to a known standard sample in a specific comminution system. **C 242, C21**
- grinding**—the removal of metal by means of rotating rigid wheels containing abrasive. **B 374, B08**
- grinding**—the removal of material from the surface of a specimen by abrasion through the use of randomly oriented hard-abrasive particles bonded to a suitable substrate, such as paper or cloth, where the abrasive particle size is generally in the range of 60 to 600 grit (approximately 150 to 15 μm) but may be finer. **E 7, E04**

grinding japan—see **japan, grinding**.

D 16, D01

grinding mark—a pattern of fine striations or scoring, usually directional, resulting from machining, as distinct from **surface marks**



F 109, C21

grip, *v*—*in tensile testing*, to hold, grasp, or secure, for example, to grip the specimen by the jaws of the clamps. D 123, D13

grip, *v*—*in tensile testing*, to hold, grasp, or secure, for example, to grip the specimen by the jaws of the clamps. D 4849, D13

grip mark, gripe mark, gripper mark—indentations and ridges along shank, usually near head, made by gripping devices that hold wire during heading; often used with other markings to classify nail manufacturer. F 547, F16

grit, *n*—coarse foreign particles in paint materials and coatings, often of irregular shape, that are hard, abrasive, and resistant to disintegration. D 16, D01

grit blasting—abrasive blasting with small irregular pieces of steel or malleable cast iron. B 374, B08

grog, *n*—a granular material produced from calcined or burned refractories, usually alumina-silica. C 71, C08

grog fireclay mortar, *n*—raw fireclay mixed with calcined fireclay, or with broken fireclay brick, or both, all ground to suitable fineness. C 71, C08

groin—bank or shore-protection structure in the form of a barrier placed oblique to the primary motion of water, designed to control movement of bed load. D 653, D18

grooming, *v*—*in tire testing*, mechanically reworking a snow test surface in order to obtain a surface with more consistent properties. F 538, F09

groove—see **female end of pipe**. C 822, C13

groove, *n*—a channel formed on surfaces other than faces of manufactured masonry units for production or construction purposes. C 1232, C15

groove—a decorative face treatment, consisting of narrow parallel channels formed into the surface of the panel; such as machined. *V-groove*—narrow and shallow V- or U-shaped channels machined on the plywood face to achieve a decorative effect. D 1038, D07

groove, *n*—a void that is relatively narrow compared to its length. F 538, F09

groove angle—the angle of support for a pipe when a formed groove is made in bedding or foundation. F 412, F17

groove, average depth [*L*], *n*—the average of all tire groove depth measurements in a single groove. F 538, F09

grooved—general term sometimes used to denote threaded, fluted, twisted, knurled, barbed, etc. F 547, F16

grooved griddle—equipment with a grooved cooking surface that imitates characteristic striped sear mark of a charbroiler. See **griddle**. F 1827, F26

grooved guide body—formed guiding device used for placing staple over work as in carding or wiring. F 592, F16

groove (void) area fraction [*nd*], *n*—the ratio of the groove (void) area to the footprint area of a tire. F 538, F09

groove (void) area [*L*²], *n*—that portion of tire footprint area which is not contacted by ribs or elements. F 538, F09

groove (void) depth [*L*], *n*—a measurement of the perpendicular distance from a real or calculated reference plane defined by edges of two adjacent ribs (lugs) to the lowest point of contact in the groove (void). F 538, F09

grooving—long narrow grooves or depressions in a surface of a pultrusion parallel to its length.

NOTE—This condition is usually caused by die fouling or by a spot of resin build-up on the die surface, effectively changing the shape of the cross section. D 3918, D20

gross buoyancy—weight of fresh water displaced by a boom totally submerged. F 818, F20

gross buoyancy to weight ratio—gross buoyancy divided by boom weight. F 818, F20

gross calorific value—the heat produced by combustion of a unit quantity of solid fuel, at constant volume, in an oxygen bomb calorimeter under specified conditions such that all water in the products remains in liquid form. D 5681, D34

gross calorific value—the energy released by combustion of a unit quantity of refuse-derived fuel at constant volume or constant pressure in a suitable calorimeter under specified conditions such that all water in the products is in the liquid form. This is the measure of calorific value predominantly used in the United States. **Synonym:** higher heating value. E 856, D34

gross calorific value (gross heat of combustion at constant volume), *Q_v(gross)*, *n*—the heat produced by combustion of unit quantity of a solid or liquid fuel when burned at constant volume in an oxygen bomb calorimeter under specified conditions, with the resulting water condensed to a liquid. D 121, D05

gross calorific value, (gross heat of combustion), Q_v (gross), *n*—the heat produced by combustion of unit quantity of a solid or liquid specimen when burned at constant volume in an oxygen bomb calorimeter under specified conditions with the resulting water condensed to a liquid. D 5681, D34

gross calorific value (gross heat of combustion), Q_v (gross)—the heat produced by combustion of unit quantity of a solid or liquid fuel when burned at constant volume in an oxygen bomb calorimeter under specified conditions with the resulting water condensed to a liquid. D 5681, D34

gross collector area—see **area, gross collector**. E 772, E44

gross cross-sectional connector plate area—cross-sectional area of metal connector plate determined by multiplying gross thickness of plate by gross dimension of plate perpendicular to direction of load application. E 631, E06

gross energy—energy usage of a piece of equipment operating under loaded conditions as measured using an electrical metering system. D 5681, D34

gross erosion—the total of all sheet, gully, and channel erosion in a watershed. D 4410, D19

gross floor area—the entire area within the inside perimeter of the exterior walls. E 631, E06

gross floor area—See **floor area**. E 631, E06

gross floor area—See **floor area**. E 1480, E06

gross heating value (also called higher heating value)—the amount of energy per volume transferred as heat from the complete, ideal combustion of the gas at standard temperature in which all the water formed by the reaction condenses to liquid. D 4150, D03

gross heat of combustion, *n*—the maximum amount of heat per unit mass that theoretically can be released by the combustion of a material, product, or assembly; it can be determined experimentally only under conditions of high pressure and in pure oxygen (contrast **effective heat of combustion**). E 176, E05

gross heat of combustion, Q_g (MJ/kg), *n*—the quantity of energy released when a unit mass of fuel is burned in a constant volume enclosure, with the products being gaseous, other than water that is condensed to the liquid state. D 4175, D02

gross power—power requirement of a piece of equipment under loaded conditions. D 5681, D34

gross sample—See **gross sample** under **sample**. D 121, D05

gross sample, *n*—a large sample made up of several portions (increments) of a mass of material. D 4175, D02

gross sample—a sample representing a lot of RDF and composed of

- a number of increments on which neither reduction nor division has been performed. **D 5681, D34**
- gross sample**—a sample representing one lot and composed of a number of increments on which neither reduction nor division has been performed. **D 5681, D34**
- gross sample**—a sample representing one lot, normally composed of a number of increments, on which neither reduction nor division has been performed. **E 856, D34**
- gross sample *n***—a sample representing one lot, normally composed of a number of increments, on which neither reduction nor division has been performed. **D 5681, D34**
- gross-vehicle weight** [lb (kg)], *n*—the total weight of the vehicle or the vehicle combination including all connected components; also, the sum of the tire loads of all wheels on the vehicle. **E 867, E17**
- ground**, *vt*—to connect electrically with ground (earth). **D 4175, D02**
- ground**—a metallic connection with the earth to establish zero potential. **D 5077, D10**
- ground arch**—the theoretical stable rock arch that develops some distance back from the surface of the opening and supports the opening. (ISRM) **D 653, D18**
- ground coat**—(1) a porcelain enamel applied directly to the base metal to function as an intermediate layer between the metal and the cover coat.
(2) on *sheet steel*, a porcelain enamel coating containing adherence-promoting agents which may be used either as an intermediate layer between the metal and the cover coat or as a single coat over the base metal. **C 286, B08**
- ground-coat boiling**—see **boiling**. **C 286, B08**
- ground fireclay**, *n*—fireclay or a mixture of fireclays that have been subjected to no treatment other than grinding or weathering, or both. **C 71, C08**
- ground fireclay mortar**, *n*—a refractory mortar consisting of finely ground raw fireclay. **C 71, C08**
- ground floor**—See **floor**. (Synonym for **first floor, first story**.)
E 631, E06
- ground-glass focusing screen**—a glass screen, one side of which is ground or made diffusing and mounted for use in a camera, in place of photosensitive material, for the purpose of intercepting, viewing, and focusing a real image formed on it. **E 7, E04**
- ground ice**—(1) ice in pores, cavities, voids, or other openings in soil or rock, including massive ice; (2) a general term referring to all types of ice in freezing and frozen ground. **D 7099, D18**
- grounding**—connecting to ground or to a conductor that is grounded. **D 5077, D10**
- ground reaction forces**—the forces, both shearing and normal, acting on the foot during contact with the ground. **F 869, F08**
- ground refractory material, double-screened**, *n*—a refractory material that contains its original gradation of particle sizes resulting from crushing, grinding, or both, and from which particles coarser and finer than two specified sizes have been removed by screening. **C 71, C08**
- ground refractory material, single-screened**, *n*—a refractory material that contains its original gradation of particle sizes resulting from crushing, grinding, or both, and from which particles coarser than a specified size have been removed by screening. **C 71, C08**
- ground rubber**, *n*—particulate rubber composed of mainly non-spherical particles that span a range of maximum “particle dimension” from well below 425 μm (40 mesh) to 2 mm (0.08 in.) as a maximum “particle dimension.” See **particulate rubber**.
D 1566, D11
- ground rubber**, *n*—particulate rubber composed of mainly non-spherical particles that span a range of maximum particle dimensions, from below 425 μm (40 mesh) to 2 mm (also refer to **particulate rubber**). **D 5681, D34**
- ground settlement**—downward movement of the ground causing a lowering of the ground surface resulting from the melting of ground ice in excess of that contained in pore fillings. **D 7099, D18**
- ground vulcanized rubber**, *n*—vulcanized rubber in particulate form; used as an extender or filler. **D 1566, D11**
- ground water**—that part of the subsurface water that is in the saturated zone. **D 653, D18**
- groundwater**—water confined in permeable sand layers between rock or clay; that part of the subsurface water that is in the saturated zone. **D 6161, D19**
- ground-water barrier**—soil, rock, or artificial material which has a relatively low permeability and which occurs below the land surface where it impedes the movement of ground water and consequently causes a pronounced difference in the potentiometric level on opposite sides of the barrier. **D 653, D18**
- ground-water basin**—a ground-water system that has defined boundaries and may include more than one aquifer of permeable materials, which are capable of furnishing a significant water supply. **D 653, D18**
- ground-water discharge**—the water released from the zone of saturation; also the volume of water released. **D 653, D18**
- ground-water divide**—a ridge in the water table or other potentiometric surface from which ground water moves away in both directions normal to the ridge line. **D 653, D18**
- ground-water elevation**—see **free water elevation**. **D 653, D18**
- ground-water flow**—the movement of water in the zone of saturation. **D 653, D18**
- ground-water level**—the level or the water table surrounding a borehole or well. The ground-water level can be represented as an elevation or as a depth below the ground surface. **D 653, D18**
- ground-water, perched**—see **perched ground-water**. **D 653, D18**
- ground-water recharge**—the process of water addition to the saturated zone; also the volume of water added by this process. **D 653, D18**
- ground-water surface**—see **free water elevation**. **D 653, D18**
- groundwood pulp**, *n*—a type of mechanical pulp produced by grinding wood logs against a rotating stone. **D 1968, D06**
- group**, *n*—in *upholstered furniture*, a number of individual upholstered furniture units that are related by one or more physical characteristics such as styling, color, shape or covering. **D 123, D13**
- group**, *n*—in *upholstered furniture*, a number of individual upholstered furniture units that are related by one or more physical characteristics such as styling, color, shape or covering. **D 7023, D13**
- group**—in *fatigue*, specimens of the same type tested at a specific time, or consecutively, at one stress level. A group may comprise one or more specimens. **E 1823, E08**
- group AQL**, *n*—the AQL assigned to a group of material properties. **D 1711, D09**
- group element**, *n*—in *construction planning, design, specification, estimating, and cost analysis*, is a component part of the whole that includes relevant **elements** which, as a group, perform major specific function, or functions, regardless of design, specification, or construction. **E 833, E06**
- group erase**—an OCR graphic shape that will delete a group or string of three or more characters. **F 149, F05**
- grout**, *n*—gypsum or portland cement plaster used to fill crevices or to fill hollow metal frames. **C 11, C11**
- grout**, *n*—a cementitious mixture, with or without admixtures, that is used primarily to fill voids. **C 125, C09**
- grout**—concrete containing no coarse aggregates; a thin mortar. **C 717, C24**
- grout**, *n*—a mixture of cementitious materials, aggregates, water, with or without admixtures, initially produced to pouring consistency without segregation. Requirements for grout are contained in Specification C 476. **C 1180, C12**
- grout**—in *soil and rock grouting*, a material injected into a soil or rock formation to change the physical characteristics of the formation. **D 653, D18**
- grout**, *n*—a mixture of cementitious material and water with or

grout, *n*

- without aggregate, sometimes incorporating CCPs, proportioned to produce a pourable consistency without segregation of the constituents. It is used for filling voids and spaces. **E 2201, E50**
- grout**—pourable mixture of a cementitious or polymeric binder and water, possibly also containing fine aggregates, coarse aggregates, or both. **E 2265, E06**
- groutability**—the ability of a formation to accept grout. **D 653, D18**
- groutability ratio of granular formations**—the ratio of the 15 % size of the formation particles to be grouted to the 85 % size of grout particles (suspension-type grout). This ratio should be greater than 24 if the grout is to successfully penetrate the formation. **D 653, D18**
- groutable rock bolts**—rock bolts with hollow cores or with tubes adapted to the periphery of the bolts and extending to the bottom of the bolts to facilitate filling the holes surrounding the bolts with grout. **D 653, D18**
- grout cap**—a “cap” that is formed by placing concrete along the top of a grout curtain. A grout cap is often used in weak foundation rock to secure grout nipples, control leakage, and to form an impermeable barrier at the top of a grout curtain. **D 653, D18**
- grouted-aggregate concrete**—concrete that is formed by injecting grout into previously placed coarse aggregate. See also **preplaced aggregate concrete**. **D 653, D18**
- grouted anchor**—anchor installed in the base material using grout. **E 2265, E06**
- grout gallery**—an opening or passageway within a dam utilized for grouting or drainage operations, or both. **D 653, D18**
- grout header**—a pipe assembly attached to a ground hole, and to which the grout lines are attached for injecting grout. Grout injector is monitored and controlled by means of valves and a pressure gate mounted on the header; sometimes called grout manifold. **D 653, D18**
- grout, hydraulic-cement, *n***—a grout made with hydraulic cement. **C 125, C09**
- grout mix**—the proportions or amounts of the various materials used in the grout, expressed by weight or volume. (The words “by volume” or “by weight” should be used to specify the mix.) **D 653, D18**
- grout (monitoring wells)**—a low permeability material placed in the annulus between the well casing or riser pipe and the borehole wall (that is, in a single-cased monitoring well), or between the riser and casing (that is, in a multicased monitoring well), to maintain the alignment of the casing and riser and to prevent movement of ground water or surface water within the annular space. **D 653, D18**
- grout nipple**—*in grouting*, a short length of pipe, installed at the collar of the grout hole, through which drilling is done and to which the grout header is attached for the purpose of injecting grout. **D 653, D18**
- grout (nonshrink), hydraulic-cement, *n***—a hydraulic-cement grout that produces a volume that, when hardened under stipulated test conditions, is greater than or equal to the original installed volume, often used as a transfer medium between load-bearing members. **C 125, C09**
- grout pipe**—a pipe or tube that is used to transport cement, bentonite, or other plugging materials from the ground surface to a specified depth in a well or borehole. The material may be allowed to flow freely or it may be injected under pressure. The term tremie pipe is frequently used interchangeably. **D 653, D18**
- grout shoe**—a plug fabricated of relatively inert materials that is positioned with the lowermost section of a permanent casing and fitted with a passageway, often with a flow check device, through which grout is injected under pressure to fill the annular space. After the grout has set, the grout shoe is usually drilled out. **D 653, D18**
- grout slope**—the natural slope of grout injected into preplaced-aggregate or other porous mass. **D 653, D18**
- grout system**—formulation of different materials used to form a grout. **D 653, D18**
- grout take**—the measured quantity of grout injected into a unit volume of formation, or a unit length of grout hole. **D 653, D18**
- growth, *n***—an increase in dimensions of a compact which may occur during sintering. (Converse of **shrinkage**.) **B 243, B09**
- growth, *n***—an increase in one or more dimensions of an object or a material. **D 123, D13**
- growth, *n*—of textiles**, the difference between the original length of a specimen and its length after the application of a specified force for a prescribed time, and the subsequent removal of the force. (See also **permanentdeformation and dimensional change**.) **D 123, D13**
- growth, *n***—an increase in one or more dimensions of an object or a material. **D 4849, D13**
- growth, *n*—of textiles**, the difference between the original length of a specimen and its length after the application of a specified force for a prescribed time, and the subsequent removal of the force. (See also **permanentdeformation and dimensional change**.) **D 4850, D13**
- growth, *n***—the increase one or more dimensions of an object or a material. **D 6477, D13**
- grub hole**—a hole through the hide caused by the penetration of the warble fly. **D 1517, D31**
- grunerite asbestos, *n***—a member of the mineral group of monoclinic amphiboles derived from grunerite or cummingtonite-grunerite. **D 2946, C17**
- guard electrode, *n***—one or more electrically conducting elements, arranged and connected in an electric instrument or measuring circuit so as to divert unwanted conduction or displacement currents from, or confine wanted currents to, the measurement device. **D 1711, D09**
- guard electrode**—one or more electrically conducting elements, arranged and connected in an electrical instrument or measuring circuit so as to divert unwanted conduction or displacement currents from, or confine wanted currents to, the measuring device. **D 2864, D27**
- guard frame**—in video-based automatic image analysis, an internal border, smaller than the monitor image frame, used to restrict the measurement area and thus eliminate errors in sizing features that intersect the measurement area border when used in conjunction with specific feature selection rules (also called the active frame). **E 7, E04**
- guardrail**—See **railing systems**. **E 631, E06**
- guardrail system**—a railing system, providing protection for building users against accidental fall and injury, located at or near the outer edge of a stair, ramp, landing, platform, deck, balcony, hatchway, manhole, floor opening, porch, or accessible roof; at the perimeter of an opening or accessible surface, such as the opening of a stair; or at a location at which an operating condition requires access limitation to a designated area. (Compare **railing system**.) **E 631, E06**
- guardrail system**—a railing system, providing protection for building users against accidental fall and injury, located at or near the outer edge of a stair, ramp, landing, platform, deck, balcony, hatchway, manhole, floor opening, porch, or accessible roof; at the perimeter of an opening or accessible surface, such as the opening of a stair; or at a location at which an operating condition requires access limitation to a designated area. (Compare **railing system**.) **E 1481, E06**
- guard region**—in video based automatic image analysis, that portion of the imaged area between the guard (active) frame and the image frame which is employed in a variety of ways to eliminate sizing errors of features that intersect the guard frame. **E 7, E04**
- guayule rubber, *n***—naturally occurring *cis*-polyisoprene obtained from the shrub, *Parthenium argentatum*. **D 1566, D11**
- gudgeon**—bright, regular-stock-steel nails with annular flange or collar located along shank. (See **tile nail, acoustical**.) **F 547, F16**
- guide, *n***—a series of options or instructions that do not recommend a specific course of action. **D 4175, D02**

- guide body**—tool component that aligns and supports staple during driving. **F 592, F16**
- guide bushing**, *n*—the steel bushing that surrounds, aligns, and holds the stationary intermediate weight in place. **E 1445, E27**
- guided bend**, *n*—the bend obtained by using a mandrel to guide and force the portion of the specimen being bent between two faces of a die. **E 6, E28**
- guided signature**, *n*—a signature executed by a writer while a writer's hand arm, or writing instrument is influenced or controlled by another. **E 2195, E30**
- guide for rating**, *n* (guide d'évaluation)—a document which explains how to rate the serviceability of an existing or planned facility for a specific purpose. A guide identifies typical requirements and provides a rating scale for comparison with the relevant combinations of features present in the facility. **E 631, E06**
- guide for rating**, *n* (guide d'évaluation)—a document which explains how to rate the serviceability of an existing or planned facility for a specific purpose. A guide identifies typical requirements and provides a rating scale for comparison with the relevant combinations of features present in the facility. **E 1480, E06**
- guideline**, *n*—a written statement or outline of policy, practice, or conduct. **E 631, E06**
- guide pin**—a pin affixed to the inside of one of the forceps halves that aligns with a hole on the other tweezer half without protruding through when closed. **F 1638, F04**
- guide pin hole**—the hole in one forceps half into which the guide pin fits without passing through when closed. **F 1638, F04**
- guide system**, *n*—the rails, wires, and shaft that guide the drop weight during its fall. **E 1445, E27**
- guide tables**, *n*—*for knock testing*, the specific relationship between cylinder height (compression ratio) and octane number at standard knock intensity for specific primary reference fuel blends tested at standard or other specified barometric pressure. **D 4175, D02**
- Guinier-Preston streak**—an elongated spot on the Laue pattern from a single crystal which first appears during age hardening. **E 7, E04**
- Guinier-Preston zones**—those regions of a crystal which give rise to Guinier-Preston streaks. **E 7, E04**
- gum**, *n*—any of a class of colloidal substances, exuded by or prepared from plants, sticky when moist, composed of complex carbohydrates and organic acids, which are soluble or swell in water. (See also **adhesive**, **glue**, *n*, and **resin**.) **D 907, D14**
- gum compound**, *n*—a rubber compound containing only those ingredients necessary for vulcanization and small amounts of other ingredients for processing, coloring, and for improving the resistance to ageing. **D 1566, D11**
- gummed**—See **coated**. **F 547, F16**
- gummed paper tape**—See **tape**. **D 996, D10**
- gun-grade**, *n*—*inbuilding construction*, a material of a suitable viscosity to extrude through the nozzle of a hand- or power-operated device. **C 717, C24**
- gunning**, *v*—an application technique that uses a pneumatic means to transport a refractory material and place it onto a cold or hot surface. **C 71, C08**
- gunning materials, refractory**, *n*—mixtures of refractory aggregate and bond(s) specially prepared for gunning. **C 71, C08**
- gusset**, *n*—(1) a piece used to give additional size or strength in a particular location of an object.
(2) the folded-in portion of flattened tubular film. **D 883, D20**
- gusset**, *n*—a plate used to connect two or more members or to reinforce a joint. **E 631, E06**
- gusset**, *n*—(1) a piece used to give additional size or strength in a particular location of an object.
(2) the folded-in portion of flattened tubular film. (D20)
F 412, F17
- gusset leather**—a soft, flexible leather used for gussets in shoes, bags, and cases. **D 1517, D31**
- gustation**, *n*—(1) the sense of taste. (2) pertaining to the act of tasting. **E 253, E18**
- gustiness**, *adj*—now referred to as intensity of turbulence which is defined as the ratio of the root mean square of wind velocity fluctuations to the mean wind velocity. **D 1356, D22**
- gutta-percha**, *n*—hard thermoplastic substance, mainly *trans*-polyisoprene obtained from trees of the *Sapotaceae* family. **D 1566, D11**
- G value**—see **radiation chemical yield**. **E 170, E10**
- gypsum**, *n*—the mineral consisting primarily of fully hydrated calcium sulfate, $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ or calcium sulfate dihydrate. **C 11, C11**
- gypsum**, *n*—see **calciumsulfate**. **C 219, C01**
- gypsum**, *n*—name for calcium sulfate dihydrate ($\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$).
E 2201, E50
- gypsum backing board**, *n*—a ¼ in. to ⅝ in. gypsum board for use as a backing for gypsum wallboard, acoustical tile, or other dry cladding.
water resistant gypsum backing board—a gypsum board designed for use on walls primarily as a base for the application of ceramic, or plastic tile. **C 11, C11**
- gypsum base for veneer plasters**, *n*—a gypsum board used as the base for application of a gypsum veneer plaster. **C 11, C11**
- gypsum board**, *n*—the generic name for a family of sheet products consisting of a noncombustible core primarily of gypsum with paper surfacing. **C 11, C11**
- gypsum concrete**, *n*—a calcined gypsum mixed with wood chips or aggregate, or both. **C 11, C11**
- gypsum core board**, *n*—a ¾ in. (19.0 mm) to 1 in. (25.4 mm) gypsum board consisting of a single board or factory laminated multiple boards, used as a gypsum stud or core in semisolid or solid gypsum board partitions. **C 11, C11**
- gypsum-deck nail**—helically threaded cap nails with special type of thread with extra large lead angle. **F 547, F16**
- gypsum formboard**, *n*—a gypsum panel product used as the permanent form for poured gypsum roof decks. **C 11, C11**
- gypsum lath**, *n*—a gypsum board used as the base for application of gypsum plaster.
perforated gypsum lath—a gypsum lath having perforations to provide mechanical keying of the basecoat plaster.
foil-backed gypsum lath—the same as plain gypsum lath except that in addition, the back surface shall be covered with a continuous sheet of pure bright finished aluminum foil.
type X lath—a gypsum lath specially manufactured to provide specific fire-resistant characteristics. **C 11, C11**
- gypsum-lath nail**—bright or blued, regular-stock-steel, 1 by 0.092 to 1¼ by 0.166 and 1¾ by 0.092-in. nails with large flat ⅜ to ⅝-in. head and long diamond point. Also, regular-stock-steel, 1 by 0.120 to 1½ by 0.148-in. nails with flat ½-in. head and medium diamond point. Also, aluminum-alloy, 1⅝ by 0.099 to 1½ by 0.105-in. nails with flat ⅜ or ⅝-in. head and medium diamond point. **F 547, F16**
- gypsum molding plaster**, *n*—a calcined gypsum plaster used primarily for plaster casts or molds, sometimes used as a gauging plaster. **C 11, C11**
- gypsum neat plaster**, *n*—a calcined gypsum mixed at the mill with ingredients to control working quality and setting time. **C 11, C11**
- gypsum panel products**, *n*—the general name for a family of sheet products consisting essentially of gypsum. **C 11, C11**
- gypsum plaster**, *n*—the generic name for a family of powdered cementitious products consisting primarily of calcined gypsum with additives to modify physical characteristics, and having the ability, when mixed with water, to produce a plastic mortar or slurry which can be formed to the desired shape by various methods and will subsequently set to a hard, rigid mass. **C 11, C11**
- gypsum sheathing**, *n*—a gypsum board used as a backing for exterior surface materials, manufactured with water-repellant paper and may be manufactured with a water-resistant core. **C 11, C11**

gypsum-sheathing nail

gypsum-sheathing nail—galvanized, barbed, regular-stock-steel, 1 $\frac{3}{4}$ by 0.120-in. nail with flat $\frac{7}{16}$ -in. head and medium diamond point.

F 547, F16

gypsum tile or block, n—a cast gypsum building unit. C 11, C11

gypsum wallboard, n—a gypsum board used primarily as an interior surfacing for building structures.

foil-backed gypsum wallboard—a gypsum wallboard with the back surface covered with a continuous sheet of pure bright finished aluminum foil.

type X gypsum wallboard—a gypsum wallboard specially manufactured to provide specific fire-resistant characteristics

C 11, C11

gypsum-wallboard nail, gypsumboard nail, drywall nail—bright or blued, regular-stock-steel, annularly threaded, 1 $\frac{1}{8}$ by 0.098 to 2 by 0.105-in. nails with flat, nub, or crossed slightly countersunk $\frac{1}{4}$ to $\frac{1}{64}$ -in. head and long diamond point. Also, slender, colored (baked-lacquer finished), regular-stock-steel, smooth or annularly threaded, 1 $\frac{1}{8}$ by 0.062 to 2 by 0.083-in. nails with slightly countersunk 0.181-in. head and medium diamond or long needle point.

F 547, F16

gypsum wood-fibered plaster, n—a calcined gypsum plaster con-

taining shredded or ground wood fiber added during manufacture.

C 11, C11

gyromagnetic ratio, proton, γ_p —the ratio of the magnetic moment of a hydrogen nucleus to its angular momentum.

NOTE—The gyromagnetic ratio is used to calculate the magnetic field from a measured resonance frequency when using the nuclear magnetic resonance technique.

The relationship is:

$$B = (2\pi f/\gamma_p) \text{ gauss} = (2\pi f/\gamma_p) \times 10^{-4} \text{ teslas}$$

where:

f = resonance frequency in cycles per second (hertz) and

γ_p = gyromagnetic ratio (the accepted value at present for water is $2.67512 \times 10^4 \text{ gauss}^{-1} \text{ s}^{-1}$).

A 340, A06

gyro-stabilized accelerometer, n—a precision vertical gyroscope fitted with one to three accelerometers to provide orthogonal measurements referenced to the earth-fixed axis system.

F 538, F09

H

- HAA**—A group of six halo acetic acids regulated in drinking water (mono, di and tri-chloroacetic acid, mono and di bromoacetic acid and chlorobromoacetic acid). **D 6161, D19**
- habitable space—occupiable space** normally used for living, including such activities as sleeping, eating, and cooking. **E 631, E06**
- habitable space**—See **building space**. **E 631, E06**
- habitat, n**—the place where a population of organisms lives and their surroundings, both living and non-living. **E 2114, E06**
- habitat indicator, n**—a physical attribute of the environment measured to characterize conditions necessary to support an organism, population, or community. **E 2114, E06**
- habit plane**—crystallographic plane in a parent phase along which a new phase (or phases) is (are) generated. **E 7, E04**
- hackle**—a finely structured fracture surface marking giving a matte or roughened appearance to the surface, having varying degrees of coarseness. Finely structured hackle is variously known as fine hackle, frosted area, gray area, matte, mist, and stippled area. Coarsely structured hackle is also known as striation. **C 162, C14**
- hackle marks**—fine ridges on the fracture surface of the glass, parallel to the direction of propagation of the fracture. **C 162, C14**
- hackling, n—in flax**, the process of cleaning and aligning long-line fibers to improve fineness and remove non-fibrous materials and short fibers. **D 123, D13**
- hackling, v—in flax**, the process of cleaning and aligning long-line fibers to improve fineness and remove non-fibrous materials and short fibers. **D 6798, D13**
- hair, n**—natural animal fiber other than sheep's wool or silk. **D 123, D13**
- hair, n**—natural animal fiber other than sheep's wool or silk. **D 4845, D13**
- hair, n**—wire protruding from the perimeter of a tire chip or shred. (See also *fishhooks*). **D 5681, D34**
- hairiness, n—of yarns**, an overall condition characterized by filaments or fibers protruding from the yarn surface and uniformly distributed along the yarn length. (Compare wild fibers.) **D 123, D13**
- hairiness, n—or yarns**, an overall condition characterized by filaments or fibers protruding from the yarn surface and uniformly distributed along the yarn length. (Compare wild fibers.) **D 4849, D13**
- hairline crack—in protectivecoatings**, a very fine crack (having a hairlike appearance) that is visible on the surface of a dried coating film. **D 4538, D33**
- hairline or hairlining**—a defect manifested in finished ware as a line or system of lines in a strain pattern, having the appearance of cracks healed by fusion. **C 286, B08**
- hair-on leather**—leather tanned without removing the hair from the skins or hide. **D 1517, D31**
- hairry**—See **fuzzy**. **D 3990, D13**
- halation, n—(1)** the apparent increase in size of a primary or secondary light source due to scattering of light toward the observer, the surround being significantly darker than the light source.
- (2) *in retroreflection*, the apparent increase in size of a retroreflector, viewed by directional illumination (for example, automobile headlights) in a dark surround. **E 284, E12**
- halation**—the scattering of light by the transparency into the viewer's line-of-sight reducing the perceived contrast of external objects, also referred to as haze. **F 2429, F07**
- half bath**—a room containing a lavatory (wash basin) and a toilet (water closet). **E 631, E06**
- half bath**—See **building space**. **E 631, E06**
- half-car roughness index (HRI), n**—an index resulting from a mathematical simulation of vehicular response to the longitudinal profile of a pavement using the half-car simulation model described in Practice E 1170 and a travelling speed of 50 mph (80 km/h). **E 867, E17**
- half cell**—an electrode immersed in a suitable electrolyte. It may be designed to yield a known constant potential, in which case unknown potentials may be measured against it; for example, the calomel half cell. **B 374, B08**
- half-duplex channel, n**—a data transmission channel capable of transmitting in both directions, but in one direction at a time. **F 1457, F05**
- half-hard wire**—as applied to aluminum, wire that has been processed so as to produce a strength approximately midway between that of soft wire and that of hard-drawn wire. **B 354, B01**
- half-life**—see **decay constant**. **E 170, E10**
- half-life**—the time required for one half of a given number of radioactive atoms to undergo decay. **E 1316, E07**
- half-life**—the time required for one half a given number of radioactive atoms to undergo decay. **E 1316, E07**
- half-value layer**—the thickness of an absorbing material required to reduce the intensity of a beam of incident radiation to one-half of its original intensity. **E 1316, E07**
- half-value layer (HVL)**—the thickness of an absorbing material required to reduce the intensity of a beam of incident radiation to one half of its original intensity. **E 1316, E07**
- half-value thickness**—the thickness of a specified substance which, when introduced into the path of a given beam of radiation, reduces its intensity to one half. **E 1316, E07**
- half-wave current (HW)**—a rectified single-phase alternating current that produces a pulsating unidirectional field. **E 1316, E07**
- hall effect**—a phenomenon in which a transverse electric field is produced in a current-carrying conductor placed in a magnetic field. **E 1316, E07**
- halo, n**—a shadow image created by ink interaction. See also **corona**. **F 1857, F05**
- halocarbon plastics**—plastics based on resins made by the polymerization of monomers composed only of carbon and a halogen or halogens. **D 883, D20**
- halo effect**—a condition characterized by an unusually clean background region at the boundary of the image areas. **F 335, F05**
- halogen**—any element of the family of the elements fluorine, chlorine, bromine and iodine (definition for purpose of this standard). **D 6161, D19**
- halogen**—any element of the family of the elements fluorine, chlorine, bromine, and iodine. Compounds do not fall under the strict definition of halogen. However, for the purpose of this standard, this word provides a convenient descriptive term for halogen-containing compounds. Of significance in halogen leak detection are those which have enough vapor pressure to be useful as tracer gases. **E 1316, E07**
- halogenation treatment**—exposure of the entire rubber surface area to a halogen for the purpose of reducing surface friction. **F 819, F18**
- halogen leak detector**—a leak detector that responds to halogen tracer gases. Also called halogen-sensitive leak detector or halide leak detector. (1) The copper-flame detector or halide torch consists of a bunsen burner with flame impinging on a copper plate or screen, and a hose with sampling probe to carry tracer gas to the air intake of the burner. (2) The alkali-ion diode halogen detector depends on the variation of positive ion emission from a heated platinum anode when halogen molecules enter the sensing element. **E 1316, E07**
- haloing**—the formation of a contrasting discoloration around the edges of the workpiece when compared to interior areas. **C 286, B08**
- haloing, n**—the peripheral lines around print detail caused by excessive ink, excessive roller impression or faulty plate shoulders. **D 6488, D01**
- haloing, n**—a shadow effect around the entire printed segment or

haloing, *n*

around the leading edge of a printed segment caused by excessive pressure between the printing plate and the printed surface.

F 1294, F05

hamper, *n*—a container (commonly used for shipping fruits and vegetables) circular, elliptical, or polygonal in horizontal cross section, the tube dimensions being usually greater than the bottom. It has slotted sides and a bottom that may be loose, stapled, or nailed in place. The top may or may not be open. (Compare **basket**.)

D 996, D10

H and D curve—See **characteristic curve**.

E 7, E04

handful, *n*—for sampling, as much fiber as the hand can contain.

D 2946, C17

hand girth, *n*—the maximum circumference of the hand around the knuckles excluding the thumb, taken with the fingers together.

D 5219, D13

handgrip, *n*—the part of a handrail designed to provide a secure grasp.

E 631, E06

handgrip, *n*—the part of a handrail designed to provide a secure grasp.

E 1481, E06

hand-held scanner, *n*—a scanner held and operated by a human, thus enabling the scanner to be brought to the symbol.

F 1294, F05

hand-held vacuum cleaner, *n*—a small, portable, hand-held, hand-supported vacuum cleaner usually with a nozzle as an integral part of the cleaner. The cleaner is primarily designed for light-duty, all-purpose, small-area cleaning and may be designed for liquid pickup. In use, the usually integrally designed nozzle is guided over the surface area to be cleaned. The cleaner may contain a driven agitator to assist in dirt removal and may have attachments or provisions, or both, for both floor and above-the-floor cleaning.

F 395, F11

handhold—any strap, handle, depression, or other provision for grasping the boom by hand.

F 818, F20

hand length, *n*—the straight distance from the prominence of the longest finger to the inner wrist bone, taken across the palm of the hand with fingers together and palm flat (use a stable, flat ruler).

D 5219, D13

handling crack, *n*—in a rigid die system, a defect that occurs in a green part after removal from the press, and prior to sintering.

B 243, B09

handling damage, (HD), *n*—as used in fractography, scratches, chips, cracks, etc., due to the handling of the specimen/component.

C 1145, C28

handling point, *n*—an indication of the minimum temperature to which an oil should be heated in any part of the suction or delivery line of an oil-handling installation when the installation is operating.

D 4175, D02

handling point, *n*—an indication of the minimum temperature to which an oil should be heated in any part of the suction or delivery line of an oil-handling installation when the installation is operating. If the storage tank does not contain an outflow heater, this temperature is necessarily the minimum oil storage temperature.

D 4175, D02

handling reinforcement—reinforcement intended to reduce the risk of collapse of the pipe or section during handling or storage prior to and during final placement.

C 822, C13

hand of combination, lock installation—a type of lock installation that is determined by the position of the lock bolt viewed from the cover side of the door, that is, vertical up, vertical down, right hand, or left hand.

F 471, F12

hand-overcast seam-finish, *n*—a finish for the raw edges of a plain seam, in which hand stitches are taken over the raw edges of each seam allowance.

D 123, D13

hand-overcast seam finish, *n*—in home sewing, a seam finish in which hand stitches are sewn such that the thread wraps around the cut edges of each seam allowance.

D 4965, D13

hand print boxes—restraints for controlling entry of scannable information by hand. Controlling of size, shape, and configuration of hand printed entries on an optical scanning form.

F 149, F05

hand print character set—Refer to ANSI X3.45-182.

F 149, F05

hand printing, *n*—a style of writing in which the letters are not joined and the writing instrument is lifted after most strokes.

E 2195, E30

handrail—See **railing systems**.

E 631, E06

handrail, *n*—a horizontal, sloping, or vertical member normally grasped by hand for guidance or support.

E 631, E06

handrail, *n*—a horizontal, sloping, or vertical member normally grasped by hand for guidance or support.

E 1481, E06

handrail bracket—See **railing systems**.

E 631, E06

handrail bracket—a device attached to a wall, post, or other surface to support the handrail.

E 631, E06

handrail bracket—a device attached to a wall, post, or other surface to support the handrail.

E 1481, E06

handrail height—See **railing systems**.

E 631, E06

handrail height—the vertical distance from the top surface of the top rail to the surface of the finished floor, top of a ramp, or the nosing line of stair treads.

E 631, E06

handrail height—the vertical distance from the top surface of the top rail to the surface of the finished floor, top of a ramp, or the nosing line of stair treads.

E 1481, E06

hand-rubbed—a non-reflective surface with a slight stipple pattern, produced by hand-applied abrasive pads or hand-held machines.

C 119, C18

handshaking, *v*—an exchange of signals between two devices in a computer network, as prelude to data exchange, it is to determine the readiness of each device to a data exchange.

F 1457, F05

handsheet, *n*—a sheet of fibrous material produced by a specified procedure, generally in a laboratory.

D 1968, D06

hand washing, *n*—the most gentle form of home laundering using hand manipulation without the use of a machine or device such as a scrubbing board.

D 123, D13

hand washing, *n*—the most gentle form of home laundering using hand manipulation without the use of a machine or device such as a scrubbing board.

D 3136, D13

hand width, *n*—the maximum width across the palm of the hand excluding the thumb, taken with fingers together and palm flat (use a stable, flat ruler).

D 5219, D13

hanging rack—see **burning bars, points, or tools**.

C 286, B08

hanging wall—the mass of rock above a discontinuity surface. (ISRM)

D 653, D18

hang pick, *n*—a pick, caught on a warp yarn knot for a short distance, producing a triangular-shaped hole in the fabric.

D 123, D13

hang pick, *n*—a pick, caught on a warp yarn knot for a short distance, producing a triangular-shaped hole in the fabric. (*Syn.* hang shot)

D 3990, D13

hang shot—See **hang pick**.

D 3990, D13

hank—specifically, a coiled or looped bundle (as of yarn, rope or wire) usually containing a definite aggregate measure of the material.

D 2864, D27

hardboard—a generic term for a panel manufactured primarily from inter-felted lignocellulosic fibers (usually wood), consolidated under heat and pressure in a hot-press to a density of 31 lb/ft³ (specific gravity 0.50) or greater, and to which other materials may have been added during manufacture to improve certain properties.

medium-density hardboard—a hardboard as previously defined with a density between 31 and 50 lb/ft³ (specific gravity between 0.50 and 0.80).

high-density hardboard—a hardboard as previously defined with a density greater than 50 lb/ft³ (specific gravity 0.80).

D 1554, D07

hardboard nail—slender, usually colored (baked-lacquer finished), stiff-stock or usually hardened-steel, usually annularly threaded, 1 to 1½ by 0.058-in. nails with small flat head and long needle point for fastening plain or prefinished ½ and ¼-in. hardboard for interior applications. Also, slender bright or colored (baked-lacquer finished), galvanized, stiff-stock, or usually hardened-steel, usually helically threaded, 2 to 3 by 0.105 and 0.120-in. nails with countersunk ⅜ or ⅜-in. head and pilot needle point for fastening hardboard for exterior applications.

F 547, F16

hardboard underlayment—a service-grade hardboard made or machined to close thickness tolerances for use as a leveling course and to provide a smooth surface under floor covering materials. **D 1554, D07**

hard chromium—chromium plate for engineering rather than decorative applications. Not necessarily harder than the latter. **B 374, B08**

hard-coating—*in anodizing aluminum*, an anodic oxide coating on aluminum with a higher apparent density and thickness and a greater resistance to wear than conventional coatings. **B 374, B08**

hard-coat system—type of finish system designed to withstand increased impact loads by increasing the strength of the base coat. Also called high-impact system. **E 631, E06**

hardcopy, n—self-sustaining image on a solid substrate. See **softcopy, print, and transparency**. **E 284, E12**

hard-drawn wire—as applied to aluminum and copper, wire that has been cold drawn to final size so as to approach the maximum tensile strength obtainable. **B 354, B01**

hard edge—an edge reinforcement used to either maintain edge integrity under load or at attachment points. **E 631, E06**

hard edge—an edge reinforcement used to either maintain edge integrity under load or at attachment points. **E 1749, E06**

hardenability, n—the property that determines the depth and distribution of hardness induced by **quenching** a steel object. **A 941, A01**

hard end—See **tight twist end**. **D 3990, D13**

hardened—heat-treated medium-carbon or medium-high-carbon-steel, with treating process resulting in toughened nail with greater stiffness at high flexural loads. (See **heat-treated**.) **F 547, F16**

hardened nail—heat-treated medium-low or medium-high carbon-steel nail. **F 547, F16**

hardener—*in grouting*, in a two component epoxy or resin, the chemical component that causes the base component to cure. **D 653, D18**

hardener, n—synonym for **curing agent**. **D 907, D14**

hardening, n—increasing the hardness by suitable treatment, usually involving heating and cooling. **A 941, A01**

hard frozen ground—frozen soil or rock which is firmly cemented by ice. **D 7099, D18**

hard glass—(1) a glass of relatively high viscosity at elevated temperatures.
(2) a glass with a high softening point.
(3) commonly refers to a glass difficult to melt. **C 162, C14**

hardmetal, n—see **cemented carbide**. **B 243, B09**

hard mica, n—mica which when slightly bent shows no tendency to delaminate. **D 1711, D09**

hardness—the relative refractoriness of a porcelain enamel or frit. **C 286, B08**

hardness, n—the resistance of a material to deformation, particularly permanent deformation, indentation, or scratching. **C 709, D02**

hardness, n—*in building construction*, the resistance to indentation as measured under specified conditions. **C 717, C24**

hardness, n—the resistance to indentation as measured under specified conditions. **C 717, C24**

hardness—a term relating to the capacity of wood to withstand denting and abrasion; for purposes of comparison, hardness in wood is often measured as the load in pounds required to embed a 0.444-in. ball to one-half its diameter (Methods D 143). **D 9, D07**

hardness, n—*in water*, dissolved salts of calcium, magnesium, and other cations that destroy the action of soap; expressed as parts per million (ppm) or grains per gallon (gr/gal) of calcium carbonate. (Compare **softness**.) **D 123, D13**

hardness—resistance of a material to indentation or scratching. (ISRM) **D 653, D18**

hardness, n—the polyvalent-cation concentration of water (generally calcium and magnesium). **D 1129, D19**

hardness, n—a physical property of a rubber vulcanizate, characterized by resistance to indentation. **D 1566, D11**

hardness—a term referring to the degree of cooking of a pulp. A hard pulp is one in which the residual lignin content is relatively high. **D 1695, D01**

hardness—a generic term referring to the resistance of a particle to breakdown as measured by specific tests. **D 2652, D28**

hardness, n—*of anelastomer*, the resistance to deformation or indentation. **D 4175, D02**

hardness, n—resistance to permanent deformation or indentation. **D 4175, D02**

hardness, n—the resistance of a material to deformation, particularly permanent deformation, indentation, or scratching. **D 4175, D02**

hardness—the polyvalent-cation concentration of water (generally calcium and magnesium). Usually expressed as mg/L as CaCO₃. **D 6161, D19**

hardness, n—the resistance of a material to deformation, particularly permanent deformation, indentation, or scratching. **E 6, E28**

hardness—a measurement of the resistance to indentation. **F 921, F04**

hardness—a measurement of the resistance to indentation. **F 1078, F04**

hardness—measure of a material's ability to resist abrasion or indentation, or both. **F 1789, F16**

hardness impression—See **impression**. **E 7, E04**

hardpan—a hard impervious layer, composed chiefly of clay, cemented by relatively insoluble materials, that does not become plastic when mixed with water and definitely limits the downward movement of water and roots. **D 653, D18**

hard particle erosion, n—deprecated term; use the preferred synonyms **solid impingement erosion** or **solid particle erosion**. **G 40, G02**

hard points—reinforced points within a sandwich construction to distribute stresses, resist concentrated compression loads, and maintain integrity of an attachment. **E 631, E06**

hard points—reinforced points within a sandwich construction to distribute stresses, resist concentrated compression loads, and maintain integrity of an attachment. **E 1749, E06**

hard rubber, n—deprecated term, see **ebonite**. **D 1566, D11**

hard shaker thermometer—a thermometer in which the constriction is overly severe thereby restricting the passage of mercury back to the bulb causing the thermometer to fail the ease-of-resetting requirements. **E 344, E20**

hard size, n—sections of cloth containing an excessive quantity of sizing. **D 123, D13**

hard size, n—sections of cloth containing an excessive quantity of sizing. (*Syn.* starch lump) **D 3990, D13**

hardware—physical components or apparatus, including major items of equipment. **E 2135, E53**

hard water, n—*intextile conservation*, water having a concentration of more than 60 ppm (3.5 gr/gal) hardness calculated as calcium carbonate. **D 123, D13**

hardwood dimension—hardwood stock processed to the specified thickness, width, and length, or in multiples thereof. **D 9, D07**

hardwoods—generally one of the botanical groups of trees that have broad leaves in contrast to the conifers or softwoods. The term has no reference to the actual hardness of the wood. **D 9, D07**

hard (X-rays)—of short wavelength. **E 7, E04**

Haring cell—A rectangular box of non-conducting material, with principal and auxiliary electrodes so arranged as to permit estimation of throwing power or electrode polarizations and potentials between them. **B 374, B08**

harmonic analysis—an analytical technique whereby the amplitude or phase, or both, of the frequency components of a complex periodic signal is determined. **E 1316, E07**

harmonic distortion—nonlinear distortion characterized by the appearance in the output of harmonics other than the fundamental component when the input wave is sinusoidal. **E 1316, E07**

harmonics—those vibrations which are integral multiples of the fundamental frequency. **E 1316, E07**

harness, n

harness, n—one or more hookup bundles tied, clamped, or otherwise fitted together for final installation; used for interconnecting electrical circuits. **D 1711, D09**

harness, n—a piece of equipment designed to be worn by a climber or mountaineer that provides an attachment point for a rope and a means to support the climber's body during climbing, resting, rappelling, or falling. **F 1773, F08**

harness, chest, n—the part of a combination harness that fits around the upper part of the body. **F 1773, F08**

harness, combination, n—a harness consisting of a sit harness and chest harness. **F 1773, F08**

harness, full-body, n—a harness that fits around the upper part, the waist, and thighs of the body. **F 1773, F08**

harness leather—a self-explanatory term sometimes so defined as to include collar and saddlery leathers. Harness leather, including the related items mentioned, is practically all made of cattlehides, vegetable-tanned, except for a considerable quantity of pigskins used for making saddle seats. **D 1517, D31**

harness, sit, n—a harness that fits around the waist and thighs of the body. Sometimes referred to as a *seat harness*. **F 1773, F08**

harness skip—See **float**. **D 3990, D13**

harsh (as in *harsh asbestos*)—description for asbestos with relatively high harshness. **D 2946, C17**

harshness—apparent property for asbestos that exhibits a significant degree of stiffness or rigidity. **D 2946, C17**

hat leather—usually sheepskin or calfskin for sweatbands of hats. The grain splits of sheepskin are vegetable-tanned for this purpose. **D 1517, D31**

haunch—that portion of the pipe barrel extending from bottom to springline. **C 896, C04**

haunch—that portion of the pipe barrel extending from bottom to springline. **F 412, F17**

haunching—the act of placing bedding material around the haunch of the pipe. **C 896, C04**

haunching—the act of placing bedding material around the haunch of the pipe. **F 412, F17**

hawser twist, n—the construction of cabled yarn, cord, or rope in which the single and first-ply twist are in the same direction and the second-ply twist is in the opposite direction, and S/S/Z or Z/Z/S construction. **D 123, D13**

hawser twist, n—the construction of cabled yarn, cord, or rope in which the single and first-ply twist are in the same direction and the second-ply twist is in the opposite direction, and S/S/Z or Z/Z/S construction. **D 4849, D13**

hazard—the adverse effect(s) that may result from exposure(s). **E 943, E47**

hazard, n—the adverse effect(s) that may result from exposure(s). **E 2114, E06**

hazard, n—source of danger; something that could harm persons or property. **G 126, G04**

hazard assessment, n—the determination of the lack of safety or degree of risk based on all integral parts of an exposure situation, including the characteristics of the chemical(s) to which one is exposed and the conditions that determine degree of exposure. **F 1494, F23**

hazardous biological materials—living biological materials, and products derived therefrom, that pose a potential threat to human health. **E 1705, E48**

hazardous chemical—any solid, liquid, gas, or mixture thereof that can potentially cause harm to the human body through inhalation, ingestion, or skin absorption. **F 1494, F23**

hazardous material—any used or unused personal property, including scrap and waste, that is ignitable, corrosive, reactive, or toxic because of its quantity, concentration, or physical, chemical, or infectious characteristics. The property can be in a solid, liquid, semiliquid, or contained gas form and may cause or significantly contribute to an increase in mortality or serious illness, or pose a

substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed. **E 2135, E53**

hazardous substance—a substance defined as a hazardous substance pursuant to CERCLA 42 USC § 9601(14), as interpreted by EPA regulations and the courts: "(A) any substance designated pursuant to section 1321(b)(2)(A) of Title 33, (B) any element, compound, mixture, solution, or substance designated pursuant to section 9602 of this title, (C) any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of the Solid Waste Disposal Act (42 USC § 6921) (but not including any waste the regulation of which under the Solid Waste Disposal Act (42 USC § 6921 *et seq.*) has been suspended by Act of Congress), (D) any toxic pollutant listed under section 1317(a) of Title 33, (E) any hazardous air pollutant listed under section 112 of the Clean Air Act (42 USC § 7412), and (F) any imminently hazardous chemical substance or mixture with respect to which the Administrator (of EPA) has taken action pursuant to section 2606 of Title 15. The term does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under subparagraphs (A) through (F) of this paragraph, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas)." **D 5681, D34**

hazardous waste—any hazardous waste having the characteristics identified under or listed pursuant to section 3001 of the Solid Waste Disposal Act (42 USC § 6901 *et seq.*) (but not including any waste the regulation of which under the Solid Waste Disposal Act has been suspended by Act of Congress) and so forth. **D 5681, D34**

hazardous waste—liquid or solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics is capable of: (a) causing, or significantly contributing to an increase in mortality or to an increase in serious irreversible, or incapacitating reversible, illness; or (b) posing a substantial present or potential hazard to human health or to the environment when improperly treated, stored, transported, or disposed of, or otherwise managed. **E 631, E06**

hazardous waste, n—waste that is listed as hazardous by the Environmental Protection Agency (EPA) and/or exhibits one or more of the following characteristics: ignitability, reactivity, corrosivity, or toxicity, as specified in the Code of Federal Regulations (CFR) part 261. **E 833, E06**

hazardous waste—liquid or solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics is capable of: (a) causing, or significantly contributing to an increase in mortality or to an increase in serious irreversible, or incapacitating reversible, illness; or (b) posing a substantial present or potential hazard to human health or to the environment when improperly treated, stored, transported, or disposed of, or otherwise managed. **E 1605, E06**

hazardous-waste discharge—accidental or intentional spilling, hazardous-waste leaking, pumping, pouring, emitting, discharge emptying, or dumping of hazardous wastes onto any land or water. **E 631, E06**

hazardous-waste facility—all contiguous land, structures, or other appurtenances, and improvements on the land, used for treating, storing, or disposing of hazardous waste. **E 631, E06**

hazardous-waste landfill—disposal facility or part of a facility where hazardous waste is placed in or on land and that is not a land surface treatment facility, a surface impoundment, or an injection well. **E 631, E06**

hazardous-waste manifest—shipping document (EPA Form 8700-22) used for identifying the quantity, composition, origin, routing, and destination of hazardous waste during its transportation from the point of generation to the point of treatment, storage, or disposal. **E 631, E06**

hazardous-waste small quantity generator—generator who produces less than 100 kg of hazardous waste per month (or accumulates less than 100 kg at any one time) or one who produces less than 1 kg of acutely hazardous waste per month (or accumulates less than 1 kg of acutely hazardous waste at any one time.)

E 631, E06

hazardous-waste storage—holding on-site of hazardous waste for a temporary period, at the end of which the hazardous waste is treated, disposed of, or stored elsewhere.

E 631, E06

hazardous-waste treatment—any method, technique, or process, including neutralization, designed to change the physical, chemical, or biological character or composition of any hazardous waste so as to neutralize it, or render it nonhazardous or less hazardous, or to recover it, make it safer to transport, store, or dispose of, or amenable for recovery, storage, or volume reduction.

E 631, E06

haze—the cloudy or turbid aspect or appearance of an otherwise transparent specimen caused by light scattered from within the specimen or from its surfaces.

D 883, D20

haze—the turbidity produced by the material in some cellulose derivatives that is not completely soluble in the medium. This turbidity may refer to solutions or to the solid plastic.

D 1695, D01

haze—film whose clarity is impaired with varying degrees of opacity.

D 2825, D21

haze, *n*—in reflection, (1) scattering of light at the glossy surface of a specimen responsible for the apparent reduction in contrast of objects viewed by reflection at the surface.

(2) percent of reflected light scattered by a specimen having a glossy surface so that its direction deviates more than a specified angle from the direction of specular reflection. (3) cloudy appearance attributable to light scattering.

E 284, E12

haze, *n*—in transmission, (1) the scattering of light by a specimen responsible for the apparent reduction in contrast of objects viewed through it.

(2) the percent of transmitted light that is scattered so that its direction deviates more than a specified angle from the direction of the incident beam.

E 284, E12

haze—the cloudy or turbid aspect or appearance of an otherwise transparent specimen caused by light scattered from within the specimen or from its surfaces. (D20)

F 412, F17

haze—see **smudge**.

F 549, F05

haze, *n*—in plastics, the cloudy or turbid aspect or appearance of an otherwise transparent material caused by light scattered from within the specimen or from its surfaces.

F 1251, F04

haze—the percent of transmitted light that is scattered so that its direction deviates more than a specified angle from the direction of the incident beam, resulting in the reduction of contrast of objects viewed through the transparency.

F 2429, F07

Hazen color, *n*—see platinum-cobalt color scale.

E 284, E12

hazing, *n*—the fine deposit of ink on the non-image area of the gravure cylinder. It is also referred to as *scumming* or dirty wipe.

D 6488, D01

HDLC—abbreviation for **high-level data link control**.

F 1457, F05

head, *n*—in zippers, the portion of the element that engages the pocket.

D 123, D13

head—pressure at a point in a liquid, expressed in terms of the vertical distance of the point below the surface of the liquid. (ISRM)

D 653, D18

head—that portion of the hide from the snout to the flare into the shoulder.

D 1517, D31

head, *n*—the portion of a element that engages the pocket.

D 2050, D13

head, *n*—pressure at a point in a liquid, expressed in terms of the vertical distance of the point below the surface of the liquid.

D 4439, D35

head—See **windows and doors**.

E 631, E06

head—upset or deformation of shank, usually at or near end of shank opposite point end; formed during manufacture of nail to provide

area to be struck by hammer during driving and to offer bearing resistance.

F 547, F16

head and neck length, *n*—the distance from the crown of the head to the cervicale (contour), taken with the head erect and the neck unbent.

head and neck length (infant special case), *n*—the distance from the crown of the head to the cervicale (contour), taken with the head erect and the neck unbent, with subject lying down flat with legs extended.

D 5219, D13

header—see **manifold**.

D 6161, D19

header tile, *n*—tile designed to provide recesses for brick header units in masonry faced walls.

C 43, C15

head girth, *n*—inbody measurements, the maximum circumference of the head above the ears.

D 123, D13

head girth, *n*—the maximum horizontal circumference of the head above the ears.

D 5219, D13

head height—total height of head; the sum of all head elements measured parallel to nail axis; for practical purposes, measured from top of fillet to top of head.

F 547, F16

heading—a fringe effect appearing on the leading edge (relative to copy machine feed direction) of the developed electrostatic image.

F 335, F05

head joint—the mortar joint perpendicular to the substrate and perpendicular to the direction of the course being laid. On a floor it may be called a cross joint.

C 904, C03

head lap, *n*—(1) the distance between the lower (nose) edge of an overlapping tile and the upper edge of the lapped unit in the course immediately below; (2) *for shingle tile only*—the distance between the lower (nose) edge of an overlapping shingle tile and the upper edge of the lapped unit in the second course below.

C 43, C15

headlap, *n*—in shingles, the shortest distance between the lower edge of an overlapping shingle or sheet and the upper edge of the lapped unit in the second course below.

C 1154, C17

headlap, *n*—in roofing, for products installed in a shingle fashion, the area on a shingle or sheet material that is covered by the requisite number of layers in multiply construction; for example, two layers on a strip shingle or three layers in a three-ply built-up roof. Headlap is commonly referred to by its width, thus the designation by linear dimension.

D 1079, D08

headlap—the shortest distance between the lower edge of an overlapping shingle or sheet and the upper edge of the lapped unit in the second course below.

D 2946, C17

head length—on a hook-head or similarly headed nail, projected distance between shank and extremity of head.

F 547, F16

headless—nail without upset or bend at head end.

F 547, F16

head loss—the reduction in liquid pressure usually associated with the passage of a solution through a filter media bed.

D 6161, D19

head rim—peripheral part of head.

F 547, F16

head signature, *n*—a condition where one pass of jets overlaps the next pass causing positive stitch lines. See also **stitch lines.**

F 1857, F05

head space—the unfilled space in a glass container fitted with a closure device.

C 162, C14

head space—volume in the upper portion of the dispenser not filled with liquid contents usually expressed as percent of total volume of dispenser at a specified temperature.

D 3064, D10

headspace, *n*—the unfilled capacity of an ampule that allows for physical expansion due to temperature and pressure changes of the filled material while maintaining the integrity of the package.

D 4175, D02

head, static—the height above a standard datum of the surface of a column of water (or other liquid) that can be supported by the static pressure at a given point. The static head is the sum of the elevation head and the pressure head.

D 653, D18

head-to-shank integrity—assurance that a headed fastener under load is able to meet its mechanical and performance requirements without failure at the junction of the head to shank.

F 1789, F16

head (total)—the sum of three components at a point: (1) elevation

head (total)

- head, *h* which is equal to the elevation of the point above a datum;
(2) pressure head, *hp*, which is the height of a column of static water than can be supported by the static pressure at the point; and
(3) velocity head, *hv*, which is the height the kinetic energy of the liquid is capable of lifting the liquid. **D 653, D18**
- headwave**—a wave that is generated by mode conversion when a point source is located at the boundary of an elastic half-space. **E 1316, E07**
- heal**, *v*—to restore wounded parts or to make healthy. **F 2312, F04**
- healing**—the ability of a polish film to return to original state after being disturbed by fingerprints, marks, etc. **D 2825, D21**
- healing**, *n*—the restoration of integrity to injured tissue. **F 2312, F04**
- healing by first intention**, *n*—healing in which union or restoration of continuity occurs directly without intervention of granulations. **F 2312, F04**
- healing by second intention**, *n*—union by closure of a wound with granulations which form from the base and both sides toward the surface of the wound. **F 2312, F04**
- healing power**—the ability of a glaze to heal surface blemishes during firing. **C 242, C21**
- health care provider**—an organization, institution, or individual authorized to provide direct patient care. **F 1177, F30**
- heartwood**—the inner layer of a woody stem wholly composed of nonliving cells and usually differentiated from the outer enveloping layer (sapwood) by its darker color. It is usually more decay resistant than sapwood. **D 9, D07**
- heat**, *n*—the total molten metal output from a single heating in a batch melting process or the total molten metal output from essentially a single heating in a continuous melting operation using basically constant charge and processing conditions and targeted at a fixed metal chemistry at the furnace spout. A heat can also be defined as a fixed time period for a continuous melting operation provided that it is shorter than the time period covered by the above definition. **A 644, A04**
- heat**, *n*—a specific lot of material representing a single melt of steel produced to a specified chemical analysis. **A 902, A05**
- heat**, *n*—a generic term denoting a specific lot of steel, based upon steelmaking and casting considerations. **A 941, A01**
- heat**, *n*—refer to melt. **B 899, B02**
- heat-absorbing glass**—glass having the property of absorbing a substantial percentage of radiant energy in the near infrared of the spectrum. **C 162, C14**
- heat activated adhesive**, *n*—adhesive, typically preapplied to one or both adherends, that is rendered tacky by application of heat and forms a bond on cooling. **D 907, D14**
- heat-actuated cooling**—the use of thermal energy to initiate a thermodynamic cycle which results in a local decrease in temperature. **E 772, E44**
- heat analysis**, *n*—the chemical composition of a specific production lot of liquid steel. **A 902, A05**
- heat analysis**, *n*—the chemical analysis determined by the steel producer as being representative of a specific heat of steel. **A 941, A01**
- heat analysis**—chemical analysis of a given heat by the producer which determines the percentages of its elements. **F 1789, F16**
- heat attenuation factor HAF**, *n*—in electric arc testing, the percent of the incident energy which is blocked by a material at an incident energy level equal to ATPV. **F 819, F18**
- heat buildup**, *n*—the accumulation of thermal energy generated within a material as a result of hysteresis, evidenced by an increase in temperature. **D 1566, D11**
- heat capacity**, *n*—Synonym for energy equivalent. **D 121, D05**
- heat capacity**, *n*—the quantity of heat required to raise a system one degree in temperature either at constant volume or constant pressure. **D 5681, D34**
- heat capacity**—the quantity of heat required to raise a system one degree in temperature either at constant volume or constant pressure. **D 5681, D34**
- heat capacity**—the amount of heat required to raise the temperature of a unit mass of a substance by one degree. It is commonly expressed in Joules per kg per degree K. **D 7099, D18**
- heat capacity**—see thermal capacity. **E 772, E44**
- heat capacity**—quantity of heat necessary to change the temperature of an entity, substance or system by one Kelvin of temperature. **E 1142, E37**
- heat capacity (energy equivalent, or water equivalent)**, *n*—the energy required to raise the temperature of a calorimeter one arbitrary unit; the quantity that when multiplied by the corrected temperature rise, then adjusted for extraneous heat effects and divided by the mass of the sample, gives the gross calorific value. **D 5681, D34**
- heat, chemical**, *n*—sensation of increased temperature resulting from exposure to substances such as capsaicin or hot peppers. The sensation tends to persist after the stimulus is removed. **E 253, E18**
- heat durability**, *n*—the extent to which a material retains its useful properties at ambient air conditions, following its exposure to a specified temperature and environment for a specified time and its return to the ambient air conditions. (Compare heat resistance.) **D 123, D13**
- heat durability**, *n*—the extent to which a material retains its useful properties at ambient air conditions, following its exposure to a specified temperature and environment for a specified time and its return to the ambient air conditions. (Compare heat resistance.) **D 4391, D13**
- heat durable**, *adj*—having heat durability. **D 123, D13**
- heat durable**, *adj*—having heat durability. **D 4391, D13**
- heat exposure**, *v*—the process of subjecting a specimen to an elevated temperature at atmospheric pressure for a specified period of time with the intent of determining properties by subsequent testing. **D 1079, D08**
- heat fixing**—the process of making a developed image permanent by heating. **F 335, F05**
- heat flow; heat flow rate, Q**, *n*—the quantity of heat transferred to or from a system in unit time. (*Q* in SI units: *W*.) (*Q* in inch-pound units: Btu/h.) **C 168, C16**
- heat flow**, *n*—dissipation or transfer of heat coming from within the earth by conduction, convection or radiation at the surface; usually reported in units of energy per unit time per unit area, for example, joules per second per square metre or watts per square metre. **E 957, E44**
- heat flux**, *n*—the thermal intensity indicated by the amount of power per unit area. **D 123, D13**
- heat flux**, *n*—the thermal intensity indicated by the amount of power per unit area. **D 4391, D13**
- heat flux**, *n*—heat transfer to a surface per unit area, per unit time. **E 176, E05**
- heat flux**, *n*—the thermal intensity indicated by the amount of energy transmitted divided by area and time kW/m^2 ($\text{cal/cm}^2\text{s}$). **F 819, F18**
- heat flux**, *n*—the thermal intensity indicated by the amount of energy transmitted per unit area and per unit time ($\text{cal/cm}^2\text{-s}$) (watts/cm^2). **F 1494, F23**
- heat flux, q**, *n*—the heat flow rate through a surface of unit area perpendicular to the direction of heat flow.
(*q* in SI units: W/m^2)
(*q* in inch-pound units: $\text{Btu/h/ft}^2 = \text{Btu/h ft}^2$) **C 168, C16**
- heat flux transducer, HFT**, *n*—a device containing a thermopile (or equivalent) that produces an output which is a function of the heat flux. **C 168, C16**
- heat for ignition**, *n*—the product of time from initial specimen exposure until the flame front reaches the 150-mm position and the flux level at this position, the latter obtained in prior calibration of the apparatus. **E 176, E05**
- heat for sustained burning**, *n*—the product of time from initial

- specimen exposure until the arrival of the flame front, and the incident flux level at that same location as measured with a dummy specimen during calibration. **E 176, E05**
- heat-fused joint**—see **joint, heat-fused**. **F 412, F17**
- heat gun**—blower-equipped apparatus that emits heat with sufficient intensity to soften dried paint to permit scraping from the surface. **E 631, E06**
- heat gun**—blower-equipped apparatus that emits heat with sufficient intensity to soften dried paint to permit scraping from the surface. **E 1605, E06**
- heating curve**—graphical representation of the course of temperature rise of a sample or body as a function of time. **E 7, E04**
- heating flux, *n***—the prescribed incident flux imposed externally from the heater onto the specimen at the initiation of the test. **E 176, E05**
- heating flux, *n***—the incident flux imposed externally from the heater on the specimen at the initiation of the test. **E 176, E05**
- heating loss, *n***—mass loss, in percent, when carbon black is heated at 125°C for 1 h; the heating loss is primarily attributed to moisture content. **D 3053, D24**
- heat island effect, *n***—see **urban heat island**. **E 2114, E06**
- heat joining**—making a joint by heating the mating surfaces of the pipe components to be joined and pressing them together so that they fuse and become essentially one piece. **F 412, F17**
- heat loss rate**—the rate at which heat is lost from a system or component of a system, per degree temperature difference between its average temperature and the average ambient air temperature. **E 772, E44**
- heat mark**—extremely shallow depression or groove in the surface of a plastic visible because of a sharply defined rim or a roughened surface. (See also **shrink mark**.) **D 883, D20**
- heat mark**—extremely shallow depression or groove in the surface of a plastic visible because of a sharply defined rim or a roughened surface. (See also **sink-mark**.) (D20) **F 412, F17**
- heat number, *n***—the alpha, numeric, or alphanumeric designator used to identify a specific **heat of steel**. **A 941, A01**
- heat of adsorption**—the heat evolved during adsorption. **D 2652, D28**
- heat of formation**—the increase in heat content resulting from the formation of 1 mole of a substance from its elements at constant pressure. **D 5681, D34**
- heat of hydration**—heat evolved by chemical reactions with water, such as that evolved during the setting and hardening of Portland cement. **D 653, D18**
- heat, physical, *n***—sensation experienced as a result of exposure to thermally hot substances such as water above 120°F. The duration of the sensation is usually limited to the time of direct contact with the stimulus. **E 253, E18**
- heat release rate, *n***—the heat evolved from the specimen, per unit of time. **E 176, E05**
- heat release rate, *n***—the calorific energy released per unit time by the combustion of a material under specified test conditions. **E 176, E05**
- heat release rate, *n***—the heat evolved from the specimen, expressed per unit area of exposed specimen area per unit of time. **E 176, E05**
- heat release rate, *n***—the heat evolved from the specimen, per unit of time. **E 176, E05**
- heat release rate, *n***—the heat evolved from the specimen per unit of time and area. **E 176, E05**
- heat resistance, *n***—the extent to which a material retains useful properties as measured during exposure of the material to a specified temperature and environment for a specified time. (Compare **heat durability**.) **D 123, D13**
- heat resistance, *n***—the extent to which a material retains useful properties as measured during exposure of the material to a specified temperature and environment for a specified time. (Compare **heat durability**.) **D 4391, D13**
- heat resistance**—extent to which a material retains useful properties as measured during exposure of the material to a specified temperature and environment for a specified time. **F 1789, F16**
- heat resistant, *adj***—having heat resistance. **D 123, D13**
- heat resistant, *adj***—having heat resistance. **D 4391, D13**
- heat-resisting glass**—glass able to withstand a relatively high thermal shock, because of low expansion coefficient or a high mechanical strength, or both. **C 162, C14**
- heat sanitize**—fresh water, heater to a minimum specified temperature (usually a minimum of 180°F), to destroy or kill any residual bacteria from tableware. **F 1827, F26**
- heat sanitizing, continuous oval-conveyor type**—dishwashing machine and conveyor-table when assembled, shall form an oval-shaped dish handling system. Machines shall automatically convey racks of soiled tableware through the treatment stages, including a final heat sanitizing rinse of the machine, conveying them out to the clean tableware removal area of the conveyor: additional parts: recirculating pre-wash chamber, rinse chamber, conveying mechanisms, heating equipment and horizontal conveyor tables. See **dishwashing machine, commercial**. **F 1827, F26**
- heat sanitizing, conveyor rack type**—machines that automatically convey racks of soiled tableware through treatment stages and final heat sanitizing rinse, conveying them out at the clean end of the machine; additional parts: rinse chamber, heating equipment, and conveying mechanism. See **dishwashing machine, commercial**. **F 1827, F26**
- heat sanitizing, rackless conveyor type**—machines shall automatically convey unracked soiled tableware through the treatment stages, includes a final heat sanitizing rinse, conveying them out at the clean end of the machine; additional parts: rinse chamber, conveying mechanisms, and heating equipment. See **dishwashing machine, commercial**. **F 1827, F26**
- heat sanitizing, stationary rack type**—manually fed machines, includes a final heat sanitizing rinse; additional parts: heating equipment. See **dishwashing machine, commercial**. **F 1827, F26**
- heat seal**—See **seal**. **D 996, D10**
- heat seal**—the result of bonding surfaces by controlled application of heat, pressure, and dwell time. **F 1327, F02**
- heat sealing adhesive tape**—a strip of material (usually fabric, metal foil, paper, or plastic film) coated with an adhesive activated with the application of heat. **E 631, E06**
- heat sealing adhesive tape**—a strip of material (usually fabric, metal foil, paper, or plastic film) coated with an adhesive activated with the application of heat. **E 1749, E06**
- heat sensitive**—a material composition that will produce an image from application of localized heat. **F 221, F05**
- heat-sensitive dipping (latex), *n***—dipping process in which a heated form is immersed in latex containing a substance that causes the latex to gel at an elevated temperature. **D 1566, D11**
- heat sensitizer, *n***—gelling agent effective only at elevated temperature. **D 1566, D11**
- heatset yarn, *n***—*in a textured yarn*, a yarn that is subjected to secondary heat during the texturing process, which is designed to reduce the torque and bulk shrinkage. **D 4849, D13**
- heatset yarns, *n***—*in a textured yarn*, a yarn that is subjected to a secondary heat during the texturing process, which is designed to reduce the torque and bulk shrinkage. **D 123, D13**
- heat shrinkage, *n***—a decrease in one or more dimensions of an object or material exposed to heat. **D 123, D13**
- heat shrinkage, *n***—a decrease in one or more dimensions of an object or material exposed to heat. **D 4849, D13**
- heat-strengthened glass**—flat glass that has been tempered to a moderate surface or edge compression to meet the requirements of Specification C 1048. (See **fully tempered glass**.) **C 162, C14**
- heat stress, *n***—(physiological) adverse condition caused by exposure to elevated temperature, radiant heat flux, or combinations of these factors. **E 176, E05**
- heat transfer fluid**—(1) *in solar energy systems*, a liquid or gas that

heat transfer fluid

passes through the solar collector and carries the absorbed thermal energy away from the collector. (2) any fluid that is used to transfer thermal energy between subsystems in solar energy systems.

F 772, E44

heat-treated—a term sometimes used for tempered glass. (See **tempered glass**.)

C 162, C14

heat-treated—heated above critical temperature and subsequently quenched, which may be followed by tempering for the purposes of obtaining certain desirable conditions or properties, such as hardness, toughness, and stiffness at high flexural loads.

F 547, F16

heat-treating—the process of subjecting a wood-base panel material (usually hardboard) to a special heat treatment after hot pressing to increase some strength properties and water resistance.

D 1554, D07

heat treatment, n—heating and cooling a steel object in such a way as to obtain desired conditions or properties.

A 941, A01

heat treatment—heating to a temperature that produces metallurgical changes in the steel that alter the mechanical properties and microstructure of the metal.

F 2078, F07

heat-up efficiency—the energy imparted to a food product, expressed as a percentage of energy consumed by the equipment during a cooking event, in which a food product is heated from a predetermined initial temperature to a predetermined final temperature, η *heat-up*.

F 1827, F26

heat-up temperature response—temperature rise on the surface of a steel plate during the test period in accordance with the heat-up temperature-response test.

F 1827, F26

heat welded seam, n—a seam produced by grooving abutting edges of resilient flooring and filling said grooves with heated, fused, or melted material to provide a bond and seal. A glazing or top coating may be applied after the seam is trimmed.

F 141, F06

heave—upward movement of soil caused by expansion or displacement resulting from phenomena such as: moisture absorption, removal of overburden, driving of piles, frost action, and loading of an adjacent area.

D 653, D18

heave response—ability of the boom to react to the vertical motion of the water surface.

F 818, F20

heaving pressure—upward pressure developed during freezing of the ground.

D 7099, D18

heavy-centered spray pattern—in *protective coatings*, an uneven spray pattern having more coating in the center, and less at the edges.

D 4538, D33

heavy distillate, n—a fuel produced from the distillation of crude oil which has a kinematic viscosity at 40°C between 5.5 and 24.0 mm²/s, inclusive.

D 4175, D02

heavy distillate/residual fuel oil blend, n—a blend of heavy distillate and residual fuel oil having a viscosity at 40°C between 5.5 and 24.0 mm²/s, inclusive.

D 4175, D02

heavy duty, adj—in *internal combustion engine operation*, characterized by average speeds, power output, and internal temperatures that are close to the potential maximums.

D 4175, D02

heavy-duty, adj—in *internal combustion engine operation*, characterized by average speeds, power output, and internal temperatures that are generally close to the potential maximums.

D 4725, D15

heavy-duty engine, n—in *internal combustion engines*, one that is designed to allow operation continuously at or close to its peak output.

D 4175, D02

heavy-duty engine, n—in *internal combustion engine types*, one that is designed to allow operation continuously at or close to its peak output.

D 4725, D15

heavy-duty tires, n—tires weighing more than 40 lb (18.1 kg), used on trucks, buses, and off the road vehicles in heavy-duty applications.

D 5681, D34

heavy end—See **coarse end**.

D 3990, D13

heavy filling—See **coarse pick**.

D 3990, D13

heavy leather—a somewhat indefinite term, generally understood to include vegetable-tanned sole, belting, strap, and mechanical

leathers made from unsplit cattlehides. More recently it also refers to thick side leathers.

D 1517, D31

heavy metals—elements having a high density or specific gravity of approximately 5.0 or higher. A generic term used to describe contaminants such as cadmium, lead, mercury, etc. Most are toxic to humans in low concentration.

D 6161, D19

heavy metal wastes—industrial wastes containing heavy metals such as arsenic, cadmium, chromium, barium, lead, silver, selenium, and mercury; these wastes are generally liquids, sludges, or filter cakes.

D 5681, D34

heavy nail, heavy-gage nail—See **stout nail**.

F 547, F16

heavy pick—See **coarse pick**.

D 3990, D13

hedonic scale, n—a scale on which liking or disliking of a stimulus is expressed.

E 253, E18

heel, n—a solid part of a shoe or boot projecting downward and attached to or forming the back part of the sole under the heel of the foot.

F 1646, F13

heel-ankle circumference, n—in *body measurements*, with the subject standing barefoot, the distance around the foot from the point where the back of the heel contacts the floor and over the juncture of the foot and leg at the front of the ankle and back to the starting point.

D 123, D13

heel, b_H—the widest part of the ski in the tail section of the ski.

F 472, F27

heel breast, n—the forward or front face of a shoe heel.

F 1646, F13

heel contact—the region on a glass container surface, located between the bearing surface and the sidewall sections, which normally contacts other similarly shaped and upright containers.

C 162, C14

heel (of the snowboard)—the widest part of the tail section of the snowboard.

F 1107, F27

heel seat, n—the part of a shoe to which the heel is attached.

F 1646, F13

heel tap—an imperfection in which the base or bottom of a bottle is very thick in one area and very thin in another.

C 162, C14

heel-toe wear, n—a type of irregular wear characterized by different wear rates at the leading and trailing edges of a projection (element).

F 538, F09

height, n—vertical dimension of the face of a unit when the unit is positioned as a stretcher.

C 1232, C15

height, n—in *body measurements*, the vertical distance from the crown of a standing subject to the soles of the feet.

D 123, D13

height, n—the vertical distance from the crown of the head to the floor, taken with subject standing and without shoes.

height (infant special case), n—the straight distance from the top of the head to the soles of the feet, taken while subject is lying down flat with legs extended and foot positioned at 1.57 rad (90°) to the leg.

D 5219, D13

height, n—of a building, the vertical distance measured from the finished grade to average level of the roof above the level of the highest wall.

E 631, E06

height—distance between root and crest, measured perpendicular to nail axis.

F 547, F16

height—the distance before stretching from one outer edge of a knuckle or twist to the outer edge of the knuckle or twist on the opposite edge of fabric.

F 552, F14

height—sum of draft and freeboard.

F 818, F20

height of capillary rise—see **capillary rise**.

D 653, D18

helical, n—the most simple pattern in a barbed tape coil where there are no concertina attachments and each coil loop is left free in its natural spiral (also called *spiral*).

F 1379, F14

helical loop spacing, n—average distance between each coil loop in a helical coil configuration.

F 1379, F14

helical thread—continuous multiple helical depressions rolled onto nail shank with resulting expansion approximately equal to depression. Unless otherwise specified, medium lead angle is implied.

F 547, F16

heliostat—a reflector that is mechanically moved so that solar flux is reflected in a constant direction to a stationary receiver or target.

E 772, E44

helium accumulation fluence monitor (HAFM)—a passive neutron dosimeter whose measured reaction product is helium. The neutron fluence is obtained by dividing the helium concentration by the spectrum-averaged cross section (see **spectrum-averaged cross section**). (See also Test Method E 910 and ASTM Master Matrix E 706)

E 170, E10

helium bombing—a pressure-evacuation test in which helium is used as the test gas.

E 1316, E07

helium drift—(1) in leak testing with a probe, the drift from a leak or permeable gasket located at some distance from the end of the probe but which is detected by the probe and can mislead the operator into suspecting the area near the probe; (2) a gradual wandering of the output meter needle of the leak detector due to slowly changing helium concentrations (either due to a leak or outgassing) in the detector tube. Expressed in scale divisions per unit time.

E 1316, E07

helium leak detector—a leak detector using helium as the tracer gas.

E 1316, E07

helix angle—See **lead angle**.

F 547, F16

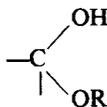
helmet, *n*—a piece of equipment designed to provide protection to climbers' heads from falling objects and the impact of a fall.

F 1773, F08

hem, *n*—*in garment construction*, a simple finish in which the raw fabric edge is turned under and stitched to a garment. (See **cuff**.)

F 1494, F23

hemiacetal groups—functional groups derived from carbonyl groups by addition of one molecule of an alcohol, of the general structure:



D 1695, D01

hemicellulose—any of a number of cell-wall polysaccharides that are removable by extraction with aqueous alkali and that may be hydrolyzed by boiling with dilute acids to give constituent monosaccharide units; any of the noncellulosic cell-wall polysaccharides.

D 1695, D01

hemic peat—peat in which the original plant fibers are moderately decomposed (between 33 and 67 % fibers).

D 653, D18

hemihydrate, *n*—the dry powder, calcium sulfate hemihydrate, resulting from calcination of $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$, calcium sulfate dihydrate. See **calcined gypsum**.

C 11, C11

hemispherical, *adj*—see **hemispherical optical measuring system**.

E 284, E12

hemispherical, 2π —over an entire hemisphere. It is assumed that the incident radiance is uniform in density over the hemisphere.

E 772, E44

hemispherical optical measuring system, *n*—an optical measuring system for measuring the reflecting or transmitting properties of specimens, wherein either the specimen is uniformly irradiated from all directions within the hemisphere on one side of the specimen or the flux emanating from the specimen is evaluated uniformly for all directions within a hemisphere.

E 284, E12

hemispherical temperature (HT), *n*—*in reference to the fusibility of coal and coke ash according to Test Method D 1857*, the temperature at which the cone has fused down to a hemispherical lump at which point the height is one half the width of the base.

D 121, D05

hemispherical temperature, HT, *n*—the temperature at which a pyrometric cone has fused down to a hemispherical lump where the height is one half the width of the base.

D 5681, D34

hemispherical temperature, HT—the temperature at which the cone

has fused down to a hemispherical lump at which point the height is one half the width of the base.

D 5681, D34

hemostatic forceps—an instrument, available in various sizes and configurations, used in surgical procedures for the compression of blood vessels and the grasping of tissue.

F 921, F04

henry (plural henries), H—the unit of self- or mutual inductance.

The henry is the inductance of a circuit in which a voltage of 1 V is induced by a uniform rate of change 1 A/s in the circuit. Alternatively, it is the inductance of a circuit in which an electric current of 1 A/s produces a flux linkage of one weber turn (Wb turn) or 10^8 maxwell-turns. See **inductance, mutual, and inductance, self**.

A 340, A06

Henry's Law, *n*—the principle that the mass of a gas dissolved in a liquid is proportional to the pressure of the gas above the liquid.

D 4175, D02

Henry's Law, *n*—the principle that the ratio of partial pressure to mole fraction of gas in solution is a constant.

D 4175, D02

HEPA filter—see **high-efficiency particulate air filter**.

E 631, E06

HEPA filter—see **high-efficiency particulate air filter**.

E 1605, E06

herbaceous plants—nonwoody species of vegetation, usually of low lignin content such as grasses.

E 1705, E48

hermetically sealed aseptic container—a container that is designed and intended to be secure against the entry of microorganisms and thereby to maintain the commercial sterility of its contents.

F 17, F02

hermetically sealed aseptic container—See **Terminology F 17**.

F 1327, F02

hermetically tight seal—a seal which does not exhibit leakage when dynamically tested with commercially built leak detectors that are sensitive to a gas on the pressure side opposite to the side on which the leak detector is located, or which does not exhibit leakage with any form of liquid test.

E 1316, E07

hermetic seal—See **seal**.

D 996, D10

herringbone—a series of long continuous waves running at various angles to the rolling direction.

B 846, B05

herringbones, *n*—*in mica*, numerous rulings that intersect to form a series of "V's" with included angles of about 120° .

D 1711, D09

hertz, Hz—the unit of cyclic frequency, *f*.

A 340, A06

Hertzian cone crack—See **percussion cone**.

C 162, C14

Hertzian contact area, *n*—the apparent area of contact between two nonconforming solid bodies pressed against each other, as calculated from Hertz' equations of elastic deformation.

D 4175, D02

Hertzian contact area, *n*—the apparent area of contact between two nonconforming solid bodies pressed against each other, as calculated from Hertz' equations of elastic deformation.

G 40, G02

Hertzian contact pressure, *n*—the magnitude of the pressure at any specified location in a Hertzian contact area, as calculated from Hertz' equations of elastic deformation.

D 4175, D02

Hertzian contact pressure, *n*—the magnitude of the pressure at any specified location in a Hertzian contact area, as calculated from Hertz' equations of elastic deformation.

G 40, G02

Hertzian stress—See **contact stress**.

C 162, C14

Hertz line, *n*—a line of plot on logarithmic paper, where the coordinates are scar diameter in millimetres and applied load in kilograms-force (or newtons), obtained under static conditions.

D 4175, D02

Hertz scar diameter, *n*—the average diameter, in millimetres, of an indentation caused by the deformation of the balls under static load (prior to test). It may be calculated from the equation

$$D_h = 8.73 \times 10^{-2} (P)^{1/3}$$

where:

D_h = Hertz diameter of the contact area, and

P = the static applied load.

D 4175, D02

hesitation, *n*—a pause in the writing without the instrument being lifted.

E 2195, E30

heterogeneity

heterogeneity—having different properties at different points. (ISRM) **D 653, D18**

heterogeneity, *n*—the condition or degree of the population under which all items of the population are not identical with respect to the characteristic(s) of interest. **D 5681, D34**

heterogeneity, *n*—the condition of the population under which items of the population are not identical with respect to the characteristic of interest. **D 5681, D34**

heterogeneous—non-uniform in microstructure or composition. **E 7, E04**

heterogeneous, *adj*—consisting of dissimilar ingredients, constituents or compositions. **F 141, F06**

heterogeneous equilibrium—in a chemical system, a state of dynamic balance amongst two or more homogeneous phases which are capable of stable coexistence in mutual or sequential contact. **E 7, E04**

heterogeneous rubber flooring, *n*—a rubber floor surfacing material consisting of layers of dissimilar compositions or colors, or both. See also Specification F 1860. **F 141, F06**

heterogeneous vinyl flooring, *n*—a vinyl floor surfacing material consisting of layers of dissimilar compositions or colors, or both. **F 141, F06**

hex, *n*—abbreviation for **hexadecimal**. **F 1457, F05**

hexadecimal, *n*—a base-16 numbering system consisting of 16 different digits, 0 through 9 and A through F. (See **hex**.) **F 1457, F05**

hexagonal close packed:—(1) a structure containing two atoms per unit cell located at (0, 0, 0) and ($\frac{1}{2}$, $\frac{\sqrt{3}}{2}$, $\frac{1}{2}$) (or $\frac{2}{3}$, $\frac{1}{3}$, $\frac{1}{2}$).

(2) one of the two ways in which spherical objects can be most closely packed together, such that the close-packed planes are alternately staggered in the order A-B-A-B-A-B. **E 7, E04**

hexagonal (concerning lattices for crystals)—Having two equal coplanar axes, a_1 and a_2 , at 120 deg to each other and a third axis, c , at right angles to the other two; c may or may not be equal to a_1 and a_2 . **E 7, E04**

hexosan—frequently used in contradistinction to pentosan, for a polysaccharide consisting mainly of hexose units. **D 1695, D01**

Heyn method—an intercept method for determining grain size. See Test Methods E 112. **E 7, E04**

H-gasket—See **gasket, lock-strip, H-type**. **C 717, C24**

hickey, *n*—an imperfection caused by dirt, hardened ink, paper debris or other unwanted particles that cling to the press or plate during printing. **D 6488, D01**

hickey, *halo, n*—a doughnut shaped hickey with an inked center, often caused by foreign particles such as ink skin. **D 6488, D01**

hickey, *void, n*—a totally un-inked spot on the printed sheet, often caused by dust or pick-outs that adhere to the offset blanket or plate, thereby interfering with transfer of ink. **D 6488, D01**

hide—the pelt of a large animal, such as cow, horse, etc. Also used interchangeably with **Skin**. **D 1517, D31**

hide grades—standard hide grades, take-up, and delivery practice are given in the booklet, "Approved Standard Practice Governing the Take-Up and Delivery of Domestic Packer Hides," published by The Leather Industries of America, Inc., 1000 Thomas Jefferson Street NW, Suite 515, Washington, DC 20007. **D 1517, D31**

hide powder—purified, shredded rawhide as a reagent in the determination of tannins. **D 1517, D31**

Hide Powder, Standard—any lot of hide powder officially approved by the American Leather Chemists Association. **D 1517, D31**

hide substance—nitrogen content of hide or leather multiplied by 5.62. **D 1517, D31**

hiding—the ability of the applied polish to cover scuff marks made by scratches in the shoe finish. **D 2825, D21**

hiding power, *n*—the ability of a paint, or paint material as used, to hide or obscure (see **opacity**) a surface to which it has been uniformly applied. **D 16, D01**

hiding power, *n*—(1) the ability of a coating material to hide the surface coated by producing a specified opacity.

(2) the area over which a specified volume of paint can be spread to produce a specified contrast, C_c , between areas where the substrate is black and where it is white. **E 284, E12**

hierarchical experiment, *n*—see **nested experiment**. **E 456, E11**

hierarchical experiment, *n*—see **nested experiment**. **E 1325, E11**

high brackish water—water with an approximate concentration of total dissolved solids ranging from 10 000 to 30 000 mg/L. See **brackish water** and **sea water**. **D 6161, D19**

high-calcium—indicates the presence of 0 to 5 % magnesium carbonate ($MgCO_3$) in the limestone from which the material was formed. **C 51, C07**

high-calcium limestone—see **limestone**. **C 51, C07**

high-carbon steel—See **steel grades**. **F 547, F16**

high-center polygon—an ice-wedge polygon in which melting of the surrounding ice wedges has left the center in a relatively elevated position. **D 7099, D18**

high-clearance sprayer—an apparatus consisting of the components of a boom sprayer mounted on a self-propelled vehicle whose frame is constructed to permit the vehicle to pass over plants with minimum damage. **E 1102, E35**

high-conductivity copper—copper that in the annealed condition has a minimum electrical conductivity of 100 % IACS. **B 846, B05**

high crown—staple crown with inverted "V" wire cross-section prior to staple driving; designed to provide rigidity during driving and flattened when fully driven. (see "V" **Crown**.) **F 592, F16**

high-density fiberboard nail—See **shake nail, shingle nail, wood shingle** and **asbestos shingle nail**. **F 547, F16**

high-density particleboard—a particleboard as previously defined with a density greater than 800 kg/m³ (50 lb/ft³) based on a reported moisture content at the time of weight and volume measurements.

NOTE—It is the industry practice to measure density of particleboards on the basis of moisture content and volume at time of test.

D 1554, D07

high-density polyethylene plastics (HDPE), *n*—those linear polyethylene plastics, having a standard density of 0.941 g/cm³ or greater. (D20) **F 412, F17**

high density polyethylene plastics, (HDPE) *n*—those linear polyethylene plastics, g. v., having a standard density of 0.941 g/cm³ or greater. **D 883, D20**

high-efficiency particulate air (HEPA) filter—filter capable of separating out particles of 0.3 μ m or greater from a body of air at 99.97 % efficiency or greater. See also **ULPA filter**. **E 631, E06**

high-efficiency particulate air (HEPA) filter—filter capable of separating out particles of 0.3 μ m or greater from a body of air at 99.97 % efficiency or greater. See also. **E 1605, E06**

high elongation, *adj*—in **steel tire cord**, a cord with an average elongation at break greater than 3.0%. **D 123, D13**

high elongation, *adj*—in **steel tire cord**, a cord with an average elongation at break greater than 3.0%. **D 6477, D13**

higher heating value—the energy content of gas (Btu/ft³), measured at standard conditions, **HV**. **F 1827, F26**

higher heating value, HHV, *n*—a synonym for gross calorific value. **D 5681, D34**

higher heating value (HHV)—a synonym for gross calorific value. **E 856, D34**

high-hip girth, *n*—in **body measurements**, the circumference of the body at a point approximately 7.5 cm (3 in.) below the waist and parallel to the floor. (Compare **hip girth**.) **D 123, D13**

high-hip girth, *n*—the maximum horizontal circumference around the body, taken at high hip level approximately 7.5 cm (3 inches) below the waist level including the abdominal extension. **D 5219, D13**

high-hip height, *n*—the distance from the high-hip girth level to the hip girth level along the side of the body (contour) then vertically to the floor, taken with the subject standing and without shoes. **D 5219, D13**

high-level data link control, *n*—a CCITT standard for communication line protocol. (See HDLC.) F 1457, F05

high life expectancy, LE-100, *n*—of paper, a paper is expected to be usable for 100 years. D 1968, D06

high life expectancy paper, LE-100, *n*—for paper, a paper expected to be usable for 100 years when stored under prescribed conditions. D 1968, D06

highlighting lines, *n*—in label printing, horizontal, thick, divider lines placed above and below the package identification building block. F 1294, F05

high lights—those portions of a metal article most exposed to buffing or polishing operations, and, hence, having the highest luster. B 374, B08

highloft nonwoven fabric, *n*—a low-density fiber network structure characterized by a high ratio of thickness to mass per unit area. D 123, D13

high-modulus aramid, *n*—for the purpose of these test methods, those aramid yarns with an initial modulus of at least 400 gf/den (35 N/tex). D 123, D13

high-phosphate detergent—detergent that contains the phosphate equivalent of at least 5 % tri-sodium phosphate (TSP). E 631, E06

high point, High—the point on a force-displacement plot, at the start of an unloading-reloading cycle, at which the displacement reverses direction, that is, the point at which the specimen mouth begins closing due to unloading. E 1823, E08

high-pressure, (HP...), *adj*—a prefix for different thermoanalytical techniques in which the pressure in the apparatus is above ambient. (ICTAC)

NOTE—As an example, high-pressure thermogravimetric analysis is designated HPTGA. E 473, E37

high-pressure molding, *n*—a method of molding or laminating in which the pressure used is greater than 1400 kPa (200 psi). D 883, D20

high-pressure steam cooker—equipment wherein the cooking compartment operates between 10 psig and 15 psig. See steam cooker. F 1827, F26

high profile tile, *n*—tile having a rise to width ratio greater than 1:4. C 43, C15

high-purity water—highly treated water with attention to microbiological, particle, organics and mineral reduction or elimination. D 6161, D19

high referral, *adj*—in paper, descriptive of any grade of paper designed for use in situations involving frequent handling. D 1968, D06

high resistance—contact resistance exceeding an arbitrary, specified limit. B 542, B02

high-resolution NMR spectrometer—an NMR apparatus that is capable of producing, for a given isotope, line widths that are less than the majority of the chemical shifts and coupling constants for that isotope. E 131, E13

high ride—an amusement ride whose motion is in a fixed or variable plane from horizontal to vertical. F 747, F24

high strength bolts—term which is used commercially to denote ASTM A 325 or A 490 bolts which are primarily used in construction applications. F 1789, F16

high-strength low-alloy steel, *n*—a steel, other than a carbon steel or an interstitial-free steel, that conforms to a specification that requires the minimum content for each specified alloying element to be lower than the applicable limit in the definition for alloy steel, and the yield point or yield strength of the product to be at least 36 ksi or 250 MPa. A 941, A01

high surfactant oil concentrate—an emulsifiable oil based product containing 25–50% wt./wt. surfactant in a minimum of 50% wt./wt. oil. E 1519, E35

high temperature bolts—bolts that are specifically manufactured of high temperature alloys to sustain tensile loads at temperatures between 500°F and 1800°F, depending upon the alloy and processing during manufacture. F 1789, F16

high temperature fastener alloys—those alloys that will maintain their anticipated strength and characteristics within the high temperature range. F 1789, F16

high temperature for mechanical fasteners—this term is generally understood to refer to a temperature range of approximately 500°F (260°C) to 1800°F (982°C). F 1789, F16

high-tenacity fiber, *n*—a manufactured fiber either (1) belonging to a generic class of fibers having exceptional breaking strength; or (2) having a breaking strength significantly greater than the average strength of other (regular tenacity) fibers in the same generic class and of equivalent linear densities. D 123, D13

high-transmission glass—glass that transmits an exceptionally high percentage of the visible light. C 162, C14

high usage, *adj*—in paper folders, descriptive of any grade of folder designed for use in situations where folders are handled frequently. D 1968, D06

high volatile A bituminous coal—See high volatile A bituminous coal under rank. D 121, D05

high volatile B bituminous coal—See high volatile B bituminous coal under rank. D 121, D05

high volatile C bituminous coal—See high volatile C bituminous coal under rank. D 121, D05

high-voltage power supply, *n*—a source of electrical power which provides voltage above logic levels, usually internal to the component. (See HVPS.) F 1457, F05

hinge—the minimum thickness of gasket material between the channel recess and the lock-strip cavity; the plane at which bonding occurs when the flange is bent open to receive or release installed material. C 717, C24

hinge—location between boom segments at which the boom can be folded back 180° upon itself. F 818, F20

hinge nail—light or heavy, bright, regular-stock-steel, 1¼ by ⅜ to 4 by ⅜-in. nails with flat or oval countersunk (95°) or oval ¼ to ½-in. head and long diamond or chisel point. F 547, F16

hinge pin—an upright pivot used to connect the gate frame hinge to the post hinge, allowing a swing gate to open or close. See frame hinge and post hinge. F 552, F14

hinge stress—the tensile component of the bending stress generated on the same surface of a glass section as, but displaced from, the site of a locally impinging force. C 162, C14

hip, *n*—in anatomy, the laterally projecting region formed by the lateral parts of the pelvis and the upper part of the femur together with the flesh covering them. D 123, D13

hip, *n*—the laterally projecting region formed by the lateral parts of the pelvis and the upper part of the femur together with the flesh covering them. D 5219, D13

hip, *n*—in anatomy, the laterally projecting region formed by the lateral parts of the pelvis and the upper part of the femur together with the flesh covering them. F 1494, F23

hip and ridge, finishing pieces, *n*—in shingles, rectangular pieces of roofing shingles cut to a flare or taper and applied with a side lap to conceal the joint of roofing shingles along the hips and ridge of a roof. C 1154, C17

hip and ridge, finishing pieces—rectangular pieces of roofing shingles cut to a flare or taper and applied with a side lap to conceal the joint of roofing shingles along the hips and ridge of a roof. D 2946, C17

hip and ridge tile, *n*—tile designed for application to the hip or ridge of a roof. C 43, C15

hip girth, *n*—inbody measurements, the maximum circumference of the body at the level of maximum prominence of the buttocks. D 123, D13

hip girth, *n*—the maximum horizontal circumference around the body at hip height. D 5219, D13

hip girth, *n*—inbody measurements, the maximum circumference of the body at the level of maximum prominence of the buttocks. F 1494, F23

hip height, *n*

hip height, *n*—the vertical distance from the hip girth level to the floor along the side of the body, taken with subject standing and without shoes.

hip height (*infant special case*), *n*—the straight distance from the hip girth level to the soles of the feet along the side of the body, taken with subject lying down flat with legs extended and foot positioned at 1.57 rad (90°) to the leg.

D 5219, D13

histel—a suborder of gelisol that contains large quantities of organic matter.

D 7099, D18

historic fabric—See **fabric**.

E 631, E06

historic fabric—See **fabric**.

E 1480, E06

historic fabric, *n* (édificehistorique)—those portions of the building fabric that have historic significance.

E 631, E06

hit—the detection and measurement of an AE signal on a channel.

E 1316, E07

hit-and-miss—a manufacturing imperfection on planed lumber, defined by grade rules as a series of planer skips with surfaced areas between. Permitted depth of misses is usually specified.

D 9, D07

hitch-back—See **draw-back**.

D 3990, D13

hit-or-miss—a manufacturing imperfection on planed, rough, or partially planed lumber, providing a maximum permitted scantness.

D 9, D07

Hi-Vol (*high-volume air sampler*)—See **sampler**.

D 1356, D22

HOBE—an abbreviation for *honeycomb before expansion*; honeycomb made by layering sheets, usually of thin aluminum or paper, containing adhesive at the cell nodes.

E 631, E06

HOBE—an abbreviation for *honeycomb before expansion*; honeycomb made by layering sheets, usually of thin aluminum or paper, containing adhesive at the cell nodes.

E 1749, E06

hob nail—stout, regular-stock-steel, 3/8 to 5/8-in. nails with large decorative (high square, fancy, round bevel, checkered, grooved, etc.) head and sheared-bevel point.

F 547, F16

hockle, *n*—in rope, a strand kink in a rope causing yarn displacement in the strand resulting in rope deformation and damage.

D 123, D13

hogged fuel—ground wood fuel that is usually a by-product of a wood products manufacturing process.

E 772, E44

hogged fuel—ground wood fuel that is usually a by-product of a wood products manufacturing process.

E 1705, E48

hog ring—a preformed open wire clip designed to close up into a ring to secure chain link fabric to horizontal tension wire (see Specification F 626).

F 552, F14

hog ring, hog-ring staple—open-ended, rounded, ring, or rectangular “U”-formed staple; used for encircling applications, that is, for attaching materials to rounded or rectangular base material by closing or wrapping hog ring around base material.

F 592, F16

hold down—see **lockdown**.

F 335, F05

holding pump—a fore pump used to hold a vapor pump at operating conditions while a roughing pump reduces the system pressure to a point at which the valve between the vapor pump and the system can be opened without stopping the flow of vapor from the nozzles.

E 1316, E07

hold pressure, *n*—in molding, the melt pressure during the hold time interval in injection molding.

D 883, D20

hold time [T]—in *fatiguetesting*, the amount of time in the cycle where the controlled test variable (for example, force, strain, displacement) remains constant with time.

E 1823, E08

hole, *n*—in fabric, an imperfection where one or more yarns are sufficiently damaged to create an aperture.

D 123, D13

hole—*in inflatable restraintfabrics*, an opening not characteristic of the normal weave pattern where one or more yarns is cut, torn, or shifted.

D 123, D13

hole, *n*—in fabric, an imperfection where one or more yarns are sufficiently damaged to create an aperture.

D 3990, D13

hole, *n*—for inflatable restraint fabrics, an opening not characteristic of the normal weave pattern where one or more yarns is cut, torn, or shifted.

D 6799, D13

hole—a deep depression or void, the bottom of which is not visible by normal (20/20) vision under 200 fc illumination.



F 109, C21

hole-burning, *n*—in luminescence, the photo-induced disappearance of a narrow segment within a broader absorption or emission band.

E 131, E13

holes—openings in or through lumber that may extend partially or entirely through a piece and may be from any cause.

D 9, D07

hole spacing, *n*—on a button, the distance from the center of one hole to another.

D 123, D13

hole spacing, *n*—on a button, the distance from the center of one hole to another.

D 5497, D13

holiday—an area where a liquid-applied material is missing.

D 1079, D08

holland cloth, *n*—a completely filled woven fabric having a smooth gloss finish on both sides used as a separating medium for sheeted rubber compounds.

D 123, D13

holland cloth, *n*—a completely filled woven fabric (usually starch-filled linen) with a smooth glass-like finish on both sides, used as a separating medium for raw rubber and rubber compounds.

D 1566, D11

holland cloth, *n*—a completely filled woven fabric having a smooth gloss finish on both sides used as a separating medium for sheeted rubber compounds.

D 6477, D13

hollow braid, *n*—in rope, a braided construction of either plain or twill braid, having an empty center.

D 123, D13

hollow casting—See *drain casting* under **casting**.

C 242, C21

hollow characters, *n*—print defects in which the center of the dark area is lighter than the edge, such that the character appears to have a heavy outline.

F 1457, F05

hollow cone atomizer—a cone atomizer wherein most of the liquid is directed toward the outside of the spray pattern.

E 1620, E29

hollow cone pattern, *n*—a cone pattern wherein most of the liquid is concentrated near the outside of the pattern.

E 1620, E29

hollow fiber (HF) membrane—self-supporting membrane fibers which have a hollow bore like a cylinder. In reverse osmosis, the membrane is usually on the outside with the bore conveying the permeate. In ultra and micro filtrations the membrane may be on the inside or the outside of the fiber.

D 6161, D19

hollow masonry unit—unit whose net cross-sectional area in any plane parallel to the surface containing cores, cells, or deep frogs is less than 75 % of its gross cross-sectional area measured in the same plane.

C 1232, C15

hollow ware—a class of utensils such as pots, pans, and kettles.

C 286, B08

holocellulose—the total polysaccharide fraction of extractive-free wood. The method of isolation or of determination should always be given.

D 1695, D01

holography (acoustic)—an inspection system using the phase interface between the ultrasonic wave from an object and a reference signal to obtain an image of reflectors in the material under test.

E 1316, E07

holography (optical)—a technique for recording, and reconstructing, the amplitude and phase distributions of a wave disturbance; widely used as a method of three-dimensional optical image formation. The technique is accomplished by recording the pattern of interference between coherent light reflected from the object of interest (object beam), and light that comes directly from the same source (reference beam).

E 1316, E07

- Homal eyepiece*—See **amplifier**. E 7, E04
- home**, *n*—a place of residence. (See also **dwelling**.) E 631, E06
- home laundering**, *n*—a process by which textile products or parts thereof may be washed, bleached, dried, and pressed by any customary method designed for use in a residence, or nonprofessional use. (See also **professional care**.) D 123, D13
- home laundering**—the process of cleaning and restoring textile materials to a serviceable condition using the washing and drying equipment commonly found in the home. D 459, D12
- home laundering**, *n*—a process by which textile products or parts thereof may be washed, bleached, dried, and pressed by any customary method designed for use in a residence, or nonprofessional use. (See also **professional care**.) D 3136, D13
- homeostasis**, *n*—a complex interactive regulatory system by which the body strives to maintain a state of internal equilibrium. E 2035, E52
- homogeneity**—having the same properties at all points. (ISRM) D 653, D18
- homogeneity**—the uniformity of the characteristics of the packaged material across the entire packaging run determined for the purpose of demonstrating the suitability of the batch for its intended purpose. D 4175, D02
- homogeneity**, *n*—the condition of the population under which all items of the population are identical with respect to the characteristic(s) of interest. D 5681, D34
- homogeneous**, *adj*—the condition of a material in which the relevant properties (composition, structure, density, and so forth) are not a function of position for sample size used, so that a small sample taken from any location in an original body is representative of the whole. Practically, the geometrical dimensions of the sample must be large with respect to the size of the individual grains, crystals, components, pores or microcracks. C 1145, C28
- homogeneous carburizing**, *n*—a process that converts a low-carbon steel to one of substantially uniform and higher carbon content throughout the section, so that a specific response to **hardening** may be obtained. A 941, A01
- homogeneous mass**—a mass that exhibits essentially the same physical properties at every point throughout the mass. D 653, D18
- homogeneous material**, *n*—a material in which relevant properties are not a function of the position within the material. C 168, C16
- homogeneous membrane**—membrane with essentially the same structural and transport properties throughout its thickness. D 6161, D19
- homogeneous (radiation) (monochromatic)**—of the same wavelength. E 7, E04
- homogeneous surface**—surface that exhibits essentially the same appearance and properties at every point throughout the area examined. E 631, E06
- homogeneous vinyl flooring**, *n*—a floor surfacing unit in sheet or tile form that is of uniform structure and composition throughout, usually consisting of vinyl plastic resins, plasticizers, fillers, pigments and stabilizers. F 141, F06
- homogenization (raw rubber)**, *n*—repeated passage of raw rubber through a mill or other mixing device, under specified conditions, to ensure uniformity. D 1566, D11
- homogenizing**, *n*—holding a steel object at high temperature to eliminate or decrease chemical segregation by diffusion. A 941, A01
- homogenous rubber flooring**, *n*—a rubber floor surfacing material, in sheet or tile form, that is of uniform structure and composition throughout. It usually consists of compounded natural or synthetic rubbers, or both, in combination with mineral fillers, pigments, and other additives. See Specification F 1859. F 141, F06
- homologous lines**, *n*—in *atomic emission spectrometry*, spectral lines that exhibit minimal change in their intensity ratios with variations in excitation conditions. E 135, E01
- homologues of phenol**—compounds of the phenol series whose structure differs regularly by some radical (for example, $-\text{CH}_3$) from that of its adjacent neighbor in the series. Also *cresols* and *xyleneols*. D 4790, D16
- homopolymer**, *n*—a polymer resulting from polymerization involving a single monomer. D 883, D20
- homopolymer**, *n*—a polymer formed from a single monomer species. D 1566, D11
- homopolymer**, *n*—a polymer resulting from polymerization involving a single monomer. (D20) F 412, F17
- honed**—a non-reflective to semi-reflective superfine satin-like surface with no surface pattern, produced by mechanical abrasion. C 119, C18
- honeycomb**—advanced stage of decay caused by *Fomes pini*. D 9, D07
- honeycomb before expansion*—See **HOBE**. E 631, E06
- honeycomb before expansion*—See **HOBE**. E 1749, E06
- honeycomb core**—a sheet material, formed into cell structure (usually hexagonal) similar to honeycomb and used as core material in the construction of sandwich panel assemblies. E 631, E06
- honeycomb core**—a sheet material, formed into cell structure (usually hexagonal) similar to honeycomb and used as core material in the construction of sandwich panel assemblies. E 1749, E06
- honeycombing**—in lumber and other wood products, separation of the fibers in the interior of the piece, usually along the wood rays. The failures often are not visible on the surfaces, although they can be the extensions of surface and end checks. D 9, D07
- honeycomb sandwich panel**—sandwich constructions consisting of honeycomb core adhesively clad with face sheets. E 631, E06
- honeycomb sandwich panel**—sandwich constructions consisting of honeycomb core adhesively clad with face sheets. E 1749, E06
- honeycomb structure*—see **soil structure**. D 653, D18
- Hong Kong seam-finish**, *n*—a finish for the raw edges of a plain seam, in which a binding fabric encloses the raw edge of each seam allowance; the binding fabric has one raw edge enclosed and the other raw edge exposed. (Compare **bound seam-finish**.) D 123, D13
- Hong Kong seam finish**, *n*—in home sewing, a seam finish in which a binding fabric is used to encase the cut edge of each seam allowance separately and in which the binding fabric has one cut edge enclosed and the other cut edge exposed. (Compare **bound seam finish**.) D 4965, D13
- hood or dust cap**, *n*—a protective cap placed over the actuator to guard against inadvertent dispensing. D 6655, D10
- hood test**—an overall test in which an object under vacuum test is enclosed by a hood which is filled with tracer gas so as to subject all parts of the test object to examination at one time. A form of dynamic leak test in which the entire enclosure or a large portion of its external surface is exposed to the tracer gas while the interior is connected to a leak detector with the objective of determining the existence of leakage. E 1316, E07
- hood with integrated makeup air*—an exhaust hood that introduces makeup air through a plenum, as an integral part of the hood. Integral makeup air options include *down discharge*, *front face discharge*, or *internal discharge (short-circuit)*, or both. F 1827, F26
- hook**, *n*—an anchoring component that fastens to the spine by means of a curved blade passed under or over lamina, transverse or spinous processes or into an anatomic or surgically created notch or opening. F 1582, F04
- hook and loop fastener**—a touch fastener, comprised of two flexible mating strips, the surface of one mating strip being covered with tiny, stiff protrusions shaped like hooks which engage the other mating strip which is covered with pliable loops. D 123, D13
- hook blade**, *n*—that portion of a spinal hook that is placed under, over, or into a bony structure to provide attachment. F 1582, F04
- hook body**—that portion of a spinal hook that connects the hook blade to the longitudinal element. F 1582, F04
- hooked bow**, *n*—a fabric condition in which the filling yarns or knitted courses are in the proper position for most of the fabric

hooked bow, n

width but are pulled out of alignment at one side of the fabric. (See also **double hooked bow**)

D 123, D13

hooked bow, n—a fabric condition in which the filling or course yarns are in the proper position for most of the fabric width but are pulled out of alignment at one side of the fabric. (See also **double hooked bow**)

D 3990, D13

hooked bow, n—a fabric condition in which the filling yarns or knitted courses are in the proper position for most of the fabric width but are pulled out of alignment at one side of the fabric. (See also **double hooked bow.**)

D 4850, D13

hook head—head, usually flattened; formed by bending wire at right angle to shank; resulting in fastener shaped like “L.”

F 547, F16

hook-head metal-lath nail—See **metal-lath nail.**

F 547, F16

hooks, n—in *fibertesting*, curved or bent fiber ends caused by the carding or specimen preparation processes.

D 123, D13

hooks, n—in *fiber testing*, curved or bent fiber ends caused by the carding or specimen preparation processes.

D 7139, D13

hookup bundle, n—a group of insulated conductors or hookup cables grouped into an assembly prior to installation, usually with multiple breakouts.

D 1711, D09

hookup cable, n—two or more insulating conductors in a common covering, or two or more insulated conductors twisted or molded together without a common covering, or one or more insulated conductors with a conductive shield with or without an outer covering.

D 1711, D09

hookup wire, n—an insulated conductor that is used to make point-to-point connections in an electrical or electronic system.

D 1711, D09

hoop fastener nail—bright, blued or galvanized, regular-stock-steel, $\frac{3}{8}$ by 0.092 to 1 by 0.162-in. nails with thin flat $\frac{3}{8}$ to $\frac{1}{16}$ -in. long, 0.207 to $\frac{3}{8}$ -in. wide hook head and medium diamond point.

F 547, F16

hoop stress—the tensile stress in the wall of the pipe in the circumferential orientation due to internal hydrostatic pressure.

F 412, F17

hopper—the converging portion of a bin.

D 653, D18

horizon (soil horizon)—one of the layers of the soil profile, distinguished principally by its texture, color, structure, and chemical content.

“A” *horizon*—the uppermost layer of a soil profile from which inorganic colloids and other soluble materials have been leached. Usually contains remnants of organic life.

“B” *horizon*—the layer of a soil profile in which material leached from the overlying “A” horizon is accumulated.

“C” *horizon*—undisturbed parent material from which the overlying soil profile has been developed.

D 653, D18

horizontal bar code, n—a bar code symbol presented in such a manner that its overall length dimension is parallel to the horizon; also called, **picket fence.**

F 1294, F05

horizontal ladder gasket—a ladder gasket installed in a vertical plane in such a way that the intermediate cross members (muntins) are vertical members.

C 717, C24

horizontal shear—shear that occurs in planes parallel to the longitudinal axis of the member; sometimes referred to as longitudinal shear.

D 9, D07

horizontal sliding window—See **windows and doors.**

E 631, E06

horizontal traction (traction)—a force acting in a horizontal axis through the wheel transducer; that is, locked wheel drag force.

E 867, E17

hornification—the behavior of certain forms of cellulose and related materials on drying, which results in a lowered reactivity. This is apparently caused by the formation of new hydrogen bonds with a corresponding decrease in accessibility.

D 1695, D01

horsehide leather—leather made from the hide of a horse or a colt. (See also **cordovan** and **front.**)

D 1517, D31

horseshoe, n—a length of sliver folded in a manner such that the two ends can be fed simultaneously into the needle field of the Fibroliner FL-101.

D 123, D13

horseshoe, n—a length of sliver folded in a manner such that the two ends can be fed simultaneously into the needle field of the Fibroliner FL-101.

D 7139, D13

horsetail, n—a rough piece of shredded tire with a width of 2 to 4 in. (5.1 to 10.2 cm) and a length greater than 6 in. (15.2 cm).

D 5681, D34

hose, n—a flexible conduit consisting of a tube, reinforcement, and usually an outer cover.

D 1566, D11

hose—an electrical insulating tube with a longitudinal slit designed to be installed temporarily on energized electrical wires.

F 819, F18

hose assembly, n—a length of hose with a coupling attached to one or each end.

D 1566, D11

hose end sprayer—an apparatus designed to be attached to standard garden hose, consisting of a hand-held container for spray mixture with an integral metering head through which water from the garden hose flows. The metering head uses water pressure, siphon effect, or some other water powered means to meter the spray mixture into the water stream which is then atomized.

E 1102, E35

hose reinforcing wire, n—a single filament of steel wire with a metallic coating (usually brass) used in the reinforcement of a rubber or other elastomer hose

D 123, D13

hose reinforcing wire, n—a single filament of steel wire with a metallic coating (usually brass) used in the reinforcement of a rubber or other elastomer hose.

D 6477, D13

hosiery, n—any covering of the foot not intended for ground contact during ambulation, such as socks, stockings, etc.

F 1646, F13

hospital—a special department in the porcelain enamel shop where damage to fired ware may be repaired.

C 286, B08

host, n—a device or computer delivering the information to a server, in this case a printer.

F 1457, F05

hot-applied sealant, n—a compound that is applied in a molten state and cures primarily by cooling to ambient temperatures.

D 5535, D04

hot cathode—a heated element of a vacuum enclosed electrical system emitting electrons thermionically. It is maintained at a potential negative with respect to a second element to accelerate the emitted electrons.

E 7, E04

hot-cathode ionization gage—see **ionization vacuum gage.**

E 1316, E07

hot chocolate dispenser—commercial equipment designed to deliver a predetermined amount of hot chocolate flavored beverage.

F 1827, F26

hot-cold working, n—the mechanical deformation of austenitic and precipitation hardening steels at a temperature just below the **recrystallization temperature** to increase the yield strength and hardness by plastic deformation or precipitation hardening effects induced by plastic deformation, or both.

A 941, A01

hot corrosion—an accelerated corrosion of metal surfaces that results from the combined effect of oxidation and reactions with sulfur compounds and other contaminants, such as chlorides, to form a molten salt on a metal surface which fluxes, destroys, or disrupts the normal protective oxide.

G 15, G01

hot densification, n—the consolidation, at elevated temperature and pressure, of an unsintered, presintered, or sintered powder preform, or encapsulated or loose powder, to reduce porosity.

B 243, B09

hot dip coating—a metallic coating obtained by dipping the basis metal into a molten metal.

B 374, B08

hot dip galvanizing—immersion of fasteners in a bath of molten zinc for a controlled time period to obtain specified coating weight or thickness.

F 1789, F16

hot-dipped, hot-dip galvanized, hot-dipped zinc-coated—See **dipped.**

F 547, F16

hot-dip process, n—the application of a metallic coating on a steel product by immersion of the product in a bath of the molten metal which forms the coating; the coating may be applied in a continuous process or a batch process.

A 902, A05

- hot, dry climate**—desert climate distinguished as sunny, hot, and dry year round, with rare scattered showers. **G 113, G03**
- hot end**—those manufacturing operations concerned with hot glass, that is, melting, forming, annealing. **C 162, C14**
- hot-filament ionization gage**—see **ionization vacuum gage**.
E 1316, E07
- hot-flame reaction, *n***—a rapid, self-sustaining, luminous, sometimes audible, reaction of the sample or its decomposition products with the atmosphere. **D 4175, D02**
- hot forming**—heat is applied to wire or rod to enhance metal flow into dies using machine applied pressures as opposed to metal removal by cutting for forming purposes. **F 1789, F16**
- hot-galvanized, barrel-galvanized, flake-galvanized, tumbler-galvanized, wean-galvanized**—zinc coating applied in heated tumbling barrel containing zinc-flakes. **F 547, F16**
- hot-gas welding**—a technique for joining thermoplastics (usually sheets) in which the materials are first softened by a jet of hot gas from a welding gun. A rod of the same plastic is used to fill the heated gap and join the sheets at the same time pressure is applied by either the rod or the tip of the gun. Sometimes referred to as string bead welding. **C 904, C03**
- hot hold**—maintaining the temperature of an idled melter below its operating temperature but above the liquidus temperature of the glass. **C 162, C14**
- hot isostatic pressing, *n***—the pressing of a powder, compact, or sintered object by subjecting it, at elevated temperature, to nominally equal pressure from every direction. **B 243, B09**
- hot junction**—See **measuring junction**. **E 7, E04**
- hot-melt adhesive, *n***—a thermoplastic adhesive that is applied in a molten state and forms a bond upon cooling to a solid state. **D 907, D14**
- hot mold**—the process of forming glassware in hot uncoated molds. **C 162, C14**
- hot-plate welding**—see **butt welding (machine)**. **C 904, C03**
- hot pressing, *v***—pressure-assisted, low strain rate uniaxial densification of a powder preform, compact, or encapsulated or loose powder at a temperature sufficient to induce diffusion or creep. **B 243, B09**
- hot pressing**—See **hot pressing** under **pressing**. **C 242, C21**
- hot pressing, *n***—a fabrication of a ceramic component utilizing temperature and uniaxial pressure to achieve the desired density and shape formation. Densification is achieved by particle rearrangement, viscous/plastic flow, or diffusional transport, or both. **C 1145, C28**
- hot-pressing**—process for increasing the density of a wet-felted or air-felted mat of fibers or particles by pressing the dried, damp, or wet mat between platens of hot-press to compact and set the structure by simultaneous application of heat and pressure. **D 1554, D07**
- hot pressing**—the curing of thermosets by heat and pressure application. **E 631, E06**
- hot pressing**—the curing of thermosets by heat and pressure application. **E 1749, E06**
- hot quenching, *n***—an imprecise term used to cover a variety of quenching procedures in which the quenching medium is maintained at a prescribed temperature above 160 °F or 70 °C. **A 941, A01**
- hot repress powder forging, *n***—hot densification of a P/M preform by forging where the material flow is mainly in the direction of forging. **B 243, B09**
- hot-rolled drawing stock**—the as-rolled section, normally round, produced by hot rolling in a rod mill from a billet or wire bar. **B 354, B01**
- hot-setting adhesive, *n***—an adhesive that sets only with the application of heat. **D 907, D14**
- hot spot**—the zone of highest temperature within a melter. **C 162, C14**
- hot spot**—a localized area of soil or groundwater contamination. **D 5681, D34**
- hot spot, *n***—the area of a spray where the product concentration is high which can be visibly seen on a spray pattern as a concentrated stain on the alcohol-sensitive paper. **D 6655, D10**
- hot spring, *n***—a thermal spring whose temperature is above that of the human body. **E 957, E44**
- hot sticking, *n***—of **piston rings**, a condition in which the ring is stuck in its groove while the engine is running, normally indicated by varnish or other deposits on the outer face of the ring, by signs of blowby on the piston skirt, or both. **D 4175, D02**
- hot-stuck piston ring, *n***—in **internal combustion engines**, a piston ring that is stuck when the piston and ring are at room temperature, and inspection shows that it was stuck during engine operation. **D 4175, D02**
- “hot stuff” or “hot”**—a roofer’s term for hot bitumen. **D 1079, D08**
- hot-surface ignition temperature of a dust layer, *n***—lowest set temperature of the hot plate that causes ignition of the dust layer. **E 1445, E27**
- hot tack, *n***—the cohesive strength during the cooling stage before solidification of a heat seal bond formed by a wax-polymer blend. **D 4175, D02**
- hot top range**—equipment with a heavy cast-iron top on which pots and pans are placed, intended for heavy duty continuous cooking. See **range**. **F 1827, F26**
- hot upset powder forging, *n***—hot densification of a P/M preform by forging where there is a significant amount of lateral material flow. **B 243, B09**
- hot water extraction cleaning, *n***—a process in which a heated solution of detergent is sprayed into the textile material and immediately removed by a wet suction nozzle behind the spray-head. **D 123, D13**
- hot water extraction cleaning, *n***—a process in which a heated solution of detergent is sprayed into the textile material and immediately removed by a wet suction nozzle behind the spray-head. **D 5253, D13**
- hot worked structure**—the structure of a material worked at a temperature higher than the recrystallization temperature. **E 7, E04**
- hot working, *n***—mechanical deformation of a metal at temperatures above its **recrystallization temperature**. **A 941, A01**
- hot working**—controlled mechanical operations for shaping a product at temperatures above the recrystallization temperature. **B 846, B05**
- hot zone**—the area surrounding the heating element(s) or heat exchanger surface. **F 1827, F26**
- hours of operation, *n***—(heures d’exploitation): **E 631, E06**
- hours of operation, *n*** (heures d’exploitation):
active hours, n (heures d’activité)—times when a facility is normally fully occupied and operational.
silent hours, n (heures d’inactivité)—period when a facility is essentially unoccupied and only security and building operations staff are present.
transitional hours, n (heures de transition)—times in the morning after the first workers normally arrive, until a facility is fully operational, and in the evening from the end of normal work until the occupants have left. **E 1480, E06**
- house, *n***—a **building** intended in its entirety as a **dwelling**.
split-level house—one divided vertically so that the floor level of rooms in one part is approximately midway between the levels of two successive stories in an adjoining part. **E 631, E06**
house—See **building**. **E 631, E06**
- house depressurization, *n***—the situation, pertaining to a specific location in a house, whereby the static pressure at that location is lower than the static pressure in the immediate vicinity outside the house. **D 1356, D22**

house fuel, n

house fuel, n—*for octane rating*, an unleaded, straight hydrocarbon fuel used for engine warm-up and all non-octane rating testing.

D 4175, D02

household dirt, n—dirt commonly found in residential households, the specific compositions of which will vary from one environment to another and is removable with a household vacuum cleaner.

F 395, F11

household vacuum cleaner, n—a vacuum cleaner suitable for the normal cleaning tasks encountered in residences, in contrast to a commercial vacuum cleaner.

F 395, F11

house, n (maison)—**building** intended in its entirety as a **dwelling**.

E 631, E06

house, n (maison)—**building** intended in its entirety as a **dwelling**.

E 1480, E06

HPC—heterotrophic plate count. Formerly called SPC. **D 6161, D19**

H-test adhesion, n—the force to extract either end of a textile cord structure that is embedded in a rubber compound under specified conditions.

D 6477, D13

huck towel, n—a plain weave nonterry foundation product constructed with small warp and filling floats, having hems or selvages, which is used to dry a person's hands and utensils such as glasses, plates, bowls, and flatware.

D 123, D13

huck towel, n—a plain weave non-terry foundation product constructed with small warp and filling floats, having hems or selvages, which is used to dry a person's hands and utensils such as glasses, plates, bowls, and flatware.

D 7023, D13

HUD—U.S. Department of Housing and Urban Development.

E 631, E06

hue—the attribute of color perception by means of which a color is judged to be red, orange, yellow, green, blue, purple, or intermediate between adjacent pairs of these, considered in a closed ring, red and purple being an adjacent pair (white, gray, and black possess no hue).

C 242, C21

hue—under **color of an object**, see **hue**.

D 16, D01

hue, n—attribute of color perception by means of which objects are judged to be red, yellow, blue, or intermediate between some adjacent pair of these.

D 2946, C17

hue, n—see **color (of an object)**. (For consensus technical definition see **hue** in Terminology E 284.)

E 253, E18

hue, n—the attribute of color perception by means of which a color is judged to be red, orange, yellow, green, blue, purple, or intermediate between adjacent pairs of these, considered in a closed ring (red and purple being an adjacent pair.) (See also **Munsell hue**.)

NOTE—Neutral colors are judged to have no hue. **E 284, E12**

Hull cell—a trapezoidal box of nonconducting material with electrodes arranged to permit observation of cathodic or anodic effects over a wide range of current densities.

B 374, B08

Hull-Davey charts—charts for indexing the lines of powder patterns on which a function of the interplanar spacing of the Bragg angle is plotted against the axial ratio for a number of different lattice planes.

E 7, E04

Hull method (for X-ray crystal analysis)—See **Debye-Scherrer method**.

E 7, E04

human-readable interpretation, n—the letters, digits or other characters associated with specific symbol characters and printed along with the linear bar code or two-dimensional symbol. **F 1294, F05**

human resources, n—those elements of support or capability that are provided by humans using their mental and physical capabilities.

D 1356, D22

human tissue burn tolerance—in the testing of thermal protective materials, the amount of thermal energy predicted to cause a second-degree burn in human tissue.

F 1494, F23

humectant—a material which increases the equilibrium water content and increases the drying time of an aqueous spray deposit.

E 1519, E35

humic acid—a variety of water-soluble organic compounds, formed by the decayed vegetable matter, which is leached into a water source by runoff or percolation. Present in most surface and some

ground waters. Higher concentrations cause a brownish tint; difficult to remove except by adsorption, ultrafiltration, nanofiltration or reverse osmosis.

D 6161, D19

humic peat—see **sapric peat**.

D 653, D18

humidify—to increase, by any process, the quantity of water vapor within a given space.

E 41, G03

humidistat—a regulatory device, activated by changes in humidity, used for the automatic control of relative humidity.

E 41, G03

humidity, n—the condition of the atmosphere in respect to water vapor. (Compare **absolute humidity** and **relative humidity**.)

D 123, D13

humidity, n—a measure of the amount of water vapor in a gas. Also see **absolute humidity** and **relative humidity**.

D 1356, D22

humidity, n—the condition of the atmosphere in respect to water vapor. (Compare **absolute humidity** and **relative humidity**.)

D4920, D13

humidity—the condition of the atmosphere in respect to water vapor. (See also **humidity, absolute; humidity, relative**.)

E 41, G03

humidity, absolute, n—the mass of water vapor per unit volume.

C 168, C16

humidity, absolute—the mass of water vapor per unit volume of the atmosphere usually measured as grams per m³.

D 6161, D19

humidity, absolute—the weight of water vapor present in a unit volume of air, for example, grains per cubic foot, or grams per cubic metre.

NOTE—The amount of water vapor is also reported in terms of weight per unit weight of dry air, for example, grains per pound of dry air. This value differs from values calculated on a volume basis and should not be referred to as absolute humidity. It is designated as **humidity ratio, specific humidity**, or **moisture content**, which also see.

E 41, G03

humidity indicator—an instrument or device that displays the approximate humidity condition within a **package**.

D 996, D10

humidity range—See **operating humidity range of analyzer** under **analyzer**. See also **operating humidity range of sample** under **sample**.

D 1356, D22

humidity ratio—in a mixture of water vapor and air, the mass of water vapor per unit mass of dry air.

E 41, G03

humidity, relative, n—the ratio of the mol fraction of water vapor present in the air to the mol fraction of water vapor present in saturated air at the same temperature and barometric pressure. Approximately, it equals the ratio of the partial pressure or density of the water vapor in the air to the saturation pressure or density, respectively, at the same temperature.

C 168, C16

humidity, relative—the ratio of the actual pressure of existing water vapor to the maximum possible (saturation) pressure of water vapor in the atmosphere at the same temperature, expressed as a percentage.

D 6161, D19

humidity, relative—the ratio of the actual pressure of existing water vapor to the maximum possible (saturation) pressure of water vapor in the atmosphere at the same temperature, expressed as a percentage.

E 41, G03

humidity, specific—in a mixture of water vapor and air, the mass of water vapor per unit mass of moist air.

E 41, G03

humification—a process by which organic matter decomposes.

D 653, D18

humus—a brown or black material formed by the partial decomposition of vegetable or animal matter; the organic portion of soil.

D 653, D18

hung window—See **windows and doors**.

E 631, E06

Hunter color difference, n—color difference calculated by the use of the Hunter equations, based on the opponent-color coordinates, *L*, *a*, *b*, applied to CIE 1931 tristimulus values for CIE standard illuminant C, and by extension to the CIE 1964 standard observer and other CIE standard illuminants.

E 284, E12

Huygens eyepiece—an achromatic eyepiece invented by Huygens and consisting of a plano-convex eyelens and a plano-convex collective, between which is a field diaphragm.

E 7, E04

H₅₀ value, *n*—a drop height with a 50 % probability of reaction, as determined experimentally by the Bruceton up-and-down method.

E 1445, E27

HVPS—abbreviation for **high-voltage power supply**. **F 1457, F05**

hybar wire—flat wire normally used in box stitching. Specifically:

Gage No.	Cross-Sectional Dimensions, in. (mm)
000	0.060 by 0.017 (1.52 by 0.43)
00	0.060 by 0.018 (1.52 by 0.46)
0	0.060 by 0.019 (1.52 by 0.48)
1	0.060 by 0.020 (1.52 by 0.51)
2	0.060 by 0.024 (1.52 by 0.61)
3	0.060 by 0.028 (1.52 by 0.71)

F 592, F16

hybrid—(for composite materials) containing at least two distinct types of matrix or reinforcement. Each matrix or reinforcement type can be distinct because of its a) physical or mechanical properties, or both, b) material form, or c) chemical composition.

D 3878, D30

hybrid asymmetrical—this refers to a snowboard shape that is asymmetrical from side to side but symmetrical from tip to tail, allowing the same board to be used by both regular-foot and goofy-foot riders by reversing the direction of travel, but retaining the non-mirror image sidecut shapes of a full asymmetrical.

F 1107, F27

hybrid longitudinal element, *n*—a longitudinal element consisting of two or more types of longitudinal elements of different size or cross-section manufactured into a single element. **F 1582, F04**

hydrate—a solid, crystalline material composed of water and components of natural gas formed under pressure at temperatures above the freezing point of water.

D 4150, D03

hydrated lime—a dry powder obtained by treating quicklime with water enough to satisfy its chemical affinity for water under the conditions of its hydration. It consists essentially of calcium hydroxide or a mixture of calcium hydroxide and magnesium oxide or magnesium hydroxide, or both.

C 51, C07

hydrated lime—dry calcium hydroxide.

D 6161, D19

hydration, *n*—the chemical reaction between hydraulic cement and water forming new compounds most of which have strength-producing properties.

C 219, C01

hydration—formation of a compound by the combining of water with some other substance.

D 653, D18

hydration resistance, *n*—the degree to which a refractory material resists chemical combination with water. This resistance is measured by either Test Method C 456 or Test Method C 492, whichever is applicable.

C 71, C08

hydraulic atomizer—see **pressure atomizer**.

E 1620, E29

hydraulic cement, *n*—a cement that sets and hardens by chemical reaction with water and is capable of doing so under water.

C 125, C09

hydraulic cement, *n*—a cement that sets and hardens by chemical interaction with water and that is capable of doing so under water.

C 219, C01

hydraulic communication—the migration of fluids from one zone to another, with reference to this guide, especially along a casing grout plug, or through back fill materials.

D 653, D18

hydraulic conductivity—the volume of fluid passing through a unit cross section in unit time under the action of a unit hydraulic potential gradient. It is commonly expressed in cm/second or m/day.

D 7099, D18

hydraulic conductivity (field aquifer tests)—the volume of water at the existing kinematic viscosity that will move in a unit time under a unit hydraulic gradient through a unit area measured at right angles to the direction of flow.

D 653, D18

hydraulic conductivity (*k*), *n*—the rate of discharge of water under laminar flow conditions through a unit cross-sectional area of a porous medium under a unit hydraulic gradient and standard temperature conditions (20°C).

D 4439, D35

hydraulic conductivity ratio (HCR), *n*—the ratio of the hydraulic

conductivity of the soil/geotextile system, k_{sg} , at any time during the test, to the initial hydraulic conductivity, k_{sg0} , measured at the beginning of the test (new).

D 4439, D35

hydraulic diffusivity—the ratio of the hydraulic conductivity and the storage capacity of a groundwater aquifer.

D 7099, D18

hydraulic fluid, *n*—liquid used in hydraulic systems for transmitting power.

D 4175, D02

hydraulic fracturing—the fracturing of an underground strata by pumping water or grout under a pressure in excess of the tensile strength and confining pressure; also called hydrofracturing.

D 653, D18

hydraulic gradient—the change in total hydraulic head of water per unit distance of flow.

critical hydraulic gradient, *i_c* (D)—hydraulic gradient at which the intergranular pressure in a mass of cohesionless soil is reduced to zero by the upward flow of water.

D 653, D18

hydraulic gradient, *i, s* (D)—the loss of hydraulic head per unit distance of flow, dH/dL.

D 4439, D35

hydraulic hydrated lime—the hydrated dry cementitious product obtained by calcining a limestone containing silica and alumina to a temperature short of incipient fusion so as to form sufficient free lime (CaO) to permit hydration, and at the same time, leaving unhydrated sufficient calcium silicates to give a dry powder meeting hydraulic property requirements.

C 51, C07

hydraulic jump—an abrupt transition from supercritical flow to subcritical or tranquil flow, accompanied by considerable turbulence or gravity waves, or both.

D 4410, D19

hydraulic leathers—see **gasket leather**.

D 1517, D31

hydraulic mortar, *n*—deprecated term; see mortar.

C 219, C01

hydraulic mortar—a mortar that is capable of setting and hardening due to the interaction of water and the constituents of the mortar.

C 904, C03

hydraulic pressure test—Same as **hydrostatic test**.

E 1316, E07

hydraulic thawing—artificial thawing and removal of frozen ground by the use of a stream or jet of water under high pressure.

D 7099, D18

hydraulic transmissivity, θ (L² T⁻¹), *n*—for a geotextile or related product, the volumetric flow rate of water per unit width of specimen per unit gradient in a direction parallel to the plane of the specimen.

D 4439, D35

hydic soil—soil that is formed under conditions of saturation, flooding, or ponding long enough to develop anaerobic conditions in the upper part, thereby influencing the growth, survival, and reproduction of plants, microorganisms, and invertebrates.

E 943, E47

hydrocarbon dew point—(see **dew point**)

D 4150, D03

hydrocarbon plastics—plastics based on resins made by the polymerization of monomers composed of carbon and hydrogen only.

D 883, D20

hydrocarbon resins, *n*—plastic materials made by the polymerization of monomers composed of only hydrogen and carbon.

D 1566, D11

hydrocelluloses—water-insoluble products of the hydrolysis of cellulose with acids. They are molecularly heterogeneous in the sense that they are composed of molecules varying in degree of polymerization. The average degree of polymerization (DP) and the DP distribution depend on the nature of the acid treatment and of the original cellulose. The term may also be applied to any insoluble polysaccharide so formed and separated as a more or less homogeneous fraction from the mixture of products, but the singular form "hydrocellulose" should not be used without an article, to avoid the implication of a molecularly homogeneous species.

D 1695, D01

hydrochemical talik—a layer or body of unfrozen ground, at a temperature of less than 0°C, in a permafrost area, which remains unfrozen due to moving mineralized groundwater.

D 7099, D18

hydrocolloid, *n*—a water-soluble polymer of colloidal nature when hydrated.

F 2312, F04

hydrodynamic specific surface

hydrodynamic specific surface—the specific surface of a fibrous material as measured by the filtration resistance of a compacted pad formed from a fiber suspension under specified conditions.

D 1695, D01

hydrogen-assisted stress cracking (HASC)—crack growth as a result of the presence of hydrogen; it can be either IHE or EHE and sometimes is referred to as hydrogen stress cracking (HSC).

F 2078, F07

hydrogenated resin, n—a resin that has been subjected to some degree of reaction with hydrogen to decrease the level of residual unsaturation.

D 6440, D01

hydrogen blistering—the formation of blisters on or below a metal surface from excessive internal hydrogen pressure. (Hydrogen may be formed during cleaning, plating, corrosion, and so forth.)

G 15, G01

hydrogen cycle, n—the operation of a cation-exchange cycle wherein the removal of specified cations from the influent water is accomplished by exchange with an equivalent amount of hydrogen ion from the exchange material.

D 1129, D19

hydrogen embrittlement—embrittlement of a metal or alloy caused by absorption of hydrogen which may occur, for example, during pickling, cathodic cleaning, electroplating, and autocatalytic plating processes.

B 374, B08

hydrogen embrittlement—a permanent loss of ductility in a metal or alloy caused by hydrogen in combination with stress, either an externally applied or an internal residual stress.

F 2078, F07

hydrogen embrittlement—hydrogen-induced cracking or severe loss of ductility caused by the presence of hydrogen in the metal.

G 15, G01

hydrogen embrittlement, internal—see *internal hydrogen embrittlement*.

F 1789, F16

hydrogen embrittlement relief—process applied to fasteners which reduces or eliminates embrittlement caused by the absorption of hydrogen during processing. Normally, this is described as a baking operation.

F 1789, F16

hydrogen loss, n—the loss in weight of metal powder or of a compact caused by heating a representative sample for a specified time and temperature in a purified hydrogen atmosphere—broadly, a measure of the oxygen content of the sample when applied to materials containing only such oxides as are reducible with hydrogen and no hydride-forming element.

B 243, B09

hydrogen overvoltage—overvoltage associated with the liberation of hydrogen.

B 374, B08

hydrogen-reduced powder, n—powder produced by the reduction of a metal oxide in an atmosphere containing hydrogen.

B 243, B09

hydrogen sulfide (H₂S)—mol weight 34.08; flammable, poisonous gas with characteristic odor of rotten eggs.

D 4790, D16

hydrogen susceptibility ratio (Hsr)—the ratio of the threshold for the onset of hydrogen assisted cracking to the tensile strength of the material.

F 2078, F07

hydrogen treating—a refining process in which an unfinished petroleum insulating oil is contacted with hydrogen gas at elevated temperatures and pressures in the presence of a catalyst, to improve its color, odor, stability, and other properties.

D 2864, D27

hydrokinetic roof system, n—a roof system that depends on quick drainage via water shedding to prevent water entry into or through the system.

D 1079, D08

hydrologic unit—geologic strata that can be distinguished on the basis of capacity to yield and transmit fluids. Aquifers and confining units are types of hydrologic units. Boundaries of a hydrologic unit may not necessarily correspond either laterally or vertically to lithostratigraphic formations.

D 653, D18

hydrolysis—the act of cleaving or splitting of complex molecules by the chemical addition of a water molecule. Acid hydrolysis is defined as the chemical addition of water to a compound such as starch in the presence of an acid as a catalyst that will form another compound such as glucose.

E 1705, E48

hydrolytically degradable plastic, n—a degradable plastic in which the degradation results from hydrolysis.

D 883, D20

hydrolytically degradable plastics, n—See **degradable plastic**.

D 883, D20

hydrolytic stability, n—the ability to withstand the environmental effects of high humidity.

D 123, D13

hydrolytic stability, n—the resistance of a material to permanent changes in properties due to reaction with water.

D 4175, D02

hydrolytic stability, n—the ability to withstand the environmental effects of high humidity.

D 7023, D13

hydrometer-thermometer field tester, n—a device designed to indicate the freezing point of an engine coolant by measurement of the relative density of the coolant at a specific temperature.

D 4725, D15

Hydrophelicity—the property that defines a material as attracting water. Water exhibits an acute contact angle with hydrophilic materials.

D 653, D18

hydrophilic—(1) tending to absorb water. (2) tending to concentrate in the aqueous phase.

B 374, B08

hydrophilic—having an affinity for water.

D 1695, D01

hydrophilic—having an affinity for water.

D 6161, D19

hydrophilic emulsifier—see **emulsifier**.

E 1316, E07

hydrophilic (literally, water-loving)—a descriptive term applied to the group or radical of a surfactant molecule that makes or tends to make it soluble in water.

D 459, D12

hydrophobic—(1) tending to repel water. (2) lacking affinity for water.

B 374, B08

hydrophobic—having an antagonism to water.

D 1695, D01

hydrophobic—lacking an affinity to water.

D 6161, D19

hydrophobicity—the property that defines a material as being water repellent. Water exhibits an obtuse contact angle with hydrophobic materials.

D 653, D18

hydrophobic (literally, water-averting)—a descriptive term applied to the moiety of a surfactant molecule that makes it, or tends to make it, insoluble in water.

D 459, D12

hydroplaning (aquaplaning) of pneumatic tires, n—a phenomenon that occurs when the load-bearing surface of a pneumatic tire is separated from a solid surface by a substance (usually a fluid and usually water).

E 867, E17

hydroplaning, dynamic—see **dynamic hydroplaning**.

E 867, E17

hydroplaning, rubber reversion—see **rubber reversion hydroplaning**.

E 867, E17

hydroplaning speed, n—the initial speed at which a pneumatic tire begins to full dynamic hydroplaning under a given set of conditions.

E 867, E17

hydroplaning, viscous—see **viscous hydroplaning**.

E 867, E17

hydrostatic design basis—one of a series of established stress values specified in Test Method D 2837 for a plastic compound obtained by categorizing the long-term hydrostatic strength determined in accordance with Test Method D 2837.

F 412, F17

hydrostatic design stress (HDS)—the estimated maximum tensile stress the material is capable of withstanding continuously with a high degree of certainty that failure of the pipe will not occur. This stress is circumferential when internal hydrostatic water pressure is applied.

F 412, F17

hydrostatic head—the fluid pressure of formation water produced by the height of water above a given point.

D 653, D18

hydrostatic pressure, n—a state of stress in which all the principal stresses are equal (and there is no shear stress), as in a liquid at rest; the product of the unit weight of the liquid and the difference in elevation between the given point and the free liquid elevation.

C 717, C24

hydrostatic pressure—the pressure exerted by water at rest.

C 822, C13

hydrostatic pressure—a state of stress in which all the principal stresses are equal (and there is no shear stress). (ISRMI)

D 653, D18

hydrostatic pressure—see **hydrostatic strength**.

D 2946, C17

hydrostatic pressure, n—a state of stress in which all the principal

stresses are equal (and there is no shear stress), as in a liquid at rest; induced artificially by means of a gaged pressure system; the product of the unit weight of the liquid and the difference in elevation between the given point and the free water elevation.

D 4439, D35

hydrostatic pressure, u_o (FL⁻²)—a state of stress in which all the principal stresses are equal (and there is no shear stress), as in a liquid at rest; the product of the unit weight of the liquid and the difference in elevation between the given point and the free water elevation.

excess hydrostatic pressure (hydrostatic excess pressure), \bar{u}, u (FL⁻²)—the pressure that exists in pore water in excess of the hydrostatic pressure.

D 653, D18

hydrostatic roof system, n —a roof system that is capable of holding water without allowing water to penetrate the system. **D 1079, D08**

hydrostatic strength, n —*in pipes*, the ability of the pipe and coupling sleeve to withstand the forces resulting from internal pressure.

C 1154, C17

hydrostatic strength—the ability of a pipe, under specified conditions, to withstand internal pressure of specified magnitude.

D 2946, C17

hydrostatic test—a test of the ability of a pipe or its joint to withstand internal hydrostatic pressure.

C 822, C13

hydrostatic test—in leak testing, a pressure test in which the component being tested is filled completely with water or another liquid. Pressure, if required, is then applied to the liquid for the required time and the outside of the component is examined visually for leaks.

E 1316, E07

hydrothermal talik—a layer or body of unfrozen ground, at a temperature above 0°C, in an area of permafrost, which is maintained by moving groundwater.

D 7099, D18

hydrotrophy—the increase in solubility of a substance which is only slightly soluble in an aqueous system by the addition of a third substance. This third substance is called a “hydrotrope” or “hydrotropic agent.”

D 459, D12

(2-hydroxyethyl)cellulose—any of several cellulose ethers in which some of the hydroxyl groups have been substituted with hydroxyethyl groups. Hydroxyethyl cellulose, except at very low degrees of substitution, is water-soluble.

D 1695, D01

(2-hydroxyethyl)ethylcellulose—a mixed ether of cellulose containing both hydroxyethyl and ethyl groups.

D 1695, D01

(2-hydroxyethyl)methylcellulose—a mixed ether of cellulose containing both hydroxyethyl and methyl groups.

D 1695, D01

hydroxyl alkalinity—see **alkalinity**.

D 6161, D19

hydroxyl groups—the monovalent group —OH, characteristic of hydroxides and alcohols.

D 1695, D01

hydroxyl number, n —the number of milligrams of potassium hydroxide (KOH) equivalent to the hydroxyl content of 1 g of sample.

D 16, D01

hydroxyl number—the milligrams of potassium hydroxide equivalent to the hydroxyl content of 1 g of sample. In the case of a pure compound, the hydroxyl number is inversely proportional to the hydroxyl equivalent weight:

$$\text{equivalent weight (g/equivalent)} = 56100/\text{hydroxyl number}$$

E 1547, E15

(2-hydroxypropyl)methylcellulose—a mixed ether of cellulose containing both hydroxypropyl and methyl groups.

D 1695, D01

hygrochromic, adj —known to change color when the moisture content or relative humidity varies.

E 284, E12

hygrometer, n —any instrument for measuring the humidity of the atmosphere.

D 123, D13

hygrometer, n —an instrument for measuring the humidity of a gas. *dew-/frost-point hygrometer, n* —an instrument that measures the surface temperature at which ambient water vapor condenses.

electric hygrometer, n —an instrument that determines the water vapor content of an atmosphere by measuring the change in resistance or capacitance of hygroscopic material.

mechanical hygrometer, n —an instrument for determining the

water vapor content of an atmosphere by measuring the dimensional change produced in an hygroscopic material.

D 1356, D22

hygrometer, n —any instrument for measuring the humidity of the atmosphere.

D4920, D13

hygroscopic—attracting, absorbing, and retaining atmospheric moisture.

D 1079, D08

hygroscopic—attracting, absorbing, and retaining atmospheric moisture.

E 631, E06

hygroscopic—attracting, absorbing, and retaining atmospheric moisture.

E 1749, E06

hygroscopic capacity (hygroscopic coefficient), w_e (D)—ratio of: (1) the weight of water absorbed by a dry soil or rock in a saturated atmosphere at a given temperature, to (2) the weight of the oven-dried soil or rock.

D 653, D18

hygroscopic water content, w_H (D)—the water content of an air-dried soil or rock.

D 653, D18

hyperbaric chamber, n —a chamber in which the internal pressure can be elevated by the introduction of compressed air (or other gasses) that is used primarily for medical treatment (including decompression sickness and arterial gas embolism) and physiological studies.

F 1549, F32

hypereutectic alloy—any composition between the eutectic point and the composition of that solid phase, of the pair into which the eutectic liquid decomposes, which is considered the less important; thus, the identification of the hypereutectic range, as distinguished from the hypoeutectic range, is a matter either of personal preference, or a common usage for each alloy system.

E 7, E04

hypereutectoid alloy—any composition between the eutectoid point and the composition of that solid phase, of the pair into which the eutectoid solid phase decomposes, which is considered the less important; for the meaning of “important,” see **hypereutecticalloy**.

E 7, E04

hypereutectoid structure—the microstructure of a hypereutectoid alloy. For example, microstructural aggregate found in iron-carbon alloys which consist of primary crystals of cementite together with nodules of pearlite.

E 7, E04

hyperfiltration—separation of dissolved ions from a feed stream as in nanofiltration and reverse osmosis.

D 6161, D19

hypoeutectic alloy—any composition between the eutectic point and the composition of that solid phase, of the pair into which the eutectic liquid decomposes, which is considered the more important; for the meaning of “important,” see **hypereutecticalloy**.

E 7, E04

hypoeutectoid alloy—any composition between the eutectoid point and the composition of that solid phase, of the pair into which the eutectoid solid phase decomposes, which is considered the more important; for the meaning of “important,” see **hypereutecticalloy**.

E 7, E04

hypoeutectoid structure—the microstructure of a hypoeutectoid alloy. For example, the microstructural aggregate found in iron-carbon alloys which consist of primary crystals of ferrite together with nodules of pearlite.

E 7, E04

hypothesis, n —a supposition or conjecture put forward to account for certain facts and used as a basis for further investigation by which it may be proved or disproved.

D 5681, D34

hysteresis—the residual strain in stone after the stress causing such strain is changed.

C 119, C18

hysteresis—incomplete recovery of strain during unloading cycle due to energy consumption. (ISRM)

D 653, D18

hysteresis, n —the conversion of mechanical energy to heat in rubber undergoing strain.

D 1566, D11

hysteresis, n —the phenomenon taking place within rubber undergoing strain that causes conversion of mechanical energy to heat, and which, in the “rubbery” region of behavior (as distinct from the glassy or transition regions), produces forces essentially independent of frequency. (See also **hysteretic** and **viscous**.)

D 1566, D11

hysteresis—the maximum difference between corresponding transducer outputs (of the wheel force transducer system) at increasing

hysteresis

and decreasing applied calibration force, expressed as a percentage of full load output. Proven outliers are excluded. **E 867, E17**

hysteresis—(1) the lagging of the magnetic effect when the magnetic force acting upon a ferromagnetic body is changed.

(2) the phenomenon exhibited by a magnetic system wherein its state is influenced by its previous history. **E 1316, E07**

hysteresis diagram—*infatigue*, the stress-strain path during a cycle. **E 1823, E08**

hysteresis (electrode memory)—hysteresis is said to have occurred if, after the concentration has been changed and restored to its original value, there is a different potential observed. The reproducibility of the electrode will consequently be poor. The systematic error is generally in the direction of the concentration of the solution in which the electrode was previously immersed. **D 4127, D19**

hysteresis loop, *n*—the Lissajous figure, or closed curve, formed by plotting dynamic force against dynamic deflection for a complete cycle. **D 1566, D11**

hysteresis loop—the divergence between the paths of the adsorption and desorption isotherms. **D 2652, D28**

hysteresis loop, biased—an incremental hysteresis loop that lies entirely in any one quadrant.

NOTE—In this case, both of the limiting values of H and B are in the same direction. **A 340, A06**

hysteresis loop, incremental—the hysteresis loop, nonsymmetrical with respect to the B and H axes, exhibited by a ferromagnetic material in a CM condition.

NOTE—In this case, both of the limiting values H may have opposite polarity, but definitely have different absolute values of H_m . An incremental loop may be initiated at either some point on a normal hysteresis loop or at some point on the normal induction curve of the specimen. **A 340, A06**

hysteresis loop (in dynamic mechanical measurement)—the closed curve representing successive stress-strain status of the material during a cyclic deformation. (ISO) **D 4092, D20**

hysteresis loop, intrinsic—a hysteresis loop obtained with a ferromagnetic material by plotting (usually to rectangular coordinates) corresponding dc values of intrinsic induction, B_i , for ordinates and magnetic field strength H for abscissae. **A 340, A06**

hysteresis loop loss, W_h —the power expended in a single slow excursion around a normal hysteresis loop. The energy is the integrated area enclosed by the loop measured in gauss-oersteds. Using the cgs-emu system of units:

$$W_h = (\int HdB/4\pi) \text{ ergs}$$

where the integrated area enclosed by the loop is measured in gauss-oersteds. **A 340, A06**

hysteresis loop, normal—a closed curve obtained with a ferromagnetic material by plotting (usually to rectangular coordinates) corresponding dc values of magnetic induction (B) for ordinates and magnetic field strength (H) for abscissa when the material is passing through a complete cycle between equal definite limits of either magnetic field strength, $\pm H_m$, or magnetic induction, $\pm B_m$. In general, the normal hysteresis loop has mirror symmetry with respect to the origin of the B and H axes, but this may not be true for special materials. **A 340, A06**

hysteresis loss, *n*—the loss of mechanical energy due to hysteresis. **D 1566, D11**

hysteresis loss, *n*—per cycle, the amount of mechanical energy converted to heat due to straining; mathematically, the area within the hysteresis loop, having units of the product of force and length. **D 1566, D11**

hysteresis loss, incremental, $P_{\Delta h}$ —the power (watts) as a result of hysteresis expended in a ferromagnetic material while being driven through an incremental flux-current loop by a CM -type of excitation. **A 340, A06**

hysteresis loss, normal, P_h —(1) the power expended in a ferromagnetic material, as a result of hysteresis, when the material is subjected to a SCM excitation.

(2) The energy loss/cycle in a magnetic material as a result of magnetic hysteresis when the induction is cyclic (but not necessarily periodic). **A 340, A06**

hysteresis loss, rotational—the hysteresis loss that occurs in a body when subjected to a constant magnetizing force, the direction of which rotates with respect to the body, either in a continuously cyclic or in a repeated oscillatory manner. **A 340, A06**

hysteresis, magnetic—the property of a ferromagnetic material exhibited by the lack of correspondence between the changes in induction resulting from increasing magnetic field strength and from decreasing magnetic field strength. **A 340, A06**

hysteretic, *adj*—*as a modifier of damping*, descriptive of that type of damping in which the damping force is proportional to the amplitude of motion across the damping element. **D 1566, D11**

hysteretic angle, magnetic, β —the mean angle by which the fundamental component of exciting current leads the fundamental component of magnetizing current, I_m , in an inductor having a ferromagnetic core.

NOTE—Because of hysteresis, the instantaneous value of the hysteretic angle will vary during the cycle of SCM excitation. However, β is taken to be the mean effective value of this angle. **A 340, A06**

- I**—moment of inertia of the transformed section of the diaphragm based on webs or flanges, in.⁴ (or mm⁴) **E 631, E06**
- σ_1** —stress at crack initiation **F 2078, F07**
- IACS**—the International Annealed Copper Standard; an international standard of electrical conductivity. **E 1316, E07**
- IAQ, n**—see **indoor air quality**. **E 2114, E06**
- IC20**—a statistically or graphically estimated concentration of test material that, under specified conditions, is expected to cause a 20 % inhibition of a biological process (such as growth, reproduction, or bioluminescence) for which the data are not dichotomous. **D 5681, D34**
- IC50**—a statistically or graphically estimated concentration of test material that, under specified conditions, is expected to cause a 50 % inhibition of a biological process (such as growth or reproduction) for which the data are not dichotomous. **E 943, E47**
- ice**—a glass enamel frit which, when applied to glassware and fired, produces a textured surface. **C 162, C14**
- ice**—water in the frozen, solid, state. **D 7099, D18**
- ice-bearing permafrost**—permafrost that contains ice. **D 7099, D18**
- ice-bonded permafrost**—ice-bearing permafrost in which the soil particles are cemented together by ice. **D 7099, D18**
- ice boom**—boom intended for use in ice-infested waters, designed to withstand effects of ice contact. **F 818, F20**
- ice-bulb temperature**—See **temperature**. **D 1356, D22**
- ice, candled**—see **candleice**. **D 7099, D18**
- ice content**—(1) the ratio, expressed as a percentage, of the weight of the ice phase to the weight of dry soil; (2) the ratio, expressed as a fraction, of the volume of ice in a sample to the volume of the whole sample. In the volumetric calculation the ratio cannot exceed unity. In the gravimetric calculation, the percentage can exceed 100 %. **D 7099, D18**
- ice-cored topography**—topography that is due almost solely to differences in the amount of excess ice underlying the surface. **D 7099, D18**
- ice crystal**—a very small individual crystal or particle of ice visible in, or on, the face of a mass of soil or rock. Crystals may occur alone, or in combination with other ice formations. **D 7099, D18**
- ice dam**—a mass of ice formed at the transition from a warm to a cold roof surface. Frequently formed by refreezing meltwater at the overhang of a steep roof, an ice dam may cause ice and water to back up under shingles or other roofing materials. **D 1079, D08**
- ice, dry, n**—smooth ice without loose surface materials. **F 538, F09**
- ice, epigenetic**—see **epigenetic ice**. **D 7099, D18**
- ice, excess**—see **excessice**. **D 7099, D18**
- ice, frazil**—see **frazilice**. **D 7099, D18**
- ice lens**—a lens-shaped body of ice ranging in thickness from hairline to 0.3 m. Ice layers more than 0.3 m in thickness are better termed massive ice beds. **D 7099, D18**
- ice lenses**—lenticular formations of ice in soil occurring essentially parallel to each other, generally normal to the direction of heat loss, and commonly in repeated layers. **D 7099, D18**
- ice nucleation temperature**—the temperature at which ice first forms during freezing of a soil/water system that does not initially contain ice. **D 7099, D18**
- ice point, n**—thermometric fixed point of ice and water saturated with air at a pressure of 101 325 Pa. **E 344, E20**
- ice-rich permafrost**—perennially frozen ground that contains ice in excess of that required to fill pore spaces. **D 7099, D18**
- ice segregation**—the process of formation of segregated ice by freezing of water in mineral or organic soil. **D 7099, D18**
- ice tool, n**—a hand-held piece of equipment designed to assist climbers and mountaineers on ice or hard snow. **F 1773, F08**
- ice vein**—an ice-filled crack or fissure in the ground. **D 7099, D18**
- ice wedge**—a massive, wedge-shaped body of ice in soil, usually with its apex pointing downwards, and composed of foliated, or layered, vertically-orientated (commonly white) ice. Wedges may be as much as several metres wide at the top, and penetrate the soil to a feather edge at depths of several metres. These may be “active” or “inactive” depending on whether or not these are growing by repeated, but not necessarily annual, winter cracking. **D 7099, D18**
- ice wedge cast**—a filling of soil or sediment into the space formerly occupied by an ice wedge. **D 7099, D18**
- ice wedge polygon**—any polygon surrounded by troughs underlain by ice wedges. **D 7099, D18**
- ICI, n**—trademarked abbreviation for Imperial Chemical Industries. Do not use as the abbreviation for International Commission on Illumination; see **CIE**. **E 284, E12**
- iciness**—a qualitative term describing the quantity of ice in frozen ground. **D 7099, D18**
- icing**—a sheet-like mass of layered ice, formed either on the ground surface or on the surface of river or lake ice, by freezing of successive flows of water that may seep from the ground, flow from a spring or emerge from below river or lake ice through fractures. (**aufeis**, German; **naled**, Russian) **D 7099, D18**
- icing blister**—a seasonal frost mound consisting of ice only and formed at least in part through lifting of one or more layers of icing by injected water. **D 7099, D18**
- icing glade**—an area which remains free of trees and shrubs due to annual occurrences of icings. **D 7099, D18**
- icing mound**—a seasonal frost mound consisting exclusively of thinly-layered ice, which has been formed by the freezing of successive flows of water. **D 7099, D18**
- IC/TC, n**—abbreviation for Intelligent Color/Trash Coordinator. **D 123, D13**
- IC/TC, n**—abbreviation for Intelligent Color/Trash Coordinator. **D 7139, D13**
- ID**—inside dimensions or inside diameter. **D 996, D10**
- ID coil**—a coil or coil assembly used for electromagnetic testing by insertion into the test piece as in the case of an inside probe for tubing. Coils of this type are also referred to as inside coils, inserted coils, or bobbin coils. **E 1316, E07**
- ideal black, n**—object or material that absorbs all light impinging on it. **D 2946, C17**
- ideal crack**—a simplified model of a crack. In a stress-free body, the crack has two smooth surfaces that are coincident and join within the body along a smooth curve called the crack front; in two-dimensional representations the crack front is called the crack tip. **E 1823, E08**
- ideal-crack-tip stress field**—the singular stress field, infinitesimally close to the crack front, that results from loading an ideal crack. In a linear-elastic homogeneous body, the significant stress components vary inversely as the square root of the distance from the crack tip. **E 1823, E08**
- ideal gas**—a gas that obeys Boyle’s law and has zero heat of free expansion (or also obeys Charles’ law). Also known as a perfect gas. **E 1316, E07**
- identification**—the physical marking of property or, in some cases, its container, by which one or more of the following can be ascertained: ownership, classification, part, serial, model, description, contract, or unique organization designation. **E 2135, E53**
- identification**—See **grip mark**. **F 547, F16**
- identification (definite conclusion of identity)**—this is the highest degree of confidence expressed by document examiners in handwriting comparisons. The examiner has no reservations whatever, and although prohibited from using the word “fact,” the examiner is certain, based on evidence contained in the handwriting, that the writer of the known material actually wrote the writing in question. **Examples**—It has been concluded that John Doe wrote the questioned material, or it is my opinion [or conclusion] that John Doe of the known material wrote the questioned material. **E 1658, E30**
- identification limit, n**—for a qualitative chemical spot test kit, this is

identification limit, *n*

the lead content that yields a 50 % chance of either a positive or negative test result for a given sample matrix (1). E 631, E06

identity period—the distance between equivalent points in adjacent unit cells, usually measured in a direction parallel to a crystal axis. E 7, E04

idiomorphic crystal—single crystals that have grown without restraint so that the habit planes are clearly developed. E 7, E04

idle energy rate—the average rate of energy consumed (Btu/h or kW) by the equipment while it is “holding” the cooking medium, cavity, or surface (see **cooking medium, cooking cavity or cooking surface**) at the equipment’s thermostat set point, $E_{idle\ rate}$

$$E_{idle\ rate} = \frac{E_{idle} \times 60}{t_{idle}}$$

where:

- $E_{idle\ rate}$ = idle energy rate,
- E_{idle} = idle energy consumption, Btu, kWh or kJ, and,
- t_{idle} = length of idle test period, min.

F 1827, F26

idling time—time periods during which a size reduction device is freewheeling, that is, not processing refuse. D 5681, D34

IDT, *n*—abbreviation for Intelligent Data Terminal. D 123, D13

IDT, *n*—abbreviation for Intelligent Data Terminal. D 7139, D13

ignitability, *n*—the propensity to ignition, as measured by the time to sustained flaming, in seconds, at a specified heating flux. E 176, E05

ignitability, *n*—the propensity for ignition, as measured by the time to sustained flaming at a specified heating flux. E 176, E05

igniter, *n*—a material such as a small diameter wire that can burn under an electrical influence and is used to ignite the promoter. G 126, G04

ignition, *n*—the initiation of combustion. D 123, D13

ignition, *n*—the initiation of combustion. D 4391, D13

ignition, *n*—the initial combustion. D 5684, D13

ignition, *n*—the initiation of combustion. E 176, E05

ignition, *n*—the initiation of combustion. E 176, E05

ignition, *n*—the initiation of combustion. E 1445, E27

ignition, *n*—the initiation of combustion. F 819, F18

ignition, *n*—the initiation of combustion. F 1494, F23

ignition delay, *n*—that period of time, expressed in degrees of crank angle rotation, between the start of fuel injection and the start of combustion. D 4175, D02

ignition delay time, *n*—the time lapse between application of heat to a material and its ignition. It is the time in seconds between insertion of the sample into the flask and ignition. It is maximum at the minimum autoignition temperature and also referred to as ignition lag. E 1445, E27

ignition delay time, t_a , *n*—experimental parameter defined as the time interval between the initiation of the dust dispersion procedure (the time at which the dispersion air starts to enter the chamber) in an experimental apparatus and the activation of the ignition source. The ignition delay time characterizes the turbulence level prevailing at ignition under the defined test conditions. E 1445, E27

ignition loss, *n*—*in glass textiles*, the amount of organic material consumed by ignition. D 123, D13

ignition loss, *n*—*in glass textiles*, the amount of organic material consumed by ignition. D 7018, D13

ignition of a dust layer, *n*—initiation of self-heating or combustion in a material under test. E 1445, E27

ignition temperature, *n*—the lowest temperature at which sustained combustion of a material can be initiated under specified test conditions. E 176, E05

ignition temperature, *n*—the temperature at which a material will ignite an oxidant under specific test conditions. G 126, G04

ignition temperature (kindling point)—the lowest temperature at

which combustion will occur spontaneously under specified conditions. D 2652, D28

ignition time, *n*—time between the start of heating and the point at which the maximum temperature or flaming combustion is reached. E 1445, E27

illuminance—luminous irradiance. E 772, E44

illuminance—the density of luminous flux on a surface per unit area. Measured in the SI system by lux. E 1316, E07

illuminance, *E, E_v, n*—luminous flux incident per unit of area. E 284, E12

illuminant, *n*—*for color determination*, incident luminous flux, specified only by its spectral distribution (see Terminology E 284). D 2946, C17

illuminant, *n*—radiant flux that may be specified by its spectral power distribution, and that can, in illuminating objects, affect their perceived colors. E 284, E12

illuminant metamerism, *n*—the property of specimens having different spectral characteristics and having the same color when viewed by a normal observer under a given illuminant, but different colors when viewed under a different illuminant, other conditions remaining the same. E 284, E12

illuminant mode, *n*—color seen as ascribed to a source of illumination. E 284, E12

illumination, *n*—*in lighting*, the density or flux of light on a unit area of surface. D 123, D13

illumination, *n*—*in lighting*, the density or flux of light on a unit area of surface. D 7139, D13

illumination—See **brightfield, conical, darkfield, polarized light**. E 7, E04

illuminator, *n*—the portion of a radiometric or photometric instrument that provides the illuminating beam on the specimen, including the source, occasionally the monochromator or spectral filters, a diffuser such as an integrating sphere, if used, and associated optics. E 284, E12

illuminator plane, *n*—the plane containing the specimen normal and the axis of the illuminator. E 284, E12

ilmenite—a mineral having the theoretical composition FeO·TiO₂ used principally in the production of titanium oxide. C 242, C21

image—a representation of an object produced by means of radiation, usually with a lens or mirror system. E 7, E04

image—the optical counterpart of an object produced by means of an image-producing device. F 221, F05

image—the optical counterpart of an object produced by a lens or mirror system or the graphic representation of an object. F 335, F05

image area, *n*—that portion of the page which is printed, including the space between letters and lines. (See **percent coverage** and **maximum image area**.) F 1457, F05

image color—appearance of the image dependent upon the spectral reflectance of the image, the spectral composition of the incident light, and the spectral response of the observer. F 221, F05

image data file—a digital file containing radiological image and text information. E 1316, E07

image definition—see **definition**. E 1316, E07

image density—the contrast between image and background as measured by densitometer. F 221, F05

image density—the optical density of the developed image as detected by the eye, or measured by a reflection densitometer. F 335, F05

image density, *n*—a perception of the image darkness as detected by the eye or measured by a reflection densitometer, where the image density is the log to the base ten of the reciprocal of the reflectance. (See **reflectance**.) F 1457, F05

image density, *n*—a measure of the reflectance or density of the imaged portion of a thermal imaging product after exposure to heat energy; typically measured with a densitometer, reflectometer, or opacimeter. F 1623, F05

image depth profile—AES, XPS, SIMS, a three-dimensional representation of the spatial distribution of a particular elemental or molecular species (as indicated by emitted secondary ions or electrons) as a function of depth or material removed by sputtering. **E 673, E42**

image processing—a method whereby digital image data is transformed through a mathematical function. **E 1316, E07**

image processing, n—techniques for filtering, storing and retrieving images, and for processing pictorial information by computer. **F 1294, F05**

image processing, in image analysis—the computer modification of a digitized image on a pixel-by-pixel basis to emphasize or de-emphasize certain aspects of the image. **E 7, E04**

image quality indicator—a device or combination of devices whose image or images on a neutron radiograph provide visual or quantitative data, or both, concerning the radiographic sensitivity of the particular neutron radiograph. **E 1316, E07**

image quality indicator (IQI)—in industrial radiology, a device or combination of devices whose demonstrated image or images provide visual or quantitative data, or both, to determine radiologic quality and sensitivity. Also known as a penetrameter (disparaged).

NOTE—It is not intended for use in judging size nor establishing acceptance limits of discontinuities. **E 1316, E07**

image rotation—in electron optics, the angular shift of the electron image of an object about the optic axis induced by the tangential component of force exerted on the electrons perpendicular to the direction of motion in the field of a magnetic lens. **E 7, E04**

image well—an imaginary well located opposite a control well such that a boundary is the perpendicular bisector of a straight line connecting the control and image wells; used to simulate the effect of a boundary on water-level changes. **D 653, D18**

imaging line scanner—an apparatus that scans in a single dimension and is moved perpendicular to the scan direction to produce a two-dimensional thermogram of a scene. **E 1316, E07**

immature fibers, n—(1) (cotton fibers treated with sodium hydroxide solution)—fibers that either (a) have swollen and assumed a spiral form, or (b) remained flat, thinly outlined, and almost transparent. Total wall width is less than the lumen width.

(2) (cotton fibers observed under polarized light)—fibers that appear purple, indigo, or blue, turn orange or yellow-orange upon rotation to the subtractive position, and upon removal of the selenite plate show parallel extinction. (Compare **mature fibers**.) **D 123, D13**

immature fibers, n—(1) (cotton fibers treated with sodium hydroxide solution)—fibers that either (a) have swollen and assumed a spiral form, or (b) remained flat, thinly outlined, and almost transparent. Total wall width is less than the lumen width.

(2) (cotton fibers observed under polarized light)—fibers that appear purple, indigo, or blue, turn orange or yellow-orange upon rotation to the subtractive position, and upon removal of the selenite plate show parallel extinction. (Compare **mature fibers**.) **D 7139, D13**

immediate elastic recovery, n—recoverable deformation which is essentially independent of time, that is, occurring in (a time approaching) zero time and recoverable in (a time approaching) zero time after removal of the applied force. (See **delayed deformation**.) **D 123, D13**

immediate elastic recovery, n—recoverable deformation which is essentially independent of time, that is, occurring in (a time approaching) zero time and recoverable in (a time approaching) zero time after removal of the applied force. (Compare **delayed-deformation** and **delayed elastic recovery**.) **D 4848, D13**

immediate seizure region, n—that region of the scar-load curve characterized by seizure or welding at the startup or by large wear scars. **D 4175, D02**

immersed cure—the method of setting or hardening asbestos-cement products by immersion in water or in an aqueous solution,

resulting in modified chemical activity between the cementitious components with an increase or decrease in the rate of cure. **D 2946, C17**

immersed membrane—MF/UF membranes immersed in the water to be filtered, where the transmembrane pressure is applied by suction to the permeate side. **D 6161, D19**

immersion error, n—an error caused by the heat conduction or radiation, or both, between the resistance thermometer element and the environment external to the measurement system, because of insufficient immersion length and thermal contact of the thermometer with the medium under measurement. **E 344, E20**

immersion lens—See **immersion objective**. **E 7, E04**

immersion objective—an objective in which a medium of high refractive index is used in the object space to increase the numerical aperture and hence the resolving power of the lens. **E 7, E04**

immersion objective (electron optics)—a lens system in which the object space is at a potential (or in a medium of index of refraction) different from that of the image space. **E 7, E04**

immersion plate—a metallic deposit produced by a displacement reaction in which one metal displaces another from solution, for example:



B 374, B08

immersion rinse—a means of removing excess penetrant in which the test parts are dipped into an agitated tank of water or remover. **E 1316, E07**

immersion rinse—a means of removing surface penetrant, in which the test part is immersed in a tank of either water or remover. **E 1316, E07**

immersion testing—an ultrasonic examination method in which the search unit and the test part are submerged (at least locally) in a fluid, usually water. **E 1316, E07**

immobilization, n—the entrapment of materials, such as cells, tissues, or proteins within, or bound to, a matrix. **F 2312, F04**

immunity—a state of resistance to corrosion or anodic dissolution of a metal caused by thermodynamic stability of the metal. **G 15, G01**

impact angle, n—in *impingement erosion*, an angle that could be either the **angle of attack** or the **angle of incidence**, which see. Because of this ambiguity, this term should be specially defined when used or, preferably, used only in contexts where the ambiguity does not matter. **G 40, G02**

impact apparatus or machine, n—the total apparatus including the foundation parts, guide rails, electromagnet lift, winch, and tools. **E 1445, E27**

impact atomizer—a pressure atomizer in which a spray pattern is achieved by the impaction of one or more liquid jets against a solid surface. **E 1620, E29**

impact bending—application of an impact load in bending to obtain a measure of the ability of wood to absorb shock loads. **D 9, D07**

impact bruise—See **percussion cone**. **C 162, C14**

impact-ignition resistance, n—the resistance of a material to ignition when struck by an object in an oxygen-enriched atmosphere under a specific test procedure. **G 126, G04**

impact insulation class, IIC—a single-number rating derived from measured values of normalized impact sound pressure levels in accordance with Annex A1 of Test Method E 492. It provides an estimate of the impact sound insulating performance of a floor-ceiling assembly. **C 634, E33**

impaction, n—a forcible contact of particles of matter, a term often used synonymously with impingement. **D 1356, D22**

impact, Izod—a specific type of impact test made with a pendulum-type machine on a cantilever beam specimen and also the values obtained by this method. **F 412, F17**

impact loading—in hardness testing, a phenomenon in which a

impact loading

momentary overload is inadvertently applied to the indenter by the inertia of parts of the tester subjected to large accelerations.

E 7, E04

impactor, *n*—a device for collecting airborne or emission particulate matter in which the air or gas being sampled is impacted or impinging against a surface.

cascade impactor, *n*—a type of impactor which employs several stages of impaction in series to collect successively smaller sizes of particles. D 1356, D22

impact pressure range—the variation in an imaging device due to type font width, on feet, impact, and other adjustments inherent in the device. F 221, F05

impact printer—a printer in which printing is the result of mechanical impacts. See **chain printer**, **drum printer**, **element printer**, **dot matrix**. F 909, F05

impact resistance, *n*—resistance to fracture under the sudden application of an external force. D 123, D13

impact resistance, *n*—resistance to fracture under shock force. D 1566, D11

impact sensitive—the property of a carbon paper, ribbon, or paper to produce an image from impact (as with a typewriter). F 221, F05

impact strength, *n*—the kinetic energy per area absorbed by an adhesively-bonded joint when fractured by shock loading. D 907, D14

impact strength—the property of a particle to resist physical breakdown when subjected to a rapidly increasing applied force. D 2652, D28

impact strength—often referred to as impact energy; it is the amount of energy required to fracture a fastener, usually measured by either an Izod or Charpy test. F 1789, F16

impact surface, *n*—an interior or exterior surface that is subject to damage by repeated sudden force, such as certain parts of doorframes. E 1605, E06

impact test—a test to determine the resistance of a porcelain enamel to fracture caused by a sudden blow. C 286, B08

impact tester, *n*—a device for dropping a cylindrical weight from a variable height onto a coated metal test panel; the greater the height required to produce cracks in the coating, the greater its impact resistance. D 16, D01

impact tool, *n*—the drop weight, intermediate weight, and anvil. E 1445, E27

impact, tup—a falling weight (tup) impact test developed specifically for pipe and fittings. F 412, F17

impact velocity, *n*—in *impingement erosion*, the relative velocity between the surface of a solid body and an impinging liquid or solid particle. G 40, G02

impact wear, *n*—wear due to collisions between two solid bodies where some component of the motion is perpendicular to the tangential plane of contact. G 40, G02

impedance—the total opposition that a circuit presents to the flow of an alternating current, specifically the complex quotient of voltage divided by current. E 1316, E07

impedance, acoustic—the product of the density and sonic velocity of a material. The extent of wave energy transmission and reflection at the boundary of two media is determined by their acoustic impedances. (ISRM) D 653, D18

impedance (acoustic)—a mathematical quantity used in computation of reflection characteristics at boundaries; product of wave velocity and material density. E 1316, E07

impedance analysis—in electromagnetic testing, an analytical method that consists of correlating changes in the amplitude, phase, or quadrature components, or all of these, of a complex test signal voltage to the electromagnetic conditions within the test specimen. E 1316, E07

impedance plane diagram—a graphical representation of the locus of points, indicating the variations in the impedance of a test coil as a function of basic test parameters. E 1316, E07

impedance ratio, $z/\rho c \equiv r/\rho c + jx/\rho c$; [dimensionless]—the ratio of

the specific normal acoustic impedance at a surface to the characteristic impedance of the medium. The real and imaginary components are called, respectively, **resistance ratio** and **reactance ratio**. C 634, E33

impedance, Z—the ratio of the time dependent voltage, $v(t)$, across a circuit, a circuit element, or material to the time dependent current, $i(t)$, through it; that is:

$$Z = v(t)/i(t)$$

E 1142, E37

imperfection, *n*—a material discontinuity or irregularity that is detectable by **inspection**. A 941, A01

imperfection—any defect or blemish in or on wood that detracts from its appearance or lowers its utility. In grading rules, a class of limitation on manufacturing practice. D 9, D07

imperfection, *n*—a departure of a quality characteristic from its intended level or state. D 123, D13

imperfection, *n*—a departure of a quality characteristic from its intended level or state. D 6799, D13

imperfection, *n*—a departure of a quality characteristic from its intended condition. E 1316, E07

imperial gallon (IG)—1.2 times U.S. gallon. D 6161, D19

impermeable boundary—the conceptual representation of a natural feature such as a fault or depositional contact that places a boundary of significantly less-permeable material laterally adjacent to an aquifer. D 653, D18

impervious, *adj*—describes the state of having obtained that degree of vitrification evidenced visually by resistance to penetration of a specified dye. C 43, C15

impervious—that degree of vitrification evidenced visually by complete resistance to dye penetration. C 242, C21

impervious carbon, *n*—the same as impervious graphite with the exception that the base stock has not been graphitized. C 709, D02

impervious carbon, *n*—the same as impervious graphite with the exception that the base stock has not been graphitized. D 4175, D02

impervious graphite, *n*—manufactured graphite that has been impregnated with a resinous material to make the final article impervious to liquids in the recommended operating range. C 709, D02

impervious graphite, *n*—manufactured graphite that has been impregnated with a resinous material to make the final article impervious to liquids in the recommended operating range. D 4175, D02

impingement, *n*—the act of bringing matter forcibly in contact.

dry impingement, *n*—the process of impingement carried out so that particulate matter carried in the gas stream is retained upon the surface against which the stream is directed.

wet impingement, *n*—the process of impingement carried out within a body of liquid, the latter serving to retain the particulate matter. D 1356, D22

impingement, *n*—in *tribology*, a process resulting in a continuing succession of impacts between (liquid or solid) particles and a solid surface. G 40, G02

impingement atomizer—in rocketry, an impinging jet atomizer; in industrial processing, an impact atomizer.

NOTE—Since this term is ambiguous, it is not recommended for describing either device. E 1620, E29

impingement attack, *n*—deprecated term for **impingement corrosion**. (The latter term is preferred so as to avoid confusion with **liquid impingement erosion**.) G 40, G02

impingement corrosion—a form of erosion-corrosion generally associated with the local impingement of a high-velocity, flowing fluid against a solid surface. G 15, G01

impingement corrosion, *n*—a form of erosion-corrosion generally associated with the impingement of a high-velocity, flowing liquid containing air bubbles against a solid surface. G 40, G02

impinger, *n*—broadly, a sampling instrument employing impingement of the collection of particulate matter.

- midget impinger, n*—a specific instrument employing wet impingement, using a liquid volume of 10 mL and a gas flow of 2.8 L/min.
- standard impinger, n*—a specific instrument employing wet impingement, using a liquid volume of 75 mL and a gas flow of 28 L/min. **D 1356, D22**
- impinging jet atomizer**—a pressure atomizer in which atomization is achieved by the external collision of two or more liquid jets. **E 1620, E29**
- implantation, n**—the procedure of inserting materials such as a cell(s), tissue(s), or organ(s) for therapeutic purposes. Synonym: *graft* or *grafting*. TEMPs may be applied to a recipient by implantation or grafting. **F 2312, F04**
- importance factor, n** (coefficient d'importance)—*of a facility requirement*, a numerical indication of the relative importance of a requirement for serviceability, expressed on a scale of 0 to 9, with 0 being not related, 1 being relevant but least important, and 9 being most important. **E 631, E06**
- importance factor, n** (coefficient d'importance)—*of a facility requirement*, a numerical indication of the relative importance of a requirement for serviceability, expressed on a scale of 0 to 9, with 0 being not related, 1 being relevant but least important, and 9 being most important. **E 1480, E06**
- impreg**—wood impregnated with synthetic resin that is cured in place so as to reduce materially swelling and shrinking of the wood on exposure to varying environmental conditions. **D 1038, D07**
- impregnate, v**—in roofing materials manufacture, to completely surround the fibers in a felt or mat with bitumen, with the spaces between the fibers partially or completely filled without a continuous coating of bitumen on the surface. **D 1079, D08**
- impregnate, vt**—to saturate the fiber insulation of wires with a high-temperature electrical insulating compound to form a moisture barrier around the wires and to inhibit fraying of the fibers. **E 344, E20**
- impregnated fabric, n**—a fabric in which the interstices between the yarns are completely filled with the impregnating compound throughout the thickness of the fabric, as distinguished from sized or coated fabrics, where these interstices are not completely filled. **D 123, D13**
- impregnated fabric, n**—a fabric in which the interstices between the yarns are completely filled with the impregnating compound throughout the thickness of the fabric, as distinguished from sized or coated fabrics, where these interstices are not completely filled. **D 4850, D13**
- impregnation, n**—a process of filling the pores of a sintered compact, with a nonmetallic material such as oil, wax, or resin. **B 243, B09**
- impregnation, n**—partial filling of the open pore structure with another material. **C 709, D02**
- impregnation, n**—partial filling of the open pore structure with another material. **D 4175, D02**
- impregnation time of paper, n**—the time in seconds required for a liquid of specified composition and viscosity to penetrate completely from one face of a sheet of paper to the other under certain prescribed conditions. **D 1711, D09**
- impressed current**—an electric current supplied by a device employing a power source that is external to the electrode system. (An example is dc current for cathodic protection.) **G 15, G01**
- impression: (1) electron microscopy**—the reproduction of the surface contours of a specimen formed in a plastic material after the application of pressure and heat, or both.
- (2) *hardness*—the imprint or dent made in the specimen by the indenter of a hardness-measuring device. **E 7, E04**
- impression replica*—See **replica**. **E 7, E04**
- impressions per ribbon**—the average number of characters which can be printed from a given ribbon on a given typewriter or printer of specified print quality under specific usage conditions. **F 221, F05**
- imprinter, pressure**—any device used to produce or impress marks or patterns on a surface, for example, a device such as that used with credit cards and address plates. **F 909, F05**
- imprinting**—(1) The act of using an imprinter; **F 909, F05**
- (2) The output of any imprinter.
- improve, v**—to enhance the quality or value of land or property. **E 631, E06**
- improve*—See **building modification**. **E 631, E06**
- impulsive sound, n**—a brief, intrusive sound, such as that associated with a tire blowout, operation of a punch press, the discharge of a firearm, a door slam, or a shout, usually characterized by a rapid rise time in the initial pressure pulse of less than a few milliseconds, and by a decay time of less than a few seconds. **C 634, E33**
- impure coal*—See *impure coal* under **coal**. **D 121, D05**
- impurities, of a biological drug product**—all process-related (non-adventitious) substances present in the raw materials, bulk drug, or final drug product that are not considered to be the active material, additives, or excipients. **E 1705, E48**
- impurity, n**—any component present in a raw material, intermediate, API, or dosage form that is not the desired entity. **E 2363, E55**
- impurity profile, n**—a description of the identified and unidentified impurities present in a raw material, intermediate, API, or dosage form. **E 2363, E55**
- imputation, n**—the act of putting onto a data set estimated values for that data to fill in for missing values or to replace erroneous values. **E 867, E17**
- inactive ice wedge**—an ice wedge that is no longer growing. **D 7099, D18**
- inactive rock glacier**—a mass of rock fragments and finer material on a slope that contains either an ice core or interstitial ice, and which shows evidence of past, but not present, movement. **D 7099, D18**
- inadequate stimulus, n**—a stimulus which is not regarded as normally affecting a particular sense, but which may actually do so (for example, pressure on the eyeball producing a perception of light, or electrical stimulation generating a taste). **E 253, E18**
- incandescence, n**—emission of light produced by a material when intensely heated; it can be produced with or without combustion. **E 176, E05**
- incandescence, n**—the self-emission of radiant energy in the visible spectrum due to the thermal excitation of atoms or molecules. **E 284, E12**
- incandescent illuminant, n**—illuminant representing the spectral distribution of radiation from an incandescent lamp of specified color temperature. **E 284, E12**
- incasement, n**—a rigid structure or pipe surrounding a buried pipe to provide additional support or protection. **F 412, F17**
- incasement, v**—placement of a rigid structure or pipe surrounding a buried pipe to provide additional support or protection. **F 412, F17**
- inch-pound units**—the units of length, area, volume, weight, and temperature in common use in the United States at the present time. These include, but are not limited to: (1) length—feet, inches, and fractional inches, (2) area—square feet and square inches, (3) volume—cubic feet, cubic inches, gallons, and ounces, (4) weight—pounds and ounces, and (5) temperature—degrees Fahrenheit. **C 896, C04**
- inch threaded Class 2A coating thickness**—a coating thickness which does not exceed $\frac{1}{8}$ of the allowance for Class 2A threads to avoid interference. **F 1789, F16**
- incident, n**—an ignition or fire, or both, that is both undesired and unanticipated, or an undesired and unanticipated consequence of an ignition or fire that was anticipated. **G 126, G04**
- incident angle*—see **angle of incidence**. **E 772, E44**
- incident energy (E_i), n**—the amount of energy (total heat, cal/cm²) received at a surface as a direct result of an electric arc discharge as measured by temperature rise on copper calorimeters. **F 819, F18**
- incident irradiation, n**—the amount of flux per unit area that is normal (perpendicular) to a surface or detector. **F 1294, F05**

incident particle energy

incident particle energy—the effective energy of the primary particles incident on the specimen surface, usually expressed in kiloelectronvolts (keV) per atomic particle. **E 673, E42**

incineration, n—controlled burning of waste products or other combustible material. **D 5681, D34**

incinerator, n—a device constructed for the purpose of containing a material for thermal oxidation. **D 5681, D34**

incinerator—enclosed device using controlled-flame combustion in which waste materials are pyrolyzed or burned. **E 631, E06**

incipient anisotropic phase, n—*as used in Test Method D 5061*, a binder-phase carbon texture having a domain size (less than 0.5 μm) that is near the measuring resolution of the light microscope. **D 121, D05**

incipient fusion, n—beginning of the development of fired bond. **C 43, C15**

incipient seizure or initial seizure region, n—that region at which, with an applied load, there is a momentary breakdown of the lubricating film. **D 4175, D02**

incise—to make slitlike lacerations generally parallel to the grain in the lateral surface of timbers that are resistant to treatment, so that deeper and more uniform penetration of preservative may be obtained. **D 9, D07**

incised—decorated by cutting or indenting the ware surface. **C 242, C21**

inclination angle, n—*of a tire*, the angle between the Z'-axis and the wheel plane. **F 538, F09**

incline—the slope of a roof expressed in percent or in the number of vertical units of rise per horizontal unit of run. **D 1079, D08**

incline impact (Conbur) test—See **package testing**. **D 996, D10**

included angle—angle between the sides of the point in the longitudinal section through the nail in the direction perpendicular to the point sides. **F 547, F16**

inclusion—a foreign solid or gas within or bounded by the glass matrix. **C 162, C14**

inclusion—any foreign matter or particles that are either encapsulated or imbedded in the pultrusion. **D 3918, D20**

inclusion—embedded foreign material or a stain other than from normal composition or forming, or both (see **blemish**). **F 109, C21**

inclusion count—determination of the number, kind, size, and distribution of non-metallic inclusions. See Practice E 45. **E 7, E04**

inclusion, (I), n—*as used in fractography*, a volume-distributed flaw that is a foreign body from other than the normal composition of the bulk advanced ceramic. **C 1145, C28**

inclusions—foreign particles which may or may not be enclosed in the copper foil. **B 846, B05**

inclusions, n—foreign matter in the mica.

air inclusions appear by transmitted light as grayish areas and as silvery areas by reflected light. These are gaseous inclusions.

clay inclusions appear by any light as areas of blue, gray, brown, etc., and are intrusions of earthy materials.

mineral inclusions appear by transmitted light as areas of deep distinct and highly saturated colors such as black, brown, green, red, and so forth. These are concentrated metallic oxides.

vegetable and smokey inclusions appear by transmitted light as areas of pastel colors of low to medium saturation such as pale yellow, pale brown, pale green, and so forth. These are dispersed metallic oxides. The term "vegetable" is a misnomer. **D 1711, D09**

inclusions—foreign material held mechanically, usually referring to non-metallic particles, such as oxides, sulfides, silicates, etc. **E 7, E04**

inclusion shape control, n—the addition of elements during steel making in order to affect the inclusion morphology. **A 941, A01**

incoherent electron scatter—the deflection of electrons by either electrons or atoms which results in a loss of kinetic energy by the incident electron. **E 7, E04**

incomplete block design, n—a design in which the experiment space is subdivided into blocks in which there are insufficient experi-

mental units available to run a complete set of treatments or replicate of the experiment. **E 456, E11**

incomplete block design, n—a design in which the experiment space is subdivided into blocks in which there are insufficient experimental units available to run a complete set of treatments or replicate of the experiment. **E 1325, E11**

incomplete head—nail head with semi-circular rim and portion of head omitted during heading, to allow tight collating of nails in strip form. (See **D head, notched head**.) **F 592, F16**

incomplete thread—thread not fully formed. **F 547, F16**

inconclusive—this is commonly used synonymously with no conclusion when the examiner is at the zero point on the scale of confidence. A potential problem is that some people understand this term to mean something short of definite (or conclusive), that is, any degree of probability, and the examiner should be aware of this ambiguity. **E 1658, E30**

incongruent transformation—a nonisothermal, or nonisobaric, phase change in which one, or both, of the phases involved undergo composition change during the process. **E 7, E04**

increment, n—a small portion of a lot collected by one operation of a sampling device and normally combined with other increments from the lot to make a gross sample. **D 121, D05**

increment, n—a portion of a material to be combined with other portions of the same material to provide a larger sample which will represent the whole material. **D 4175, D02**

increment, n—a portion of a lot as collected by one individual manual or mechanical sampling operation and normally combined with other increments from the lot to make a gross sample. **D 5681, D34**

increment, n—*in sampling*, a portion of material removed from a lot by a single operation. **E 135, E01**

increment—a portion of the lot collected by one individual manual or mechanical sampling operation and normally combined with other increments from the lot to make a gross sample. **E 856, D34**

incremental cost (benefit)—the additional cost (benefit) resulting from an increase in the investment in a building project (Syn. *marginal cost (benefit)*). **E 631, E06**

incremental cost (benefit), n—the additional cost (benefit) resulting from an increase in the investment in a building project (Syn. *marginal cost (benefit)*). **E 833, E06**

incremental permeability—the ratio of the change in magnetic induction to the corresponding change in magnetizing force when the mean induction differs from zero. **E 1316, E07**

increment borer—an augerlike instrument with a hollow bit, used to extract cores from trees for study of growth and age and for other research purposes. **D 9, D07**

increments (solid sample)—portions of material selected from various parts of a lot, which may be tested individually or composited and tested as a unit. **E 1547, E15**

incubation period, n—*in cavitation and impingement erosion*, the initial stage of the erosion rate-time pattern during which the erosion rate is zero or negligible compared to later stages. Also, the exposure duration associated with this stage. (Quantitatively it is sometimes defined as the intercept on the time or exposure axis, of a straight line extension of the maximum-slope portion of the cumulative erosion-time curve.) **G 40, G02**

indent—See **impression**. **E 7, E04**

indentation—See **impression**. **E 7, E04**

indentation—1) the extent of deformation by the indenter point of any one of a number of standard hardness testing instruments; 2) a recess in any surface of a rubber article. **F 869, F08**

indentation hardness, n—the hardness as evaluated from measurements of area or depth of the indentation made by pressing a specified indenter into the surface of a material under specified static loading conditions. **E 6, E28**

indentation hardness—resistance of a material to indentation. This is

- the usual type of hardness test in which a pointed or rounded indenter is pressed into a surface under a substantially static load. **F 1789, F16**
- indentations, *n***—latent or visible impressions in paper or other media. **E 2195, E30**
- indenter**—in hardness testing, a tool, usually of diamond and having a definite geometrical shape, which is forced into the surface of the specimen. **E 7, E04**
- indenter constant**—in hardness testing, a numerical constant relating the area of the indentation to the square of the measured diagonal. **E 7, E04**
- independent third party, *n***—unbiased person or entity that is knowledgeable with subject matter expertise. **F 2463, F10**
- independent variable**—the selected and controlled variable (namely, stress or strain). It is denoted *X* when plotted on appropriate coordinates. **E 1823, E08**
- index**—the upper point of the mercury column whose position, when noted with respect to the corresponding numerals and graduations, indicates the temperature of the mercury within the bulb. **E 344, E20**
- index, *n***—(synonymous with “number in Committee E17 usage, for example; *PSI, RN*), a number or formula expressing some property, form, ratio, etc. of the relation or proportion of one amount or dimension to another. **E 867, E17**
- index, changing**—the mark on the dial ring used when changing the combination. **F 471, F12**
- index, L.O.B.C. (locked on by combination)**—the mark on the dial ring used to set the combination so the back cover can be removed. **F 471, F12**
- index of refraction, *n***—see **refractive index**. **D 4175, D02**
- index of refraction, *n***—the numerical expression of the ratio of the velocity of light in a vacuum to the velocity of light in a substance, at a specified wavelength. **E 284, E12**
- index, opening**—the mark on the dial ring used when dialing the combination to open the lock. **F 471, F12**
- index test, *n***—a test procedure which may contain a known bias but which may be used to establish an order for a set of specimens with respect to the property of interest. **D 4439, D35**
- indian tanned**—combination tanned with alum and vegetable tannins. **D 1517, D31**
- India-tanned**—Term applied to hides and skins from India, considered as a semitanned raw material and generally retanned in the United States before finishing. **D 1517, D31**
- indicated dynamic forces [F]**—the maximum and minimum forces (or the mean force and the force amplitude) that correspond to the readings obtained from the force transducer associated with the fatigue testing system, according to an existing static calibration. The force transducer calibration may have been furnished by the machine manufacturer or may have been developed by the user. **E 1823, E08**
- indication**—the response or evidence from a nondestructive examination. **E 1316, E07**
- indication, *n***—the response or evidence from a nondestructive examination that requires interpretation to determine relevance. **E 1316, E07**
- indication**—that which marks or denotes the presence of a reflector. **E 1316, E07**
- indications**—eddy-current signals caused by any change from uniformity of a tube. These changes from uniformity affect the electrical characteristic of the tube but may not be detrimental to the end use of the product. (E 215) **E 1316, E07**
- indications did not**—this carries the same weight as the indications term that is, it is a very weak opinion.
Examples—There is very little significant evidence present in the comparable portions of the questioned and known writings, but that evidence *suggests* that the John Doe of the known material did not write the questioned material, or I found *indications* that the John Doe of the known material did *not* write the questioned material but the evidence is far from conclusive.
See Discussion after **indications**. **E 1658, E30**
- indications (evidence to suggest)**—a body of writing has few features which are of significance for handwriting comparison purposes, but those features are in agreement with another body of writing.
Examples—There is evidence which *indicates* (or *suggests*) that the John Doe of the known material may have written the questioned material but the evidence falls far short of that necessary to support a definite conclusion. **E 1658, E30**
- indicator, *n***—quantitative value or qualitative information derived from a set of parameters that provides information about the state of a phenomenon. **E 2114, E06**
- indicator (pH)**—a substance that changes color when the pH of the medium is changed. In the case of most useful indicators, the pH range within which the color changes is narrow. **B 374, B08**
- indicator titration**—in ion-selective electrode work, a type of differential complexometric titration in which a metal ion complex is added to the sample as an electrode indicator, and a different metal ion in the sample is determined by titration with the complexing agent contained in the indicator. An electrode that responds to the indicator metal ion is used to detect the point at which the titrant has complexed all of the ion being determined. An abrupt change in the indicator ion concentration occurs when excess complexing agent is added. **D 4127, D19**
- indices**—See **Miller indices**. **E 7, E04**
- indices of metamerism potential, *n***—indices indicating the degree to which two metameric specimens may develop metamerism, derived solely from their different spectral characteristics. **E 284, E12**
- indifferent point**—in a phase diagram, a maximum point, or minimum point, that is, a composition and temperature, or pressure, at which congruent transformation occurs. **E 7, E04**
- indigenous (endogenous) inclusion**—a nonmetallic material that precipitates from the melt. (See **inclusions**.) **E 7, E04**
- indigenous inclusions**—See **deoxidation products**. **E 7, E04**
- indigenous species, *n***—a species that is likely, due to historical presence, to occur at a specified site for some portion of its life span. **E 2114, E06**
- indigneous species**—a species that is likely, due to historical presence, to occur at a specified site for some portion of its life span. **E 943, E47**
- indirect detection of mycoplasma**—detection of mycoplasma by DNA staining or any method other than cultivation. **E 1705, E48**
- indirect electrophotographic copying process**—an electrophotographic copying process in which the photoconductor is not an integral part of the final copy. **F 335, F05**
- indirect exposure**—a method in which only a gamma-insensitive conversion screen is exposed to the neutron beam. After exposure, the conversion screen is placed in contact with the image recorder. **E 1316, E07**
- indirect magnetization**—magnetization induced in a part when no direct electrical contact is made. **E 1316, E07**
- indirect medical direction**—the physician management of all clinical aspects of an EMS system, including but not limited to planning, training, implementation, and evaluation (also known as off-line medical control). **F 1177, F30**
- indirect oxygen service, *n***—service in which oxygen is not normally but may be contacted as a result of an operator error, or process disturbance, such as liquid oxygen tank insulation or liquid oxygen pump motor bearings. **G 126, G04**
- indirect yarn numbering system, *n***—a system that expresses the linear density of yarn in length per unit mass. **D 123, D13**
- indirect yarn numbering system, *n***—a system that expresses the linear density of yarn in length per unit mass. **D 4849, D13**

individualizing characteristic, n

individualizing characteristic, n —marks or properties that serve to individualize writing. **E 2195, E30**

individual pellet hardness, n —the force required to fracture or crush a carbon black pellet. **D 3053, D24**

indoor air pollution, n —the level of air pollution in an enclosed environment. **E 2114, E06**

indoor air quality, IAQ, n —the composition and characteristics of the air in an enclosed space that affect the occupants of that space. **E 2114, E06**

indoor furniture, n —furniture manufactured for use in the interior of a building. **D 123, D13**

indoor furniture, n —furniture manufactured for use in the interior of a building. **D 7023, D13**

induced current method—see **current induction method**.

E 1316, E07

induced field—see **indirect magnetization**.

E 1316, E07

inductance, core, L_1 —the effective parallel circuit inductance of a ferromagnetic core based upon a hypothetical nonresistive path that is exclusively considered to carry the magnetizing current, I_m .

NOTE—The product $I_m^2 \omega L_1$ equals the quadrature power delivered to the core. **A 340, A06**

inductance, incremental, L_Δ —the self-inductance of an electrical circuit when the ferromagnetic core has an ac cyclic magnetization produced by specified values of both ac and dc components of the exciting current. **A 340, A06**

inductance, initial, L_0 —the limiting value of the core inductance, L_1 reached in a ferromagnetic core when, under ac symmetrical cyclic excitation, the magnetizing current has been progressively and gradually reduced from a comparatively high value to a zero value.

NOTE—Initial inductance may be obtained by highly sensitive ASTM bridge methods working in the range in which μ_L is a linear function of H . A series of decreasing values of μ_L is measured and plotted versus corresponding values of magnetizing current, I_m (or other suitable excitation parameter), and the data extrapolated to zero excitation. See **permeability, initial dynamic**.

A 340, A06

inductance, intrinsic (ferric), L_f —that portion of the self-inductance which is due to the intrinsic induction in a ferromagnetic core.

NOTE—It is determined at a specified value of the magnetizing current. **A 340, A06**

inductance, mutual, L_m —the common property of two electrical circuits that determines the flux linkage in one circuit (the secondary) produced by a given current in the other circuit (the primary). The mutual inductance, L_m , is defined by the equation:

$$L_m = \mathcal{L}_2 I_1$$

where:

\mathcal{L}_2 = flux linkage in the secondary and

I_1 = current in the primary, assuming no current in the secondary.

NOTE—If \mathcal{L}_2 is in maxwell-turns and I_1 is in amperes, then the mutual inductance in henries is defined by the equation:

$$L_m = (\mathcal{L}_2 / I_1) \times 10^{-8}$$

NOTE—If the linkage is proportional to the current (no ferromagnetic material present), the inductance is constant and may be obtained from the equation:

$$e_2 = L_m (di_1 / dt)$$

where:

e_2 = instantaneous induced emf in the secondary and

di_1 / dt = time rate of change of the current in the primary.

NOTE—If ferromagnetic materials or eddy currents are present, the mutual inductance must be regarded as a function of the primary current, its rate of change, and the magnetic history of the material. Thus:

$$e_2 = -(d(L_m i_1) / dt) = -[L_m (di_1 / dt) + i_1 (dL_m / dt)]$$

A 340, A06

inductance, self, L —that property of an electric circuit that determines the flux linkage produced by a given current in the circuit. The self-inductance, L , is defined by the equation:

$$L = \mathcal{L} / I$$

where:

\mathcal{L} = flux linkage and

I = current.

NOTE—If \mathcal{L} is in maxwell-turns and I in amperes, then the self-inductance in henries is defined by the equation:

$$L = (\mathcal{L} / I) \times 10^{-8}$$

NOTE—If the linkage is proportional to the current (no ferromagnetic material present), the inductance is constant and may be obtained from the equation:

$$e_2 = -L (di / dt)$$

where:

e = instantaneous induced emf and

di / dt = time rate of change of the current.

NOTE—If ferromagnetic material or eddy currents are present, the self-inductance must be regarded as a function of the circuit current, its rate of change, and the magnetic history of the material. Thus:

$$e = -(d(Li) / dt) = -[L (di / dt) + i (dL / dt)]$$

A 340, A06

inductance, series, L_s —the effective series ac self-inductance exhibited by an inductor having a ferromagnetic core and subjected to an *SCM* excitation after the core has been demagnetized.

NOTE—The value of series inductance is a function of the level of excitation. **A 340, A06**

inductance, winding, L_w —the linear inductance of the magnetizing winding as a result of the flux caused by the ac symmetrical cyclic magnetization exciting current, I . The flux linking the winding is that flux outside of the ferromagnetic core material. **A 340, A06**

induction—the relief of repression of transcription of lysogenic phage genes encoding the functions for lytic growth, so that the phage will grow lytically. **E 1705, E48**

induction, B —See **magnetic induction (flux density)**. **A 340, A06**

induction, biased, B_b —the value of the apparent dc magnetic induction around which the ac cyclic changes are occurring in a magnetic material resulting from the biasing magnetizing field. This value is a function of the incremental magnetizing field and is not determined by the normal induction curve. **A 340, A06**

induction curve, intrinsic (ferric)—a curve of a previously demagnetized specimen depicting the relation between intrinsic induction and corresponding ascending values of magnetic field strength. This curve starts at the origin of the B_i and H axes. **A 340, A06**

induction curve, normal—a curve of a previously demagnetized specimen depicting the relation between normal induction and corresponding ascending values of magnetic field strength. This curve starts at the origin of the B and H axes. **A 340, A06**

induction fryer—a thermostatically controlled piece of equipment,

including a cooking vessel powered by electromagnetic coils inside stainless steel immersion tubes. The electromagnetic field created by these coils causes eddy currents to form in the metal surrounding them, in which the amount of heat in the metal is controlled by changing the magnetic field surrounding the induction coils in response to the fryer thermostat. See **fryer**.

F 1827, F26

induction hardening, *n*—in *surface hardening*, a process in which only the surface layer of a suitable steel object is heated by electrical induction to above Ac_3 or Ac_{cm} , and then the object is **quenched**. A 941, A01

induction hardening, *n*—in *through hardening*, a process in which a suitable steel object is heated by electrical induction to above Ac_3 or Ac_{cm} throughout its section, and then the object is **quenched**. A 941, A01

induction heating, *n*—heating by electrical induction. A 941, A01

induction, incremental, B_Δ —one half the algebraic difference of the extreme values of the magnetic induction during a cycle in a magnetic material that is subjected simultaneously to a biasing magnetizing field and a symmetrically cyclically varying magnetizing field. Twice the incremental induction is indicated by the symbol ΔB , thus:

$$B_\Delta = \Delta B/2$$

A 340, A06

induction, intrinsic, B_i —the vector difference between the dc magnetic induction in a magnetic material and the magnetic induction that would exist in a vacuum under the influence of the same magnetic field strength. This is expressed by the equation:

$$B_i = B - \Gamma_m H$$

NOTE—In the cgs-emu system of units, $B_i/4\pi$ is often called magnetic polarization. A 340, A06

induction, maximum:

(1) B_m —the maximum value of induction, B , in a dc hysteresis loop. The tip of this loop has the magnetostatic coordinates H_m , B_m , which exist simultaneously.

(2) B_{max} —the maximum value of induction, B , in an ac flux-current loop.

NOTE—In a flux-current loop, the magneto-dynamic values B_{max} and H_{max} do not exist simultaneously; B_{max} occurs later than H_{max} . A 340, A06

induction, normal, B —the maximum induction, in a magnetic material that is in a symmetrically cyclically magnetized condition. A 340, A06

induction range—an electric range that causes heat to be generated directly in the magnetic material comprising the cooking container by means of an induced electromagnetic field. The amount of heat generated in the cooking container is controlled by varying the strength of the magnetic field. See **range**. F 1827, F26

induction, remanent, B_d —the magnetic induction that remains in a magnetic circuit after the removal of an applied magnetic field.

NOTE—If there are no air gaps or other inhomogeneities in the magnetic circuit, the remanent induction, B_d , will equal the residual induction, B_r ; if air gaps or other inhomogeneities are present, B_d will be less than B_r . A 340, A06

induction, residual, B_r —the value of magnetic induction corresponding to zero magnetizing field when the magnetic material is subjected to symmetrically cyclically magnetized conditions. A 340, A06

induction, saturation, B_s —the maximum intrinsic induction possible in a material. A 340, A06

industrial grade—a quality of aromatic hydrocarbons suitable for many industrial applications that have a tolerance for nonreactive impurities. D 4790, D16

industrial hygienist—person certified by the American Board of

Industrial Hygiene, or an industrial hygienist in training, or a person with equivalent education or experience or both. E 631, E06

industrial hygienist—person certified by the American Board of Industrial Hygiene, or an industrial hygienist in training, or a person with equivalent education or experience or both. E 1605, E06

industrial hygienist, *n*—a person who, by experience and academic training, is qualified to recognize, evaluate, and control chemical, physical, and biological agents in the workplace, or a person certified by the American Board of Industrial Hygiene. F 1494, F23

industrialized building—a **manufactured building** (preferred term). E 631, E06

industrialized building—See **building**. E 631, E06

industrialized building process—the process of constructing manufactured **buildings**. E 631, E06

industrialized building system—the integration of **subsystems** and **components** into an overall process, utilizing factors of production, transportation, and on-site assembly techniques. E 631, E06

industrialized building system—See **building system**. E 631, E06

industrial talc, *n*—a mineral product varying in composition from that approaching the theoretical formula of talc, $Mg_3Si_4O_{10}(OH)_2$, to mixtures of talc and other naturally associated minerals, some of which may be fibrous as defined in ASTM Definitions D 2946, Terms Relating to Asbestos. These fibrous minerals may or may not be asbestos. D 16, D01

industrial talc, nonasbestos type, *n*—industrial talc of which less than 2 particles per 100 particles (by light microscopy) are asbestos fibers, where "asbestos fiber" is defined as being both a fiber by Definitions D 2946 and one of the asbestiform varieties of serpentine, riebeckite, cummingtonite (which are chrysotile, crocidolite and amosite, respectively), anthophyllite, tremolite, or actinolite. The nonasbestiform varieties of these same minerals are not asbestos. D 16, D01

industrial waste—the water-conveyed residues resulting from manufacturing or processing operations. C 896, C04

industrial yarn, *n*—a yarn composed of continuous filaments, usually of high breaking tenacity, produced with or without twist, and intended for applications in which functional properties are of primary importance; for example, in reinforcing material in elastomeric products (tires, hose, belting), in protective coverings, and in cordage and webbing, etc. D 123, D13

industrial yarn, *n*—a yarn composed of continuous filaments, usually of high breaking tenacity, produced with or without twist, and intended for applications in which functional properties are of primary importance; for example, in reinforcing material in elastomeric products (tires, hose, belting), in protective coverings, and in cordage and webbing, and so forth. D 6477, D13

industry products, *n*—for *feathers or down*, products such as furniture, pillows, comforters, sleeping bags, and wearing apparel which are wholly or partially filled with feathers or down; bulk stocks of processed feathers or down intended for use in the manufacture of such products. D 123, D13

industry products, *n*—for *feathers or down*, products such as furniture, pillows, comforters, sleeping bags, and wearing apparel which are wholly or partially filled with feathers or down; bulk stocks of processed feathers or down intended for use in the manufacture of such products. D 7022, D13

inelastic:

inelastic mean free path—see **electron**.

scattering correction to background—XPS, a method of correcting background for contributions of inelastic scattering processes, most often approximated by simulating the background through a peak by assuming that the rise in background is proportional to the peak area at higher kinetic energy. A more accurate correction is done by deconvolving the energy loss spectrum itself.

scattering cross-section—AES, XPS, a measure of the

inelastic:

probability that an electron traversing a material will undergo an inelastic scattering process, expressed as an area per unit event.

scattering event—ISS, a collision process in which a fraction of the kinetic energy imparted by the probe ion contributes to an increase in the internal energy of the target material, and is not recovered as kinetic energy of the scattered probe ion or target atom recoil. **E 673, E42**

inelastic deformation—the portion of deformation under stress that is not annulled by removal of stress. (ISRM) **D 653, D18**

inelastic electron scatter—See **incoherent electron scatter**. **E 7, E04**

inelastic strain, ϵ_{in} —the strain that is not elastic. **E 1823, E08**

inert—not participating in any fashion in chemical reactions. **D 653, D18**

inert anode—an anode that is insoluble in the electrolyte under the conditions prevailing in the electrolysis. **B 374, B08**

inert components—those elements or components of natural gas (fuel gas) that do not contribute to the heating value. **D 4150, D03**

inertial loading—See **impact loading**. **E 7, E04**

inert (inactive) ingredient—component of an aerosol formulation that does not contribute to the specific effect of the formulation. In some cases, it may be quite arbitrarily defined (for example with insecticides, only the propellants are considered as inert ingredients). **D 3064, D10**

inerting—the technique by which a combustible mixture is rendered nonflammable by addition of a gas incapable of supporting combustion. **D 5681, D34**

inertinite—See **inertinite** under **maceral**. **D 121, D05**

inertodetrinite—See **inertodetrinite** under **maceral**. **D 121, D05**

inferior—lower, also toward the foot. **F 869, F08**

infill, *n*—a series of pickets of a picket railing system and the structural as well as the decorative elements, including the panels, mesh, or similar elements, of a panel railing system; located between top and bottom rails and posts; to serve the twofold purpose of (a) protecting bodies from penetrating and falling through the picket and panel infill areas and (b) providing a specified resistance to horizontal thrusts as are potentially encountered within the infill area. **E 631, E06**

infill, *n*—a series of balusters of a baluster railing system and the structural as well as the decorative elements, including the panels, mesh, or similar elements, of a panel railing system; located between top and bottom rails and posts; to serve the twofold purpose of (a) protecting bodies from penetrating and falling through the baluster and panel infill areas and (b) providing a specified resistance to horizontal thrusts as are potentially encountered within the infill area. **E 1481, E06**

infill area—the field of picket and panel railing systems, bordered by top and bottom rails and posts. **E 631, E06**

infill area—the field of baluster and panel railing systems, bordered by top and bottom rails and posts. **E 1481, E06**

infiltrant efficiency, *n*—the ratio of the mass of infiltrant absorbed by the part to the mass of infiltrant originally used, expressed as a percentage. **B 243, B09**

infiltration, *n*—a process of filling the pores of a sintered, or unsintered, compact with a metal or alloy of lower melting point. **B 243, B09**

infiltration—the volume of groundwater entering a sewer and its connections from the soil through pipe, joints, connections, or appurtenances. **C 822, C13**

infiltration—the quality of ground water entering the test section during a specified time period. **C 896, C04**

infiltration erosion, *n*—the pitting, channeling, and coarsening of the surface porosity that results from the dissolution of the base metal by the liquid infiltrant, as the infiltrant flows into the matrix. **B 243, B09**

infiltration loading density, *n*—infiltrant weight per unit area of contact between infiltrant and part. **B 243, B09**

infiltration (of soil)—movement of water from the ground surface into soil. **D 7099, D18**

infiltration, pipe—the passage of fluid into a pipe section through small holes or leaks. **F 412, F17**

infiltration residue, *n*—material that remains on the surface of the part after infiltration. **B 243, B09**

infinite pad method—in *optical character recognition*, a method of measuring reflectance of a paper stock such that doubling the number of backing sheets of the same stock will not change measured reflectance. **F 149, F05**

infinite thickness, *n*—term applied to a layer of material so thick that increasing its thickness does not change its reflectance or other optical properties. **E 284, E12**

inflatable boom—boom that uses inflated gas-filled chambers as the flotation. **F 818, F20**

inflatable restraint, *n*—a vehicular safety device designed to cushion an occupant or equipment during collision; airbag. **D 123, D13**

inflatable restraint, *n*—a vehicular safety device designed to cushion an occupant or equipment during collision; an airbag. **D 6799, D13**

inflation—a rise in the general price level, usually expressed as a percentage rate. **E 631, E06**

inflation, *n*—a rise in the general price level, usually expressed as a percentage rate. **E 833, E06**

inflation pressure loss rate, *n*—rate of change of normalized inflation pressure, determined from the slope of the linear portion of the log pressure versus time curve. **F 538, F09**

inflator, *n*—*for inflatable restraints*, a device for generating and directing expansion gases into a cushion. [D13.20] **D 5428 D 123, D13**

inflator, *n*—*for inflatable restraints*, a device for generating and directing expansion gases into a cushion. **D 6799, D13**

inflection point, *n*—the first point of the force-elongation curve at which the second derivative equals zero. **D 4439, D35**

inflection point—position on a curved line, such as a phase boundary, where the direction of curvature is reversed. **E 7, E04**

inflow—the volume of any kind of water entering a sewer and its connections from outside sources not including those sources described under “infiltration.” **C 822, C13**

influence value, *I (D)*—the value of the portion of a mathematical expression that contains combinations of the independent variables arranged in dimensionless form. **D 653, D18**

influent stream, *n*—see preferred term **losing stream**. **D 653, D18**

information, *n*—the result of processing one or more pieces of data to produce a meaningful and useful statistic or indicator for users. **E 867, E17**

information depth—maximum depth, normal to the specimen surface, from which useful signal information is obtained. **E 673, E42**

infrared, *adj*—pertaining to the region of the electromagnetic spectrum from approximately 0.78 to 300 μm . **D 1711, D09**

infrared—invisible light and heat radiation, adjacent to the red end of the visible spectrum, with wavelengths from 700 to about 3000 nm (nanometres). **E 7, E04**

infrared—pertaining to the region of the electromagnetic spectrum with wavelength range from approximately 0.78 to 1000 μm (wavenumber range 12 800 to 10 cm^{-1}). **E 131, E13**

infrared, *adj*—referring to radiant flux having wavelengths longer than the wavelengths of light, usually wavelengths from about 780 nm to about 1 mm. **E 284, E12**

infrared imaging system—an apparatus that converts the two-dimensional spatial variations in infrared radiance from any object surface into a two-dimensional thermogram of the same scene, in which variations in radiance are displayed in gradations of gray tone or in color. **E 1316, E07**

infrared (IR), *adj*—of the electromagnetic radiation within the mid- and far infrared spectral ranges (approximately from 3 to 30 μm wavelength). **E 344, E20**

infrared (IR) thermometer, *n*—optoelectronic instrument adapted

for noncontact measurement of temperature of a subject by utilizing *infrared* radiation exchange between the *subject* and the *sensor*. **E 344, E20**

infrared radiation, *n*—radiation for which the wavelengths of the monochromatic components are greater than those for visible radiation, and less than about 1 mm.

NOTE—The limits of the spectral range of infrared radiation are not well defined and may vary according to the user. Committee E-2.1.2 of the CIE distinguishes in the spectral range between 780 nm and 1 mm:

IR-A	780 to 1400 nm
IR-B	1.4 to 3 μ m
IR-C	3 μ m to 1 mm

E 349, E21

infrared reflector—a material with a reflectance in the infrared region as close as possible to 1.00. **E 1316, E07**

infrared response—a particular type of optical system used in some scanners. As a general rule, nonscan inks for this purpose are in the red portion of the color spectrum. **F 149, F05**

infrared sensing device—one of a wide class of instruments used to display or record, or both information related to the thermal radiation received from any object surfaces viewed by the instrument. The instrument varies in complexity from spot radiometers to two-dimensional real-time imaging systems. **E 1316, E07**

infrared spectroscopy—pertaining to spectroscopy in the infrared region of the electromagnetic spectrum. **E 131, E13**

infrared thermographer—the person qualified or trained to use infrared imaging radiometer. **E 1316, E07**

infrared thermography—see **thermography, infrared**. **E 1316, E07**

inglaze decoration—See *inglaze decoration* under **decoration**.

C 242, C21

ingot, *n*—cast form suitable for fabricating (rolling, forging, extruding, and so forth) or remelting. **B 881, B07**

ingot, *n*—a casting of simple shape suitable for hot-working or remelting. **B 899, B02**

ingot—cast metal in a form intended for subsequent fabrication.

E 7, E04

ingot and ingot bar—refinery shapes used for remelting (not fabrication). Ingots normally range in weight from 20 to 35 lb (9 to 16 kg) and ingot bars from 50 to 70 lb (23 to 32 kg). Both are usually notched to facilitate breaking into smaller pieces. **B 846, B05**

ingot scum—slag, dross, or oxidation appearing on the top surface of ingots during pouring, which, when entrapped, is a source of inclusions. **E 7, E04**

inherent ash, *n*—the residue remaining from the inherent impurities after ignition under conditions specified for the ash determination.

D 121, D05

inherent flame-resistance, *n*—as applied to textiles, flame resistance that derives from an essential characteristic of the fiber from which the textile is made. (Compare **flame resistance**.) **D 123, D13**

inherent flame-resistance, *n*—as applied to textiles, flame resistance that derives from an essential characteristic of the fiber from which the textile is made. (Compare **flame resistance**.) **D 4391, D13**

inherent fluorescence—fluorescence that is an intrinsic characteristic of a material. **E 1316, E07**

inherent impurity, *n*—the inorganic material in coal that is structurally part of the coal and cannot be separated from it by coal preparation methods. **D 121, D05**

inherently flame-resistant, *adj*—having inherent flame-resistance.

D 123, D13

inherently-flame-resistant, *adj*—having inherent flame-resistance.

D 4391, D13

inherent moisture—See *inherent moisture* under **moisture**.

D 121, D05

inherent viscosity—see **viscosity, inherent**.

D 1695, D01

inhibition load XX (ILXX), *n*—a statistically or graphically estimated loading rate of test material that is expected to cause a

XX % inhibition of a biological process (such as growth or reproduction) which has an analog as opposed to a digital measure.

D 4175, D02

inhibition load XX (ILXX), *n*—a statistically or graphically estimated loading rate of test material that is expected to cause a XX % inhibition of a biological process (such as growth or reproduction) of a representative subpopulation of organisms under specified conditions and is expressed as an analog as opposed to digital measure. **D 4175, D02**

inhibition load XX (ILXX), *n*—a statistically or graphically estimated loading rate of test material that is expected to cause a XX % inhibition of a biological process (such as growth or reproduction) of a representative subpopulation of organisms under specified conditions and is expressed as an analog as opposed to digital measure. **D 6384, D02**

inhibitor—a substance used to reduce the rate of a chemical or electrochemical reaction, commonly corrosion or pickling.

B 374, B08

inhibitor—a material that stops or slows a chemical reaction from occurring. **D 653, D18**

inhibitor, *n*—a substance used in low concentration which suppresses a chemical reaction. **D 883, D20**

inhibitor, *n*—a substance used to suppress a chemical reaction.

D 907, D14

inhibitor, *n*—material used to suppress a chemical reaction.

D 1566, D11

inhibitor—any substance which when added to an electrical insulating fluid retards or prevents undesirable reactions. **D 2864, D27**

inhibitor, *n*—a chemical compound added to engine coolant to mitigate cooling system degradation. **D 4725, D15**

inhibitor—a substance added to a material to retard or prevent deterioration. **D 4790, D16**

inhibitor, *n*—a substance used in low concentration which suppresses chemical reaction. (D20) **F 412, F17**

initial backfill—location for placement of selected material, native or import, extending from the top of the bedding material to an elevation 1 ft above top of pipe. **C 896, C04**

initial boiling point—the temperature observed immediately after the first drop of distillate falls into the receiving cylinder during a distillation test. **D 4790, D16**

initial boiling point (IBP), *n*—the point at which a cumulative volume count equal to 0.5 % of the total volume count under the chromatogram is obtained. **D 4175, D02**

initial calibration blank—a solution containing no analyte that is used for initial calibration and zeroing of the instrument response.

E 1605, E06

initial calibration blank (ICB)—a standard solution that contains no analyte and is used for the initial calibration and zeroing instrument response. **E 631, E06**

initial calibration verification—a solution (or set of solutions) of known analyte concentration used to verify calibration standard levels; the concentration of analyte is to be near the mid-range of the working range of the linear curve that is made from a stock solution having a different manufacturer or manufactured lot identification than the calibration standards. **E 1605, E06**

initial calibration verification (ICV)—a standard solution (or set of solutions) used to verify calibration standard levels; the concentration of analyte is to be near mid-range of the linear curve that is made from a stock solution having a different manufacturer or manufacturer lot identification than the calibration standards.

E 631, E06

initial consolidation (initial compression)—see **consolidation**.

D 653, D18

initial cost—See **first cost**.

E 631, E06

*initial cost, *n**—See **first cost**.

E 833, E06

initial deformation temperature (IT), *n*—in reference to the fusibility of coal and coke ash according to Test Method D 1857, the temperature at which the first rounding of the apex of the cone

initial deformation temperature (IT), *n*

occurs. Shrinkage or warping of the cone is ignored if the tip remains sharp. **D 121, D05**

initial deformation temperature, IT, *n*—the temperature at which the first rounding of the apex of a pyrometric cone occurs; shrinking or warping of the cone is ignored if the tip remains sharp. **D 5681, D34**

initial deformation temperature, IT—the temperature at which the first rounding of the apex of a pyrometric cone occurs. Shrinking or warping of the cone is ignored if the tip remains sharp. **D 5681, D34**

initial grab, *n*—the ability of a wet-state material to remain in place initially after it has been applied. **E 2110, E06**

initial investment cost—See **first cost**. **E 631, E06**

initial investment cost, *n*—See **first cost**. **E 833, E06**

initial modulus, *n*—the slope of the initial straight portion of a stress-strain or force-elongation curve. **D 123, D13**

initial modulus, *n*—*in a stress-strain curve*, the slope of the initial straight-line portion of the curve. **D 4848, D13**

initial modulus, *n*—the slope of the initial straight portion of a stress-strain (or force elongation) curve. **D 6477, D13**

initial permeability—the slope of the induction curve at zero magnetizing force as the test specimen is being removed from a demagnetizing condition (slope at origin of BH curve before hysteresis is observed). **E 1316, E07**

initial potential—see **charge acceptance**. **F 335, F05**

initial pulse—the response of the ultrasonic system display to the transmitter pulse (sometimes called main bang). **E 1316, E07**

initial rate of absorption, *n*—a measure of the suction of water upward into a dry brick from a bed face during one minute of exposure. **C 43, C15**

initial recovery, *n*—the decrease in strain in a specimen resulting from the removal of force, before creep recovery takes place. **E 6, E28**

initial set—a degree of stiffening of a grout mixture generally stated as an empirical value indicating the time in hours and minutes that is required for a mixture to stiffen sufficiently to resist the penetration of a weighted test needle. **D 653, D18**

initial set, *n*—a time-related set caused by the hydration process. **E 2110, E06**

initial setting time—the time interval from the start of mixing the component parts at a specified temperature, (a) to that time when a Gillmore needle weighing 1 lb (454 g) and having a tip $\frac{1}{24}$ in. (1 mm) in diameter by $\frac{3}{16}$ in. (5 mm) long will penetrate mortar $\frac{5}{8}$ in. (16 mm) thick to a depth of $\frac{3}{16}$ in. (5 mm) in 1 min, or, (b) to that time at which a $\frac{1}{4}$ in. (6.4 mm) wide joint of the mortar between bricks is indented less than $\frac{1}{24}$ in. (1 mm) by a Vicat needle during a 10-min period. **C 904, C03**

initial spray angle, *n*—the plane angle of the spray emerging from the nozzle discharge orifice. **E 1620, E29**

initial strain, *n*—the strain introduced into a specimen by the given loading conditions, before creep takes place. **E 6, E28**

initial stress, *n*—the stress introduced into a specimen by imposing the given constraint conditions before stress relaxation takes place. **E 6, E28**

initial survey—systematic inspection of a dwelling unit by a qualified inspector, using a portable XRF analyzer, atomic absorption spectroscopy, or other approved testing techniques, to determine whether a lead-based paint hazard is present. **E 631, E06**

initial tangent modulus, *n*—the slope of the stress-strain curve at the origin. **D 907, D14**

initial temperature—See **activation temperature**. **F 1623, F05**

initial tensile modulus, J_p (FL^{-1}), Nm^{-1} , *n*—*for geosynthetics*, the ratio of the change in force per unit width to the change in elongation of the initial portion of a force-elongation curve. **D 4439, D35**

injectability—see **groutability**. **D 653, D18**

injection molded button, *n*—a method of forming which requires the filling of a cavity under pressure with polymer that will take the form of the mold when cooled. **D 123, D13**

injection molded flooring—a floor surfacing material made by driving or forcing a polymeric compound into a mold. **F 141, F06**

injection molding, *n*—the process of forming a material by forcing it, in a fluid state under pressure, through a runner system (sprue, runner, gate(s)) into the cavity of a closed mold. **D 123, D13**

injection molding, *n*—the process of forming a material by forcing it, in a fluid state and under pressure, through a runner system (sprue, runner, gate(s)) into the cavity of a closed mold. **D 883, D20**

injection molding, *n*—process by which a rubber compound is forced into a closed mold by pressure other than the mold clamping force. **D 1566, D11**

injection molding, *n*—the process of forming a material by forcing it, in a fluid state under pressure, through a runner system (sprue, runner, gate(s)) into the cavity of a closed mold. **D 5497, D13**

injection molding, *n*—the process of forming a material by forcing it, under pressure, from a heated cylinder through a sprue (runner, gate) into the cavity of a closed mold. (D20) **F 412, F17**

injection seal—a seal accomplished by injecting sealant into holes, joggles, channels, grooves, and other voids caused by buildup of structure boundaries. **E 631, E06**

injection seal—a seal accomplished by injecting sealant into holes, joggles, channels, grooves, and other voids caused by buildup of structure boundaries. **E 1749, E06**

injection time, *n*—the time interval from the beginning of screw forward movement until switching over to hold pressure. **D 883, D20**

injection timing (injection advance), *n*—that time in the combustion cycle, measured in degrees of crank angle, at which fuel injection into the combustion chamber is initiated. **D 4175, D02**

ink deposit—a coating containing a coloring material which transfers in part or entirely to a copy sheet at the point of pressure contact. (F 129) **F 221, F05**

inked ribbon—a ribbon composed of a supporting substrate of film, fabric, or paper and a coating or impregnation of a coloring material. The coloring material is of such nature that it will transfer in part or entirely to a copy sheet at the point of pressure contact. (F 129) **F 221, F05**

ink fading, *n*—term used in offset printing for the variation in the ink density (uneven ink film) in the direction of print (as a consequence of inking unit design and content of the printing sheet). **D 6488, D01**

ink fill-in, *n*—expansion of a mark beyond specified tolerances. **F 1294, F05**

ink jet printer—a nonimpact printer in which the characters are formed by projecting droplets of ink onto a substrate. **F 909, F05**

ink kick-out, *n*—the settling of pigment or resin in the bulk ink. **D 6488, D01**

ink layer—(1) the components of the image coating used in thermal transfer products which contain waxes, resins, pigments and other materials deposited or coated onto a substrate; (2) the layer of thermally sensitive material which is transferred during the thermal transfer printing process. **F 1623, F05**

ink misting, *n*—the ejection of fine particles of ink into the air and onto the press, occurring when the ink film splits in more than one place. The centrifugal forces generated by high speed rollers can cause this problem. **D 6488, D01**

ink mottle, *n*—a condition in which large solid images show very localized variations in color strength or gloss, or both. **D 6488, D01**

ink, OCR—Refer to ANSI X3.86-180. **F 149, F05**

ink over-emulsification, *n*—a condition that occurs when a lithographic ink picks up too much dampening solution resulting in a weak print or snowflake pattern. **D 6488, D01**

- ink refusal**, *n*—the failure of a roller or plate to accept ink. Alternative term: *stripping*—see *Gravure Printing*. **D 6488**, D01
- ink sedimentation**, *n*—the settling out of undissolved resin or improperly ground pigments. **D 6488**, D01
- ink setoff**, *n*—the undesirable transfer of an ink in any printing process from fresh prints to any other surface. **D 6488**, D01
- ink setoff**, *n*—the transfer of ink to the back side of the sheet or area of the web that is the result of slow drying. **D 6488**, D01
- inlaid sheet flooring**, *n*—a floor surfacing material in which the decorative pattern or design is formed by colored areas set in to the surface. The design so formed may or may not extend through to a backing. **F 141**, F06
- in-leakage rate**—the combined leakage rate from all existing leaks in a specified evacuated vessel in pressure volume units per unit of time. **E 1316**, E07
- inlet**—the opening, flange, connection, or coupling on a leak detector or leak testing system through which the tracer gas may enter due to a leak in an object under test. **E 1316**, E07
- inlet flange*—see **inlet**. **E 1316**, E07
- inlet port*—see **inlet**. **E 1316**, E07
- in-line clinch**—flat clinch with both staple legs in straight alignment. **F 592**, F16
- in-line coagulation**—a filtration process performed by continually adding a coagulant to the raw feedwater and then passing the water through a filter(s) to remove the microfloc which has been formed. **D 6161**, D19
- in-line instrument**—instrument whose active element is installed in the pipeline and measures at pipeline conditions. **D 4150**, D03
- in-line measurements**, *n*—measurement where the sample is not removed from the process stream, and can be invasive or non-invasive. **E 2363**, E55
- innerliner**, *n*—the layer or layers of rubber laminated to the inside of a tire and which meets the Rubber Manufacturers Association definition of a mud and snow tire. **D 5681**, D34
- inner liner**, *n*—of a tire, the innermost layer(s) of a tubeless tire that limit(s) diffusion of the inflation medium into the carcass. **F 538**, F09
- inner melt**, *n*—a thin continuous layer of water between the thermometer well and the ice mantle of a water triple-point cell. **E 344**, E20
- inner packing**—See **packing**. **D 996**, D10
- inner plies**—plies other than face or back plies in a panel construction. Subface, subback, crossband, and center are classed as inner plies. **D 1038**, D07
- inner spindle assembly**—a component in some manipulation-resistant locks that connects the knob with the cam slide. **F 471**, F12
- innocuous impurities**—impurities that are not a health or safety concern in the product. The route of administration of the drug may be a significant criterion in the determination of whether an impurity is innocuous. **E 1705**, E48
- inoculated iron**, *n*—cast iron, either liquid or solid, to which one or more inoculating alloys have been added while the iron was in the molten state. **A 644**, A04
- inoculated iron, fully**, *n*—cast iron, either liquid or solid, to which all molten metal additions, including all inoculating alloys, have been added. **A 644**, A04
- inoculating alloy**, *n*—an alloy added to molten iron for the principle purpose of nucleating a primary phase such as graphite. Inoculating alloys are frequently used to avoid the formation of primary carbide by enhancing the nucleation of graphite. **A 644**, A04
- inoculum**, *n*—spores, bacteria, single celled organisms or other live materials that are introduced into a test medium. **D 4175**, D02
- inoculum**, *n*—living spores, bacteria, single celled organisms, or other live materials that are introduced into a test medium. **D 4175**, D02
- inoculum**, *n*—living spores, bacteria, single celled organisms, or other live materials that are introduced into a test medium. **D 6384**, D02
- inorganic**, *adj*—being or composed of matter other than hydrocarbons and their derivatives, or matter that is not of plant or animal origin. **D 1079**, D08
- inorganic alkaline detergent*—a formulated cleaning composition containing water-soluble alkali or alkaline salts, but generally no surfactants. **D 459**, D12
- inorganic alkaline detergent*—under **detergent**, see *inorganic alkaline detergent*. **D 459**, D12
- inorganic silt*—see **silt**. **D 653**, D18
- in-plane flow**, *n*—fluid flow confined to a direction parallel to the plane of a geotextile or related product. **D 4439**, D35
- in-plane length (or deflection) measurement, L (or D) [L]**—a length (or deflection) measurement made parallel to the underlying layer (or the *xy*-plane). **E 2444**, E08
- inplane loads**, *n*—loads which are parallel to the facings. **C 274**, D30
- in-plant cleaning**, *n*—for *textile floor coverings*, a cleaning process performed in a facility away from the location where the product is used. **D 123**, D13
- in-plant cleaning**, *n*—for *textile floor coverings*, cleaning process performed in a facility away from the location where the product is used. **D 5253**, D13
- in-process control**—system that provides a method to detect the variation of product characteristic(s) during manufacturing and processing and initiates corrective action to maintain the product characteristic(s) within its specified limits. **F 1789**, F16
- in-process control**, *n*—monitoring and, if necessary, adjustments performed to ensure that the process conforms to its specification. The control of the environment or equipment may be part of in-process control. **F 2312**, F04
- in-process material**, *n*—any material(s) fabricated, compounded, blended, or synthesized using a chemical, physical, or biological process that is produced for and being used in the preparation of an intermediate, drug substance, or drug product. **E 2363**, E55
- in-process sampling inspection**—random sample of product drawn from prescribed points of the processing stream (usually characteristic sensitive) and performing specific inspections and tests to determine conformance of the product at that point of the processing stream. **F 1789**, F16
- inquartation**, *vt*—the addition of silver to an assay sample to facilitate parting. **E 135**, E01
- inrush current**—a transient current that exists at the instant of contact closure and persists for a relatively short time. **B 542**, B02
- inseam**—the hidden seam of a welted shoe holding together the welt, upper, lining, and insole. **F 869**, F08
- inseam**, *n*—in *garment construction*, with the trousers folded by mating the inside leg seams, measure from center of crotch to bottom edge of trouser's leg or cuff. **F 1494**, F23
- inseam length**, *n*—in *body measurements*, from center of crotch to 25.4 mm (1 in.) below top of the shoe. **F 1494**, F23
- insect screening**, *n*—in *coated glass yarn fabrics*, a woven netting having an approximately even spaced mesh of 12 by 12 yarns or more per 25.4 mm (1 in.). **D 123**, D13
- insect screening**, *n*—in *coated glass yarn fabrics*, a woven netting having an approximately even-spaced mesh of 12 by 12 yarns or more per 25 mm (1 in.). **D 7018**, D13
- insert**, *n*—a part consisting of metal or other material which may be molded into position or may be pressed into the molding after the completion of the molding operation. (ISO) **D 883**, D20
- insert**, *n*—usually a thin filler or frame of wood, **fiberboard**, plastic, or other suitable material used to take up space, or separate articles within a **package**. (Compare **buffer**, **divider**, **separator**.) **D 996**, D10
- insert**—pre-designed and prefabricated cast-in-place or post-installed anchors specifically designed for the attachment of bolted or slotted connections. **E 2265**, E06

insert, *n*—a part consisting of metal or other material that may be molded into position or may be pressed into the molding after the completion of the molding operation. (D20, ISO) **F 412, F17**

insert—a reusable, threaded attachment point fixed permanently in the snowboard at the time of manufacture, used to mount the bindings to the board. It is typically arranged in a pattern corresponding to a particular binding manufacturer's pattern. **F 1107, F27**

inserted coil—see **ID coil**. **E 1316, E07**

insert-fitting joint—see **joint, clamped insert-fitting**. **F 412, F17**

insertion force—the force required to mate two connector halves. **B 542, B02**

insertion loss, *IL*—of a silencer or other sound-reducing element, in a specified frequency band, the decrease in sound power level, measured at the location of the receiver, when a sound insulator or a sound attenuator is inserted in the transmission path between the source and the receiver. **C 634, E33**

insert or orifice cup, *n*—the mechanical break-up component that forces product to flow in a swirl pattern out of the exit orifice in order to produce a fine mist. **D 6655, D10**

inserts, *n*—apparatus placed into the sandwich for attaching items; synonymous with hard points. **C 274, D30**

in service coefficient of friction—a coefficient of friction measured under a specified condition of use, which may not be clean and dry, and hence, not a property of the ceramic surface. **C 242, C21**

in-service conditions—the normal conditions to which a system and its components will be exposed during their operational lifetimes. This does not include stagnation conditions; see **stagnation conditions**. **E 772, E44**

inside bevel point—bevel point with its beveled face on staple inside; used to produce an outward clinch or to provide additional penetration in the base material, or both. **F 592, F16**

inside coil—see **ID coil**. **E 1316, E07**

inside knuckle—the juncture between the inside sidewall and the inside bottom surface of a glass article. **C 162, C14**

inside-leg length, *n*—in body measurements, the vertical distance from the crotch to the soles of the feet. **D 123, D13**

inside-out testing—see **bell jar testing**. **E 1316, E07**

inside seam, *n*—a seam formed in which the completed seam allowance is located on the interior of the object, usually on the back side of the fabric. (Compare **outside seam**.) **D 123, D13**

inside seam, *n*—in home sewing, a seam having seam allowances located within the interior, or the underside, of the product. (Compare **outside seam**.) **D 4965, D13**

in situ—applied to a rock or soil when occurring in the situation in which it is naturally formed or deposited. **D 653, D18**

in-situ—in its original place or environment. **D 7099, D18**

in situ—a term used to describe work performed in place or at a facility. **E 1605, E06**

in situ treatment, *n*—treatment, remediation, or cleanup of contaminated sites and materials in place. **E 833, E06**

insolation—the use of the term *insolation* is discouraged in favor of the preferred term, **solar irradiance**. **E 772, E44**

insole—a sole of leather or other material cut to the size and shape of the bottom of the last. In some shoe constructions, the insole surface forms the inside of the bottom of the shoe; in others it is covered with a sock lining of thin material which conceals stitching, nails, etc. (Also known as innersole). **F 869, F08**

insolubles, *n*—*inlubricating grease analysis*, the material remaining after the acid hydrolysis, water extraction, and solvent extraction of soap-thickened greases. **D 4175, D02**

insonification—the introduction or application of ultrasonic energy to a volume of material for the purpose of ultrasonic examination. Also spelled **ensonification**. **E 1316, E07**

inspection, *n*—the process of measuring, examining, testing, gaging, or otherwise comparing the unit of product with the applicable requirements. **A 941, A01**

inspection, *n*—the process of measuring, examining, testing, gaging,

or otherwise comparing a characteristic or property of a material with applicable requirements. In this case only by visual examination. **D 123, D13**

inspection, *n*—*infabric grading*, the process of viewing, measuring, examining, or otherwise comparing the visual characteristics of a fabric with applicable requirements. **D 123, D13**

inspection, *n*—the process of measuring, examining, testing, gaging, or otherwise evaluating materials, products, services, systems, or environments. **D 1356, D22**

inspection—the process of measuring, examining, testing or otherwise comparing the unit of product. **D 1517, D31**

inspection, *n*—the process of measuring, examining, testing, gaging, or otherwise comparing a characteristic or property of a material with applicable requirements. In this case only by visual examination. **D 4850, D13**

inspection—process of measuring, examining, testing, gaging, or using other procedures to ascertain the quality or state, detect errors or defects, or otherwise appraise materials, products, services, systems, or environments to a pre-established standard. **E 1187, E36**

inspection, *n*—see preferred term **examination**. **E 1316, E07**

inspection—visual examination of the test part after completion of the liquid penetrant processing steps. **E 1316, E07**

inspection—process of measuring, examining, testing, gaging, or using other procedures to ascertain the quality or state of, detect errors or defects in, or otherwise appraise materials, products, services, systems, or environments to a preestablished standard. **F 1789, F16**

inspection agency—see *inspectionbody*, (ISO Guide 2). **E 1187, E36**

inspection band, *n*—an area of the bar code symbol where measurements are taken spanning from 10 to 90 % of the average bar height. **F 1294, F05**

inspection body—body that performs inspection services on behalf of a certification body, (ISO Guide 2). **E 1187, E36**

inspection medium—see **examination medium**. **E 1316, E07**

inspection plan—set of instructions defining product characteristics, specifications, or frequency of inspection, or a combination thereof, for product at a specified operation. **F 1789, F16**

inspection test—fastener or its selected characteristics tested in process or after manufacture to determine conformance of the fastener or its selected characteristics to the manufacturing specifications. **F 1789, F16**

inspection torque—torque necessary to maintain tightening motion in a fastener at its fully preloaded installed tension. **F 1789, F16**

inspector, *n*—*in pipe laying*, an authorized representative of the engineer, or owner, assigned to make any and all necessary inspections of the work performed, including materials and equipment furnished. **C 1154, C17**

inspector—*for pipe laying*, an authorized representative of the engineer, or owner, assigned to make any and all necessary inspections of the work performed, including materials and equipment furnished. **D 2946, C17**

inspector—person appointed by an authority to examine and evaluate designated domains for conformance to established rules and regulations. **E 631, E06**

installation—the process of assembling dimension stone into a structure. **C 119, C18**

installation torque—specified torque applied to an anchor during its installation. **E 2265, E06**

instantaneous coefficient of thermal expansion—See **coefficient of thermal expansion**. **E 7, E04**

instantaneous collector efficiency—see **efficiency, instantaneous collector**. **E 772, E44**

instantaneous erosion rate, *n*—the slope of a tangent to the cumulative erosion-time curve at a specified point on that curve. **G 40, G02**

instantaneous field of view (IFOV)—for a scanning system, the

angular dimensions in object space within which objects are imaged by an individual detector (unit = deg or rad).

NOTE—The IFOV is equivalent to the horizontal and vertical fields of view of the individual detector. For small detectors, the detector angular subtenses or projections, α and β , are defined by $\alpha = af$ and $\beta = bf$ where a and b are the horizontal and vertical dimensions of the detector and f is the effective focal length of the optic. (IFOV may also be expressed as a solid angle in units of sr.) **E 1316, E07**

instantaneous sampler—a suspended-sediment sampler that takes a representative specimen of the water-sediment mixture in a stream at a desired depth and moment of time. **D 4410, D19**

instantaneous sampling—See **sampling**. **D 1356, D22**

instep—top part of the arch of a foot over the metatarsal bones from back of the toes to the ankle, also the corresponding part of a shoe last. **F 869, F08**

instrumental detection efficiency—*SIMS*, the ratio of ions for a particular species detected to ions produced. **E 673, E42**

instrumental detection limit (IDL)—an instrumental measurement value that is used to provide a lower concentration limit for reporting quantitative analysis data for a given instrument. **E 631, E06**

instrumental QC standard—a solution (or set of solutions) of known analyte concentration that provides information on measurement performance during the instrumental analysis portion of the overall analyte measurement process. **E 1605, E06**

instrumental QC standards—these provide information on measurement performance during the instrumental analysis portion of the overall lead measurement process. They include CCBs, CCVs, ICBs, ICVs, and ICSs. **E 631, E06**

instrumental offset, μ_d , n —calculated difference in degrees of measured temperature between *core temperature* and *ear canal temperature*, derived from the population of representative study samples. **E 344, E20**

instrumentation dead time—see **dead time, instrumentation**. **E 1316, E07**

instrument line shape (ILS) function—the FT of the function by which an interferogram is weighted. **E 131, E13**

instrument response time, n —the time required for an indicating or detecting device to undergo a defined displacement following an abrupt change in the property being measured. **D 4175, D02**

instrument response time—the time required for an indicating or detecting device to undergo a defined displacement following an abrupt change in the quantity being measured. **E 131, E13**

instrument traceability—the ability to demonstrate that a particular measuring instrument or artifact standard has been calibrated at acceptable time intervals against a national or international standard or against a secondary standard which has been in turn calibrated against the national standard or transfer standard. **E 170, E10**

insufficient cure—a pultrusion abnormality created by lack of, or incomplete, cross-linking of the resin.

NOTE—This condition can usually be detected by dull surface appearance, low Barcol hardness, and low physical properties. Thick sections, cured from the outside in, can reveal insufficient cure in the center of the section even though completely cured on the surface. This condition can be caused by insufficient die temperature, improper catalyst, or pulling too fast for the die temperature. **D 3918, D20**

insulated—separated from other conducting surfaces by a dielectric substance (including air space) offering a high resistance to the passage of current.

NOTE—When any object is said to be insulated, it is understood to be insulated in a suitable manner for the conditions to which it is subjected. Otherwise, it is, within the purpose of this definition, uninsulated. Insulating covering of conductors is one means of making the conductor insulated. **F 819, F18**

insulated conductor, n —a conductor covered by a layer or layers of

insulating material and whose prime function is to carry current in an electric circuit. **D 1711, D09**

insulating concrete—a lightweight concrete made with lightweight coarse aggregate and having relatively low insulating characteristics. **C 717, C24**

insulating firebrick, n —see **firebrick, insulating**. **C 71, C08**

insulating formboard—a specially fabricated cellulosic fiberboard designed for use as a permanent form for certain poured-in-place roof constructions. **D 1554, D07**

insulating liquid, fluid or gas—a fluid (liquid or gaseous) which does not readily conduct electricity. Electrical insulating fluids typically provide both electrical insulation and heat transfer in electrical equipment. **D 2864, D27**

insulating material—a material of relatively low electrical conductivity and high dielectric strength, usually used to support or provide electrical separation for conductors, in which a voltage applied between two points on or within the material produces a small and sometimes negligible current. **D 2864, D27**

insulating material (insulator), n —a material in which a voltage applied between two points on or within the material produces a small and sometimes negligible current. **D 1711, D09**

insulating roof deck—a cellulosic fiberboard product designed for use in open-beam ceiling roof construction. The product is composed of multiple layers of structural insulating board laminated together with water-resistant adhesive. **D 1554, D07**

insulating-siding nail—See **brick-siding nail**. **F 547, F16**

insulation—See **thermal insulation**. **D 1079, D08**

insulation, n —a material that is normally added to an assembly to provide resistance to heat flow for purpose of energy conservation. **E 176, E05**

insulation blanket, n —a relatively flat and flexible insulation in coherent sheet form furnished in units of substantial area. **E 176, E05**

insulation building-board nail, tileboard nail—galvanized, electro-galvanized or cadmium or nickel-plated, regular-stock-steel, 1¼ and 1¾ by 0.054-in. nails with flat ¾-in. head and medium needle point. Also, plain or colored (baked-lacquer finished) hardened-steel, smooth or annularly threaded, 1¼ by 0.054 to 1¾ by 0.062-in. nails with slightly countersunk 0.109-in. head and medium diamond or long needle point. **F 547, F16**

insulation compaction density—the density of a compacted powder is the combined density of the powder particles and of the voids remaining after the powder compaction. Sometimes the insulation compaction density is divided by the theoretical density of the powder particles to obtain a dimensionless fraction of theoretical density as a convenient method to express the relative compaction. **E 344, E20**

insulation-lath nail—blued, regular-stock-steel, 1½ and 1¾ by 0.092-in. nails with flat ¾-in. head and long diamond point. (See **gypsum-lath nail**.) **F 547, F16**

insulation resistance—the apparent resistance between adjacent contacting laminations, calculated as a ratio of the applied voltage to conduction current. This parameter is normally a function of the applied force and voltage. **A 340, A06**

insulation resistance—see **resistance, insulation**. **D 1711, D09**

insulation resistance—the electrical resistance between two isolated test points on a membrane switch. **F 2112, F01**

insulation resistance, dc, n —the resistance at a specified direct-current voltage between the insulated leads of a thermistor sensor and the metallic enclosure of the sensor, if such an enclosure is present, or else between the sensor leads and a conductive medium in which the sensor is immersed. **E 344, E20**

insulation-sheathing nail—galvanized, barbed, regular-stock-steel, 1¾ and 2 by 0.115 or 0.120-in. nails with flat ¼ or ½-in. head and medium diamond point. **F 547, F16**

insulator (electric)—a device having high electrical resistance and used for supporting or separating conductors to prevent undesired flow of current from them to other objects. (Also known as electrical insulator.) **D 5077, D10**

intangible property

intangible property—property that is not itself intrinsically valuable, but that derives its value from what it represents or evidences, for example, goodwill, knowledge derived from study, experience, or instruction, or knowledge of a specific event or situation.

E 2135, E53

integral, *adj*—*ingeosynthetics*, forming a necessary part of the whole; constituent.

D 4439, D35

integral heat of adsorption—the sum of the differential heats of adsorption from zero to a given level of adsorption.

D 2652, D28

integrally mold—to join and cure two or more uncured (B-staged) composite details to create an assembly during a single autoclave cure cycle.

E 631, E06

integrally mold—to join and cure two or more uncured (B-staged) composite details to create an assembly during a single autoclave cure cycle.

E 1749, E06

integral neutron fluence—the fluence of neutrons integrated over all energies.

$$\Phi = \int_0^{\infty} \Phi(E) dE$$

E 170, E10

integral tooth of metal connector plate—plate projection punched from metal connector plate at right angle to its surface which remains attached to plate and serves as a fastening element.

E 631, E06

integral tripack—See **color film: monopack**.

E 7, E04

integrated pest management, IPM, *n*—(1) The judicious use and integration of various pest control tactics of the associated environment of the pest in ways that complement and facilitate the biological and other natural controls of pests to meet economic, public health, and environmental goals. (2) An environmentally sound system of controlling landscape pests, which includes understanding of the pest's life cycle and well-timed non-toxic treatments.

E 2114, E06

integrating camera—A diffraction camera in which the specimen is moved relative to the incident beam in order to cause diffraction to occur from an extended area of the specimen surface.

E 7, E04

integrating sphere, *n*—an optical device used either to collect flux reflected or transmitted from a specimen into a hemisphere or to provide isotropic irradiation of a specimen from a complete hemisphere, consisting of an approximately spherical cavity with apertures (ports) for admitting and detecting flux, and usually having additional apertures over which sample and reference specimens are placed and for including or excluding the specularly reflected components.

E 284, E12

integrating (Ulbrecht) sphere, *n*—part of an integrating photometer. A sphere that is coated internally with a white diffusing paint as nonselective as possible and is provided with an associated equipment for making a photometric measurement at a point of the inner surface of the sphere. A screen placed inside the sphere prevents the point under observation from receiving any radiation directly from the source.

E 349, E21

integration, *n*—the result of blending compatible data sources into a composite data set has a unity or wholeness for purposes of analysis, summarization, and retrieval of specific data or information.

E 867, E17

integration period, π —the time, in seconds, required for the pen or other indicator to move 98.6 % of its maximum travel in response to a step function.

E 131, E13

integrator, *n*—*in the tensile testing of textiles*, a device for obtaining the time integral of the load.

D 123, D13

integrator, *n*—*intextile unevenness testing*, a device that calculates the coefficient of variation unevenness or the mean deviation unevenness.

D 123, D13

integrator, *n*—*in textile unevenness testing*, a device that calculates the coefficient of variation unevenness or the mean deviation unevenness.

D 4849, D13

integrity—measure of the degree to which a membrane system rejects particles of interest.

D 6161, D19

integrity, *n*—the ability of a test assembly, when exposed to fire from one side, to prevent the passage of flame and hot gases through it or the occurrence of flames on its unexposed side.

E 176, E05

intelligent transportation system (ITS), *n*—systems that apply modern sensing, communication, computing, analysis, or display technologies, or a combination thereof, to one or more aspects of the operations, management, and use of transportation systems.

E 867, E17

intended trajectory, *n*—the intended or ideal path (rectilinear or curvilinear) to bring a vehicle to a stop, that is, under controlled angular orientation.

F 538, F09

intensifying screen—a sheet of a substance which emits visible light or X-rays or photoelectrons, or combinations of these, under the action of X-rays, thus enhancing the darkening of a film placed in contact with it.

E 7, E04

intensifying screen—a material that converts a part of the radiographic energy into light or electrons and that, when in contact with a recording medium during exposure, improves the quality of the radiograph, or reduces the exposure time required to produce a radiograph, or both. Three kinds of screens in common use are:

(a) *metal screen*—a screen consisting of dense metal (usually lead) or of a dense metal compound (for example, lead oxide) that emits primary electrons when exposed to X- or gamma-rays.

(b) *fluorescent screen*—a screen consisting of a coating of phosphors which fluoresces when exposed to X or gamma radiation.

(c) *fluorescent-metallic screen*—a screen consisting of a metallic foil (usually lead) coated with a material that fluoresces when exposed to X or gamma radiation. The coated surface is placed next to the film to provide fluorescence; the metal functions as a normal metal screen.

E 1316, E07

intensional definition, *n*—a two-part definition of a term consisting of a class name for the concept, the genus, and one or two more characteristics that differentiate the concept from others in the same class.

E 1992, E02

intensiostatic—See **galvanostatic**.

G 15, G01

intensity, *n*—the perceived magnitude of a stimulus.

E 253, E18

intensity—apparent depth of a black or colored image produced by a carbon or ribbon.

F 221, F05

intensity, *n*—the amount of radiant or luminous flux per unit solid angle that diverges from a light source.

F 1294, F05

intensity, I_v , I_s , *n*—flux per unit solid angle. (See also **luminous intensity**, **radiant intensity**.)

E 284, E12

intensity of scattering—the energy per unit time per unit area of the general radiation which is diffracted by matter. Its value depends upon the scattering power of the individual atoms of the material, upon the scattering angle, and upon the wavelength of the radiation.

E 7, E04

intensity (X-rays)—the energy per unit of time of a beam per unit area perpendicular to the direction of propagation.

E 7, E04

interaction, *n*—the condition that exists among factors when a test result obtained at one level of a factor is dependent on the level of one or more additional factors.

D 123, D13

interatomic Auger process—*AES*, *XPS*, an Auger transition in which final electron vacancies are in valence levels or molecular orbitals, some of which may be predominantly orbitals of a neighboring bonded atom.

E 673, E42

interbody spacer, *n*—a structure (biologic or synthetic) to replace (partially or totally) the vertebral body or intervertebral disk(s), or both.

F 1582, F04

interception count—the number of particles (or clusters of particles) of a phase or constituent of interest that are crossed by the lines of a test grid.

E 7, E04

intercept method—See **Heyn method**.

E 7, E04

interchangeability, *n*—the extent to which the thermometer matches a resistance-temperature relationship. (The verification of interchangeability can be accomplished only by calibration. The

- deviations at the temperature limits and the maximum deviation from the established resistance-temperature relationship shall be specified.) **E 344, E20**
- intercharacter space, *n***—the space between the last bar of one character and the first bar of the next that separates two adjacent characters. Also called intercharacter gap. **F 1294, F05**
- intercoat contamination**—*in protective coatings*, the presence of foreign matter between successive coats. **D 4538, D33**
- intercolor feathering, *n***—instantaneous ink spread into adjacent inks. **F 1857, F05**
- interconnected porosity, *n***—a network of pores in and extending to the surface of a sintered compact. Usually applied to powder metallurgy materials in which the interconnected porosity is determined by impregnating the specimens with oil. Synonymous with **communicating pores**. **B 243, B09**
- interconnection, *n***—the mechanical interface or connection mechanism between at least two components or between components and bony elements of the spine, pelvis, or ribs. **F 1582, F04**
- interconnector**—a device to connect adjacent membrane elements in series and to seal the product channel from the feed-brine channel. **D 6161, D19**
- intercorrelation coefficient, (r_{xx})**—a measure of the linear association between values of the same type of variable expressed as a correlation coefficient, (*r*). **E 131, E13**
- intercritical annealing/isothermal annealing**—heating a steel above the lower critical transformation temperature, but below the upper-critical transformation temperature, to dissolve all the iron carbides, but not transform all the ferrite to austenite. Cooling slowly from this temperature, through the lower critical temperature, produces a structure of ferrite and pearlite that is free of internal stresses. In *intercritical annealing*, the steel continues to cool slowly in the furnace, similarly to full annealing. In *isothermal annealing*, cooling is stopped just below the lower critical, assuring complete transformation to ferrite and coarse pearlite, and eliminating the potential for bainite formation. The coarse pearlite structure greatly improves machinability of medium carbon steels. **F 1789, F16**
- intercrystalline corrosion**—See **intergranular corrosion**. **G 15, G01**
- intercrystalline cracks**—cracks or fractures that occur between the grains or crystals in a polycrystalline aggregate. **E 7, E04**
- interdendritic**—located within the branches of a dendrite or between the boundaries of two or more dendrites. **E 7, E04**
- interdendritic porosity**—voids occurring between the dendrites in cast metal. **E 7, E04**
- interdigitation**—the interlocking or meshing of the female and male jaw serrations. **F 921, F04**
- interface**—a boundary between two phases with different chemical or physical properties. **E 673, E42**
- interface**—the boundary between two materials. **E 1316, E07**
- interface, *n***—the area in a device where different subsystems connect electrically or a device used to establish a connection between two different devices. **F 1457, F05**
- interface, *n***—one of the two mating surfaces, lines or points of contact within an interconnection between two components, between any component and bone, or between two bony elements. **F 1582, F04**
- interface width, observed**—*AES, XPS, SIMS*, the distance over which a 16 % to 84 % (or 84 % to 16 %) change in signal is measured at the junction of two dissimilar matrices. **E 673, E42**
- interfacial region**—that volume adjacent to an interface having physical or chemical properties different from either bulk phase as a result of its proximity to the interface. **E 673, E42**
- interfacial tension**—the contractile force of an interface between two phases. See **surface tension**. **B 374, B08**
- interfacial tension**—the force existing in a liquid-liquid phase interface that tends to diminish the area of the interface. This force, which is analogous to the surface tension of liquid-vapor interfaces, acts at each point on the interface in the plane tangent at that point. **D 459, D12**
- interfacial tension, *n***—the force existing in a liquid-liquid phase interface that tends to diminish the area of the interface. This force, which is analogous to the surface tension of liquid-vapor interfaces, acts at each point on the interface in the plane tangent at that point. (*Compilation of ASTM Standard Definitions, 7th Edition.*) **D 2864, D27**
- interfacial water**—water in transition layers at mineral/water and mineral/water/ice interfaces in frozen ground. **D 7099, D18**
- interference, *n***—*in testing*, an effect due to the presence of a constituent or characteristic that influences the measurement of another constituent or characteristic. **D 123, D13**
- interference, *n***—an undesired output caused by a substance or substances other than the one being measured. **D 1356, D22**
- interference**—the effect of a combination of wave trains of various phases and amplitudes. **E 7, E04**
- interference**—the variation with distance or time of the amplitude of a wave which results from the superposition of two or more waves having the same, or nearly the same frequency. **E 1316, E07**
- interference check standard, *n***—a solution (or set of solutions) of known analyte concentration used to verify an accurate analyte response in the presence of possible spectral interferences from other analytes that may be present in samples. **E 1605, E06**
- interference check standard (ICS)**—a standard solution (or set of solutions) used for ICP-AES to verify an accurate analyte response in the presence of possible spectral interferences from other analytes present in samples; the concentration of analyte is to be less than 25 % of the highest calibration standard, and concentrations of the interferant will be 200 $\mu\text{g/mL}$ of aluminum, calcium, iron, and magnesium. **E 631, E06**
- interference filter, *n***—filter constructed of extremely thin alternate layers of high and low refractive-index material and capable of transmitting narrow spectral bands formed by constructive interference within the desired waveband and destructive interference at other wavelengths. **E 284, E12**
- interference, *n***—any activity or event that could produce anomalous measurements. **C 634, E33**
- interference seal**—a seal produced between a fastener and its hole when a fastener of a given diameter is driven into a hole of a smaller diameter. An interference seal is also produced when a fastener shank is expanded by the installation process. **E 631, E06**
- interference seal**—a seal produced between a fastener and its hole when a fastener of a given diameter is driven into a hole of a smaller diameter. An interference seal is also produced when a fastener shank is expanded by the installation process. **E 1749, E06**
- interference signal**—*SIMS*, signal measured at the mass position of interest due to another, undesired species. **E 673, E42**
- interfering substance**—any species, other than the ion being measured, whose presence in the sample solution affects the measured potential of a cell. Interfering substances fall into two classes: “electrode” interferences and “method” interferences. Examples of the first class would be those substances which give a similar response to the ion being measured and whose presence generally results in an apparent increase in the activity (or concentration) of the ion to be determined (for example, Na^+ for the Ca^{++} electrode), those species which interact with the membrane so as to change its chemical composition (that is, organic solvents for the liquid or poly(vinyl chloride) (PVC) membrane electrodes) or electrolytes present at a high concentration giving rise to appreciable liquid-junction potentials. The second class of interfering substance is that which interacts with the ion being measured so as to decrease its activity or apparent concentration, but where the electrode continues to report the true activity (that is, CN^- present in the measurement of Ag^+). **D 4127, D19**
- interferogram, double-sided**—interferogram measured with approximately equal retardation on either side of the centerburst. **E 131, E13**
- interferogram, I(δ)**—record of the modulated component of the

interferogram, I(δ)

- interference signal measured as a function of retardation by the detector. **E 131, E13**
- interferogram, laser reference**—sinusoidal interferogram of a laser source measured at the same time as the signal interferogram. **E 131, E13**
- interferogram, signal**—interferogram of the beam of radiant energy whose spectrum is desired. **E 131, E13**
- interferogram, single-sided**—interferogram in which sampling is initiated close to the centerburst and continues through that point to the maximum retardation desired. **E 131, E13**
- interferogram, white light**—reference interferogram of a broadband light source measured at the same time as the signal interferogram and used to initiate data acquisition of consecutive scans for signal-averaging. **E 131, E13**
- interferometer**—device used to divide a beam of radiant energy into two or more paths, generate an optical path difference between the beams, and recombine them in order to produce repetitive interference maxima and minima as the optical retardation is varied. **E 131, E13**
- interferometer**—a non-contact optical instrument used to obtain topographical 3-D data sets. **E 2444, E08**
- interferometer, Genzel**—interferometer in which the beam is focused in the plane of the beamsplitter and collimated before the moving mirror(s). **E 131, E13**
- interferometer, lamellar grating**—interferometer in which the beam is reflected from two interleaved mirrors, one of which is stationary while the other is movable. **E 131, E13**
- interferometer, Michelson**—interferometer in which an approximately collimated beam of radiant energy is divided into two paths by a beamsplitter; one beam is reflected from a movable mirror and the other from a stationary mirror, and they are then recombined at the beamsplitter. **E 131, E13**
- interferometer, rapid-scanning**—interferometer in which the retardation is varied rapidly enough that the modulation frequencies in the interferogram are sufficiently high that the interferogram signal can be amplified directly without additional modulation by an external chopper. **E 131, E13**
- interferometer, refractively scanned**—interferometer in which the retardation between two beams is generated by the movement of a wedged optical element. **E 131, E13**
- interferometer, slow-scanning**—interferometer in which the retardation is continuously varied, but so slowly that an external chopper is needed to modulate the beam at a frequency which is high enough for ac signal amplification. **E 131, E13**
- interferometer, stepped-scanning**—interferometer in which the movable element is held stationary for the length of time required for signal integration and digitization of each sample point, and then translated to the next sample point. **E 131, E13**
- intergranular corrosion**—a preferential attack at the grain boundaries. **E 7, E04**
- intergranular corrosion**—preferential corrosion at or adjacent to the grain boundaries of a metal or alloy. **G 15, G01**
- intergranular pressure**—see **stress**. **D 653, D18**
- interim controls**—a set of measures designed to temporarily reduce human exposure or likely exposure to lead-based paint hazards, including specialized cleaning, repairs, maintenance, painting, temporary containment, ongoing monitoring of lead-based paint hazards or potential hazards, and the establishment and operation of management and resident education programs. **E 1605, E06**
- interim remedial measure, n**—a remedial action that implements a partial solution prior to the selection of a final complete remedy. Interim remedial measures may be early actions, but they are often not. **D 5681, D34**
- interim foam-filled tube**—a tube filled with homogeneous unicellular thermosetting foam having closed cells blown with non-combustible gases, with the filling bonded to the interior wall.
NOTE—The foam filling should be free of voids, separations, holes, cracks, or the like. **F 819, F18**
- interior packing**—See **packing**. **D 996, D10**
- interior pipe size (IPS)**—See **iron pipe size**. **E 631, E06**
- interior type plywood**—a term frequently applied to plywood bonded with adhesives that maintain adequate bonds under conditions usually existing in the interior of buildings; the commercial classification is a function of veneer grade as well as glue durability. **D 1038, D07**
- interior work-area**—hallway, room, part of a room, or group of rooms in which a lead-hazard abatement activity takes place on the inside of a building. **E 631, E06**
- interlaboratory study, ILS, n**—a study undertaken to demonstrate the precision and accuracy of a test method. **E 135, E01**
- interlaboratory test comparison**—organization, performance and evaluation of tests on the same or similar items or materials by two or more laboratories in accordance with predetermined conditions, (ISO Guide 2). **E 1187, E36**
- interlaboratory testing**—the evaluating of a test method in more than one laboratory by analyzing data obtained from one or more materials that are as homogeneous as practical. **D 123, D13**
- interlaminar**—describing objects (for example, voids), events (for example, fracture), or fields (for example, stress) between the laminae of a laminate. **D 3878, D30**
- interlaminar**—descriptive term pertaining to some object (voids), event (fracture), or potential field (shear stress) referenced as existing or occurring between two or more adjacent laminae. **E 631, E06**
- interlaminar**—descriptive term pertaining to some object (voids), event (fracture), or potential field (shear stress) referenced as existing or occurring between two or more adjacent laminae. **E 1749, E06**
- interlayer**—a material used for bonding glass lites together. See related term **laminated glass**. **C 162, C14**
- interlayer paper**—see **layer insulation**. **D 1711, D09**
- interlining, n**—any textile which is intended for incorporation into an article of wearing apparel as a layer between an outer shell and inner lining. **D 123, D13**
- interlock**—See **windows and doors**. **E 631, E06**
- interlock**—a device or system, either electrical, mechanical, or electromechanical, that serves to prevent exposure to an electric shock, physical injury, or excessive radiation emission when a door, cover, or access panel is opened or removed. **F 1827, F26**
- interlocking tile, n**—tile with a system of ribs or grooves enabling the lateral joining of adjacent tiles in the same course with the overlocking edge of one tile covering the underlocking edge of another forming the side lap. **C 43, C15**
- intermediary plane**—any plane in a microscope where a real image of a specimen is formed. Reticles can be inserted at intermediary planes for superposition on the image. **E 7, E04**
- intermediate annealing, n**—annealing wrought steel objects at one or more stages during manufacture prior to final thermal treatment. **A 941, A01**
- intermediate fiberboard sheathing**—a cellulosic fiberboard sheathing product, approximately 22 lb/ft³, used in frame construction under masonry veneer, siding, shingles, and stucco. **D 1554, D07**
- intermediate image**—any image of an object formed by a lens other than the final projector lens. **E 7, E04**
- intermediate pack**—See **pack**. **D 996, D10**
- intermediate package**—See **package**. **D 996, D10**
- intermediate phase**—in a chemical system, a distinguishable homogeneous substance whose composition range of existence does not extend to any of the pure components of the system. **E 7, E04**
- intermediate precision conditions, n**—conditions under which test results are obtained with the same test method using test units or test specimens (see Practice E 691, 10.3) taken at random from a single quantity of material that is as nearly homogeneous as possible, and with changing conditions such as operator, measuring equipment, location within the laboratory, and time. **E 456, E11**

intermediate precisions, n —the closeness of agreement between test results obtained under specified intermediate precision conditions.

NOTE—The specific measure and the specific conditions must be specified for each intermediate measure of precision; thus, "standard deviation of test results among operators in a laboratory," or "day-to-day standard deviation within a laboratory for the same operator."

NOTE—Because the training of operators, the agreement of different pieces of equipment in the same laboratory and the variation of environmental conditions with longer time intervals all depend on the degree of within-laboratory control, the intermediate measures of precision are likely to vary appreciably from laboratory to laboratory. Thus, intermediate precisions may be more characteristic of individual laboratories than of the test method.

intermediate principal plane—see **principal plane**. D 653, D18

intermediate principal stress—see **stress**. D 653, D18

intermediate rail—one of two or more rails between the top rail and floor. E 631, E06

intermediate rail—one of two or more rails between the top rail and floor. E 1481, E06

intermediate rail—horizontal member of the framework running continuously at any point between the top and bottom of the fence (sometimes called *middle rail*). F 552, F14

intermediate rib, n —one or more rib(s) located between the centerline and the shoulder ribs of the tread band. F 538, F09

intermediate row, n —a row located between the circumferential centerline and the shoulder ribs/rows of the tread band. F 538, F09

intermediate temper—as applied to aluminum, any temper between soft and hard drawn. B 354, B01

intermediate-temperature-setting adhesive, n —an adhesive that sets in the temperature range from 31 to 99°C (87 to 211°F). (Synonym *warm-setting adhesive*.) (Compare **cold-setting adhesive**, **hot-setting adhesive**, and **room-temperature-setting adhesive**.) D 907, D14

intermetallic phases—compounds, or intermediate solid solutions, containing two or more metals, which usually have characteristic properties and crystal structures different from those of the pure metals or the terminal solid solutions. E 7, E04

intermittent disfigurement—disfigurement of the shape of the pultrusion for a limited length.

NOTE—This condition usually results from die fouling or from folded or crowded reinforcing material and is corrected after a short distance. D 3918, D20

intermittent human temperature determination—determination of human body temperature that is made periodically by a series of entirely separate measurements. E 344, E20

intermittent moving bed (pulse, slug)—an adsorption process characterized by upward flow of a fluid through a fixed bed of granular adsorbent with periodic withdrawal of spent adsorbent from the bottom of the bed and additions of reprocessed or virgin adsorbent to the top of the bed. D 2652, D28

intermittent sampling—See **sampling**. D 1356, D22

intermodal container—See **container**. D 996, D10

internal, *adj*—of the interior of *subject's* body or body cavity, such as pulmonary artery, urinary bladder, oral, rectal, etc. E 344, E20

internal absorptance, α_p, n —ratio of the absorbed radiant or luminous flux to the flux that has entered the first surface of the layer of material. E 284, E12

internal absorptance of a homogeneous nondiffusing plate, n —ratio of the radiant or luminous flux absorbed between the entry and exit surfaces of the plate to the flux which leaves the entry surface. Symbol: $a_i, a_i + \tau_i = 1$.

NOTE—For a given plate, the internal absorptance is a function of the path length of the radiation in the plate and thus of the angle of incidence. The fundamental concept is spectral internal absorptance. $a_i(\lambda)$. E 349, E21

internal carbon referencing—XPS, a method of determining the charging potential of a specimen by comparing the experimentally determined binding energy of the C1s peak maximum from a

specific carbon group within the specimen to a standard binding energy value for that carbon group. A hydrocarbon group within the specimen is often used for this purpose. E 673, E42

internal conversion, n —a transition between electronic states of the same total spin quantum number (multiplicity). E 131, E13

internal cut outs, n —lines, part of a pattern piece, not part of the piece boundary, which are cut during the cutting process. D 6963, D13

internal discharge—method in which makeup air is introduced inside the hood. This design has limited application, and the amount of supply air able to be introduced varies considerable with the type of cooking equipment and the exhaust flow rate. Makeup air may be untempered depending on climatic conditions. F 1827, F26

internal filling solution of sensing electrode—in liquid membrane electrodes, an aqueous internal filling solution contacts the internal reference element and the membrane, which is saturated with ion exchanger. The filling solution normally contains a fixed level of chloride and of the ion for which the electrode was designed; the concentration of this ion determines the zero potential point of the electrode. In addition, the filling solution is saturated with silver chloride to prevent the silver chloride of the internal reference element from dissolving. D 4127, D19

internal flotation—flotation element located within the boom membrane. F 818, F20

internal friction (shear resistance), (FL^{-2}) —the portion of the shearing strength of a soil or rock indicated by the terms $p \tan \phi$ in Coulomb's equation $s = c + p \tan \phi$. It is usually considered to be due to the interlocking of the soil or rock grains and the resistance to sliding between the grains. D 653, D18

internal hydrogen embrittlement—embrittlement caused by residual hydrogen from fastener processing, such as cleaning, pickling, phosphating, or electroplating. F 1789, F16

internal hydrogen embrittlement (IHE)—hydrogen embrittlement caused by absorbed atomic hydrogen from any chemical process that introduces hydrogen into the steel before exposure to an externally applied stress. F 2078, F07

internal lines, n —lines, part of a pattern piece, not a part of the piece boundary, which are not cut. D 6963, D13

internal mixing pneumatic atomizer—a pneumatic atomizer in which gas and liquid are introduced and mixed within the nozzle, and are then discharged as a two-phase dispersion through a common orifice. E 1620, E29

internal oxidation—preferential oxidation of certain components or phases within the bulk of a solid metal. E 7, E04

internal oxidation—the formation of isolated particles of corrosion products beneath the metal surface. (This occurs as the result of preferential oxidation of certain alloy constituents by inward diffusion of oxygen, nitrogen, sulfur, and so forth.) G 15, G01

internal rate of return (IRR)—the compound rate of interest that, when used to discount study period costs and benefits of a project, will make the two equal. E 631, E06

internal rate of return (IRR), n —the compound rate of interest that, when used to discount study period costs and benefits of a project, will make the two equal. E 833, E06

internal reference electrode—a reference electrode that is contained inside an ion-selective electrode assembly. Comment: The system frequently consists of a silver-silver chloride electrode in contact with an appropriate solution containing chloride and a fixed concentration of the ion for which the membrane is selective. D 4127, D19

internal, reflection attachment, IRA—the transfer optical system which supports the IRE, directs the energy of the radiant beam into the IRE, and then redirects the energy into the spectrometer or onto the detector. The IRA may be part of an internal reflection spectrometer or it may be placed into the sampling space of a spectrometer. E 131, E13

internal reflection element (IRE)—the transparent optical element

internal reflection element (IRE)

used in internal reflection spectroscopy for establishing the conditions necessary to obtain the internal reflection spectra of materials. E 131, E13

internal reflection spectroscopy (IRS)—the technique of recording optical spectra by placing a sample material in contact with a transparent medium of greater refractive index and measuring the reflectance (single or multiple) from the interface, generally at angles of incidence greater than the critical angle. E 131, E13

internal reflux, *n*—the liquid normally running down inside a distillation column. (Synonym—*reflux*.) D 4175, D02

internal reflux—the liquid normally running down inside the column. D 4175, D02

internal seam—See **stepdown test**. E 7, E04

internal shrinkage cracks—longitudinal cracks in the pultrusion that are found within sections of roving reinforcement.

NOTE—This condition is caused by shrinkage strains during cure that show up in the roving portion of the pultrusion where transverse strength is low. D 3918, D20

internal standard, *n*—a material present in or added to samples in known amount to serve as a reference measurement. D 1129, D19

internal standard—a compound of known behavior added to a sample to facilitate the analysis. D 4790, D16

internal standard, *n*—in *spectrometry*, a material present in or added to test samples that serves as an intensity reference for spectral measurements. E 135, E01

internal standard line, *n*—a spectral line of an internal standard, with which the radiant energy of an analytical line is compared. E 135, E01

internal transmission density, *n*—logarithm to the base 10 of the reciprocal of the internal transmittance. Symbol: D_i , $D_i = -\log_{10} \tau_i$.

NOTE—See Note of **internal transmittance of a homogeneous nondiffusing plate**.

NOTE—In German, the symbol E is still in use and the natural logarithm is also used sometimes instead of the common logarithm; the corresponding quantity is then called “natürliches Absorptionsmass.” (= $\ln 1/\tau_i$). E 349, E21

internal transmittance, τ_i, n —the ratio of flux reaching the exit surface of a specimen to the flux that penetrates the entry surface. E 284, E12

internal transmittance of a homogeneous nondiffusing plate, *n*—ratio of the radiant or luminous flux reaching the exit surface of the plate to the flux which leaves the entry surface.

NOTE—For a given plate, the internal transmittance is a function of the path length of the radiation in the plate and thus of the angle of incidence. The fundamental concept is “spectral internal transmittance” $\tau(\lambda)$. E 349, E21

International Organization for Standards, *n*—an organization that develops and publishes international standards for a variety of technical applications, including data processing and communications. (See **ISO**.) F 1457, F05

international pyrheliometric scale—pyrheliometric scale decreed as being in operation from July 1, 1957, in order to meet an urgent need for a single international scale. E 772, E44

International Practical Temperature Scale (IPTS-48), *n*—the temperature scale adopted by the 11th General Conference on Weights and Measures in 1960 and replaced in 1968 by the International Practical Temperature Scale of 1968. E 344, E20

International Practical Temperature Scale of 1968 (IPTS-68), *n*—the temperature scale adopted by the 13th General Conference on Weights and Measures in 1968. E 344, E20

international roughness index (IRI), *n*—an index computed from a longitudinal profile measurement using a quarter-car simulation at a simulation speed of 50 mph (80 km/h). E 867, E17

international roughness index, true—see **true international roughness index**. E 867, E17

International System of Units, SI—a complete coherent system of units whose base units are the metre, kilogram, second, ampere,

kelvin, mole, and candela. Other units are derived as combinations of the base units or supplementary units. A 340, A06

International Temperature Scale of 1990 (ITS-90), *n*—the temperature scale prepared in accordance with instructions of the 18th General Conference on Weights and Measures, and adopted on January 1, 1990. E 344, E20

interphase, *n*—in an adhesive joint, a region of finite dimension extending from a point in the adherend where the local properties (chemical, physical, mechanical, and morphological) begin to change from the bulk properties of the adherend to a point in the adhesive where the local properties equal the bulk properties of the adhesive. D 907, D14

interphase—the region between two distinct phases over which there is a variation of a property. E 673, E42

interplanar distance—the perpendicular distance between adjacent parallel lattice planes. E 7, E04

interpretation—the determination of whether indications are relevant or nonrelevant. E 1316, E07

interpretation, *n*—the determination of whether indications are relevant, nonrelevant, or false. E 1316, E07

interpreter—that part of the OCR system which analyzes the input data and determines what the individual characters are and what their relation is to each other. F 149, F05

inter-projection wear, *n*—a type of irregular treadwear characterized by different wear rates on one or more adjacent projections (either transverse or circumferential orientation); this results in a step-off in tread depth between the adjacent projections. F 538, F09

interpupillary distance—spacing between the pupils of the eyes; eyepieces on binocular microscopes should be set at this distance for comfortable and accurate viewing. E 7, E04

interrupted aging, *n*—aging at two or more temperatures, by steps, and cooling to room temperature after each step. A 941, A01

interrupted quenching, *n*—quenching in which the object being quenched is removed from the quenching medium while the object is at a temperature substantially higher than that of the quenching medium. A 941, A01

intersection count—the number of boundaries between the matrix phase and the phase or constituent of interest that are crossed by the lines of a test grid. For isolated particles in a matrix, the number of feature intersections will equal twice the number of feature interceptions. E 7, E04

interstice—see preferred term **void**. D 653, D18

interstitial—occurring between the grains or in the pores in rock or soil. D 653, D18

interstitial-free steel, *n*—a steel that has essentially all of its carbon and nitrogen chemically combined with stabilization elements rather than being present interstitially. A 941, A01

interstitial water, *n*—the residual water remaining in the sample pore spaces at the completion of the fixed-volume weekly leach. D 5681, D34

interstitial water—water occupying space between sediment or soil particles (syn. **pore water**). E 943, E47

intersystem crossing—a transition between electronic states that differ in total spin quantum number (multiplicity). E 131, E13

interval, arrival time (Δt_{ij})—the time interval between the detected arrivals of an acoustic emission wave at the i th and j th sensors of a sensor array. E 1316, E07

interval erosion rate, *n*—the slope of a line joining two specified points on the cumulative erosion-time curve. G 40, G02

interval error, *n*—the deviation of the nominal value of a temperature interval from its true value; either for the total range (total interval) or for a part of the range (partial interval). E 344, E20

interval estimate—the estimate of a parameter given by two statistics, defining the end points of an interval. E 1823, E08

intervener physician—a licensed M.D. or D.O., having not previously established a doctor/patient relationship with the emergency patient, who is willing to accept responsibility for patient care, and who can provide proof of a current medical license. F 1177, F30

- intervention required, *n***—a message from the host computer indicating to the operator that some action is required before printing can continue. **F 1457, F05**
- intervertebral body fusion cage, *n***—a hollow device which contains graft material. **F 1582, F04**
- intervertebral body fusion devices, *n***—a structure which is placed in the disc space between two adjacent vertebral bodies to provide support for eventual arthrodeses of the two adjacent vertebral bodies. **F 1582, F04**
- intracrystalline cracking*—See **transcrystalline cracking**. **E 7, E04**
- intralaminar**—describing objects (for example, voids), events (for example, fracture), or fields (for example, stress) within the laminae of a laminate. **D 3878, D30**
- intrapermafrost water**—water occurring in unfrozen zones (that is, taliks and cryopegs) within permafrost. **D 7099, D18**
- intra-projection wear, *n***—a type of irregular wear characterized by a different wear rate at two or more locations within a given projection. **F 538, F09**
- intrinsic fiber optic chemical sensor, *n***—a fiber optic chemical sensor in which the modulation of the optical signal is effected through a change in the properties of the optical fiber itself, and such modulation occurs while the radiant energy is guided by the optical fiber. **E 131, E13**
- intrinsic linewidth, of specimen**—AES, XPS, the linewidth contribution arising from the specimen. The measured linewidth is a convolution of this function and broadening contributions of the instrument (for example, X-ray source radiation linewidth, spectrometer energy resolution). **E 673, E42**
- intrinsic shear strength, S_o (FL⁻²)**—the shear strength of a rock indicated by Coulomb's equation when $p \tan \phi$ (shear resistance or internal friction) vanishes. Corresponds to cohesion, c , in soil mechanics. **D 653, D18**
- intrinsic viscosity*—see **viscosity, intrinsic**. **D 1695, D01**
- intrusive ice**—ice formed from water intruded or injected under pressure into soils and rocks. **D 7099, D18**
- intumescent coating, *n***—a fire-retardant coating (which see) that when heated forms a foam produced by nonflammable gases, such as carbon dioxide and ammonia. This results in a thick, highly insulating layer of carbon (about fifty times as thick as the original coating) that serves to protect the coated substrate from fire. **D 16, D01**
- invariant equilibrium**—a stable state amongst a number of phases exceeding by two the number of components in the system and in which more of the external variables (pressure, temperature, or concentrations) may be varied without causing a decrease in the number of phases present. **E 7, E04**
- invariant equilibrium**—stable state among a number of phases exceeding by two the number of components in the system and in which more of the external variables (pressure, temperatures, or concentrations) may be varied without causing a decrease in the number of phases present, (E 7, E04). **E 1142, E37**
- invariant point**—a point defined by the unique values of temperature, pressure, and concentrations in a system with the maximum number phases which can coexist in equilibrium. **E 7, E04**
- invariant point**—point defined by the unique values of temperature, pressure, and concentrations in a system with the maximum number of phases that can coexist in equilibrium, (E 7, E04). **E 1142, E37**
- invasive species, *n***—an exotic species that alters the native ecosystem and negatively impacts native species, resulting in habitat loss, water-table modification, or other disruptions. **E 2114, E06**
- inverse rate curve**—in thermal analysis, the curve that is obtained when the length of time required by the specimen to pass through successive and constant intervals of temperature is plotted against the temperature. **E 7, E04**
- inverse segregation**—a concentration of low melting constituents in those regions in which solidification first occurs. **E 7, E04**
- inverse wear rate [*nd*], *n***—the distance traveled by a tire, after break-in, per unit loss in tread depth. **F 538, F09**
- inversion, *n***—a reversal of the normal atmospheric temperature gradient, thus an increase of temperature of the air with increasing altitude. **D 1356, D22**
- inversion**—the act of turning inward, turning the sole of the foot toward the midline of the body. **F 869, F08**
- invert**—the bottom or lowest point of the internal surface of the transverse cross section of a pipe. **C 822, C13**
- invert**—on the cross section, the lowest point of the underground excavation or the lowest section of the lining. (ISRM) **D 653, D18**
- inverted microscope**—a microscope so arranged that the line of sight is directed upwards through the objective to the object. **E 7, E04**
- invert emulsion**—a water in oil emulsion also known as closed phase emulsion, total emulsion and invert. **E 609, E35**
- invert emulsion suspension**—a water in oil emulsion also known as a multiple emulsion. **E 609, E35**
- investigative PDD procedures, *n***—routine PDD examinations that are used to explore wider issues than evidentiary PDD examinations, and are not intended to meet exacting evidentiary standards. Investigative procedures may include applicant testing, Post-Conviction Sex Offender Testing, and multiple-facet criminal testing. **E 2035, E52**
- investment cost**—first cost and later expenditures which have substantial and enduring value (generally more than one year) for upgrading, expanding, or changing the functional use of a building or building subsystem. **E 631, E06**
- investment cost, *n***—first cost and later expenditures which have substantial and enduring value (generally more than one year) for upgrading, expanding, or changing the functional use of a building or building subsystem. **E 833, E06**
- invisible waste, *n***—*in cotton testing*, weight loss due to dust, moisture, loose fibers, etc., carried away by the air stream during the test. **D 123, D13**
- invisible waste, *n***—*in cotton testing*, weight loss due to dust, moisture, loose fibers, etc., carried away by the air stream during the test. **D 7139, D13**
- iodine adsorption number, *n***—the number of grams of iodine adsorbed per kilogram of carbon black under specified conditions. **D 3053, D24**
- ion**—an electrified portion of matter of atomic or molecular dimensions. **B 374, B08**
- ion**—a charged portion of matter of atomic or molecular dimensions. **D 6161, D19**
- ion beam**—a directed flux of charged atoms or molecules.
- current*—the measured rate of flow of charged atoms or molecules incident upon the specimen per unit time, usually expressed in amperes (A).
- current density*—the ion beam current incident on the specimen per unit cross-sectional area, usually expressed in amperes per square centimetre (A/cm²).
- energy*—in surface analysis, the mean kinetic energy of the ions in the beam (see **beam, energy**). **E 673, E42**
- ion content,, *n***—a measure of the free sodium, potassium, and chloride content in a direct thermal or thermal transfer product; trace amounts may cause chemical attack to the thermal printhead elements. **F 1623, F05**
- ion deposition printer**—a printer where ion charges are gated onto a dielectric drum. Toner is picked up by the charge, then transferred to the paper. Once the toner is deposited on the paper, it can be affixed by either pressure or heat fusion. **F 149, F05**
- ion exchange**—a reversible process by which ions are interchanged between a solid and a liquid with no substantial structural changes of the solid. **B 374, B08**
- ion exchange, *n***—a reversible process by which ions are interchanged between an insoluble material and a liquid with no substantial structural changes of the material. **D 1129, D19**
- ion exchange**—a reversible process by which ions are interchanged between a solid and a liquid with no substantial structural changes in the solid. **D 1695, D01**

ion exchange

ion exchange—a reversible process by which ions are interchanged between a solid and a liquid with no substantial structural changes in the solid; ions removed from a liquid by chemical bonding to the media. **D 6161, D19**

ion-exchange capacity—for cellulosic ion-exchange materials, the number of milliequivalents of ions that can be exchanged by 1 g of the ion-exchange material. **D 1695, D01**

ion-exchange capacity (volume basis), *n*—the number of milliequivalents of exchangeable ions per millilitre of backwashed and settled bed of ion-exchange material in its standard form. **D 1129, D19**

ion-exchange capacity (volume basis)—the number of milliequivalents of exchangeable ions per millilitre of backwashed and settled bed of ion-exchange material in its standard form. **D 6161, D19**

ion-exchange capacity (weight basis), *n*—the number of milliequivalents of exchangeable ions per dry gram of ion-exchange material in its standard form. **D 1129, D19**

ion-exchange capacity (weight basis)—the number of milliequivalents of exchangeable ions per dry gram of ion-exchange material in its standard form. **D 6161, D19**

ion-exchange material, *n*—a water insoluble material that has the ability to exchange reversibly certain ions in its structure, or attached to its surface as functional groups, with ions in a surrounding medium. **D 1129, D19**

ion-exchange material—a water insoluble material that has the ability to reversibly exchange ions in its structure, or attached to its surface as functional groups, with ions in a surrounding medium. **D 6161, D19**

ion-exchange materials—insoluble solid materials with the ability to exchange reversibly certain ions, in the structure or attached to the surface as functional groups, with ions in a surrounding medium. **D 1695, D01**

ion-exchange membrane, *n*—an ion-exchange material in a form suitable for use as a barrier between two fluids. **D 1129, D19**

ion-exchange membrane—an ion-exchange material in a form suitable for use as a barrier between two fluids. **D 6161, D19**

ion-exchange particle, *n*—an ion-exchange material in the form of spheroids or granules with an average diameter less than 10 mm. **D 1129, D19**

ion-exchange particle—an ion-exchange material in the form of spheroids or granules. **D 6161, D19**

ion-exchange resin, *n*—a synthetic, organic-ion-exchange material. **D 1129, D19**

ion-exchange resin—an organic ion-exchange material substrate, usually synthetic. **D 6161, D19**

ionic cellulose ethers—those water-soluble cellulose ethers which contain ionizable groups, in more than trace amounts. Sodium carboxymethyl cellulose is an example. **D 1695, D01**

ionic strength—the weighted concentration of ions in solution, computed by multiplying the concentration (*c*) of each and every ion in solution by the corresponding square of the charge (*Z*) on the ion, summing and dividing by 2: ionic strength = $(1/2)\sum Z^2C$. Conductivity measurements give a rough estimate of ionic strength. The ionic strength (and to a lesser extent, the concentration of nonionic dissolved species) largely determines the activity coefficient of each ion in the solution. **D 4127, D19**

ionic strength—measure of the overall electrolytic potential of a solution, the strength of a solution based on both the concentrations and valencies of the ions present. **D 6161, D19**

ionic-strength adjustment buffer—a pH buffered solution of high ionic strength added to samples and calibration solutions before measurement in order to achieve identical ionic strength and hydrogen ion activity. In addition, complexing agents and other components are often added to minimize the effects of certain interferences. **D 4127, D19**

ion image—SIMS, a two-dimensional representation of the spatial distribution of a particular secondary ion emitted from a specific area of the specimen. **E 673, E42**

ion implantation—the injection of ions into a specimen. **E 673, E42**

ionization, *n*—the process by which electrons are lost from or transferred to neutral molecules or atoms to form positively or negatively charged particles. **D 1711, D09**

ionization—the process by which neutral atoms or molecules, such as air, acquire a positive or negative charge. **D 5077, D10**

ionization—the disassociation of molecules into charged particles (ions). **D 6161, D19**

ionization—a process in which a charged particle is created from a parent atom or molecule or other bound state. **E 170, E10**

ionization chamber—a device for the measurement of radiation intensity by means of determining the degree to which the radiation ionizes a gas. **E 7, E04**

ionization cross-section—the probability that an incident particle traversing a gas or solid will produce an ionizing collision. The total ionization cross-section includes all electron vacancies produced by a primary collision and subsequent Coster-Kronig or Auger decay process. The partial ionization cross-section results from one particular process such as a primary collision to produce an initial innershell vacancy in a particular shell, a Coster-Kronig process, or an Auger ejection process to produce particular distributions of electron vacancies. **E 673, E42**

ionization method—a method of X-ray diffraction in which the intensity of the diffracted beam is measured by means of an ionization chamber. **E 7, E04**

ionization potential—the minimum energy, expressed in (electron) volts, required to remove an electron from an atom or molecule to form a positive ion. **E 1316, E07**

ionization vacuum gage—an indicating device used in vacuum systems to determine the pressure of the residual gas in a system by measuring the positive ion current produced in the process of ionization in an electrical field. **E 7, E04**

ionization vacuum gage—a vacuum gage comprising a means of ionizing the gas molecules, electrodes to facilitate the collection of the positive ions formed, and means of indicating the magnitude of the collected ion current. Various types of ionization gages are distinguished according to the method of producing the ionization. The common types are as follows:

(a) *hot-cathode ionization gage*—the ions are produced by collisions with electrons emitted from a hot filament (or cathode) and accelerated by an electric field. Also called hot-filament ionization gage, or simply ion gage. The Bayard-Alpert ionization gage employs a tube with an electrode structure designed to minimize X-ray-induced electron emission from the ion collector.

(b) *cold-cathode ionization gage*—the ions are produced by a cold-cathode discharge, usually in the presence of a magnetic field which lengthens the path of the electrons between cathode and anode. The discharge tube is a transparent tube in which the color and form of a cold-cathode discharge (without the presence of a magnetic field) gives an indication of the pressure and the nature of the gas. The Phillips ionization gage is a cold-cathode ionization gage in which a magnetic field is directly parallel to the axis of an annular electrode (normally the anode) located between two plate electrodes perpendicular to the axis. Various modifications of the Penning gage are named after the inventors, and certain types are referred to as magnetron vacuum gages.

(c) *radioactive ionization gage*—the ions are produced by radiations (usually alpha particles) emitted from a radioactive source. **E 1316, E07**

ionizing radiation—any type of radiation consisting of *charged* particles or *uncharged* particles, or both, that as a result of physical interaction, creates ions by either primary or secondary processes. (For example, *charged* particles could be positrons or electrons, protons, or other heavy ions, and *uncharged* particles could be X rays, gamma rays, or neutrons.) **E 170, E10**

ion lifetime—the average time that an ion exists in a particular electronic configuration, for example, a vacancy in a particular shell in an atom. **E 673, E42**

ion line, *n*—a spectral line resulting from radiation emitted during electron transition as an ionized atom decays to a lower, but still ionized, energy level. **E 135, E01**

ion neutralization—*ISS, SIMS*, the charge exchange processes in which a probe is neutralized by the material surface or gas phase species with which it interacts. **E 673, E42**

ion pump—an electrical device for pumping gas comprising a means for ionizing the gas and a system of electrodes at suitable potentials, and in some cases also a magnetic field, which causes the ions formed to move towards a surface on which they are absorbed or buried. **E 1316, E07**

ion-scattering:

spectrometer—*ISS*, an instrument capable of generating a beam of principally monoenergetic, singly charged, low-energy ions and determining the energy distribution of the probe ions that have been scattered from the solid surface through a known angle.

spectrometry—*ISS*, a technique to elucidate composition and structure of the outermost atomic layers of a solid material, in which principally monoenergetic, singly charged, low-energy (less than 10 keV) probe ions are scattered from the surface and are subsequently detected and recorded as a function of the energy or scattering angle, or both.

spectrum—*ISS*, a representation in which the scattered ion intensity is presented as a function of the ratio of the scattered ion energy to the incident ion energy. **E 673, E42**

ion-selective electrode—electrochemical sensors, the potentials of which are linearly dependent on the logarithm of the activity of a given ion in solution. Such devices are distinct from systems that involve redox reactions.

(A) Primary Electrodes

(1) *crystalline electrodes*—may be homogeneous or heterogeneous.

(a) *homogeneous membrane electrodes*—are ion-selective electrodes in which the membrane is a crystalline material prepared from either a single compound or a homogeneous mixture of compounds (that is, Ag_2S , $\text{AgI}/\text{Ag}_2\text{S}$).

(b) *heterogeneous membrane electrodes*—are formed when an active substance, or mixture of active substances, is mixed with an inert matrix, such as silicone rubber or PVC, or placed on hydrophobized graphite, to form the sensing membrane that is heterogeneous in nature.

(2) *noncrystalline electrodes*—In these electrodes a support, containing an ionic (either cationic or anionic) species or an uncharged species, forms the ion-selective membrane which is usually interposed between two aqueous solutions. The support used can be either porous (for example, filter, glass frit, etc.) or nonporous (for example, glass or inert polymeric material such as PVC, yielding with the ion-exchanger and the solvent a *solidified* homogeneous mixture). These electrodes exhibit a response due to the presence of the ion-exchange material in the membrane.

(a) *rigid matrix electrodes*—Glass electrodes are ion-selective electrodes in which the sensing membrane is a thin piece of glass whose chemical composition determines the selectivity of the electrode. In this group are: hydrogen ion-selective electrodes and monovalent cation-selective electrodes.

(b) *electrodes with a mobile carrier:*

(1) *positively charged*—bulky cations (for example, those of quaternary ammonium salts or salts of transition metal complexes such as derivatives of 1,10-phenanthroline) which, when dissolved in a suitable organic solvent and held on an inert support (for example, filter or PVC), provide membranes that are sensitive to changes in the activities of anions.

(2) *negatively charged*—complexing agents (for example, of type $(\text{RO})_2\text{PO}_2^-$) or bulky anions (for example, tetra-*p*-chlorophenylborate anions) that when dissolved in a suitable

organic solvent and held in an inert support (for example, filter or PVC), provide membranes that are sensitive to changes in the activities of cations.

(3) *uncharged (neutral) carrier*—electrodes based on solutions of molecular carriers of cations (for example, antibiotics, macrocyclic compounds or other sequestering agents) that can be used in membrane preparations which show sensitivity and selectivity to certain cations.

(B) Sensitized Ion-selective Electrodes

(1) *gas-sensing electrodes:*

(a) *secondary reaction type*—sensors composed of an indicating and a reference electrode that uses a gas-permeable membrane or an air gap to separate the sample solution from a thin film of an intermediate solution, which is held between the gas membrane and the ion-sensing membrane of the electrode, or placed on the surface of the electrode using a wetting agent (for example, air-gap electrode). This intermediate solution interacts with the gaseous species in such a way to produce a change in a measure value (for example, pH) of the intermediate solution. This change is sensed by the ion-selective electrode and is proportional to the partial pressure of the gaseous species in the sample.

(b) *redox reaction type*—a gas sensing electrode using a platinum redox electrode, typified by the hydrogen gas electrode. This responds to the redox equilibrium between hydrogen gas and hydrogen ion in solution.

(c) *amperometric detector*—this is a type that uses an amperometric detector, generally behind a gas permeable membrane. Such devices have been used for oxygen and for free chlorine.

(2) *enzyme substrate electrodes*—sensors in which an ion-selective electrode is covered with a coating containing an enzyme that causes the reaction of an organic or inorganic substance (substrate) to produce a species to which the electrode responds. Alternatively, the sensor could be covered with a layer of substrate that reacts with the enzyme to be assayed.

NOTE—The term *ion-specific electrode* is not recommended. The term *specific* implies that the electrode does not respond to additional ions. Since no electrode is truly specific for one ion, the term *ion-selective* is recommended as more appropriate. *Selective ion-sensitive electrode* is a little-used term to describe an ion-selective electrode. **D 4127, D19**

ion source—in leak testing, that part of a leak detector tube in which tracer gas is ionized preliminary to being detected. **E 1316, E07**

ion species—type and charge of ion such as Ar^+ , O^- , and H_2^+ . If an isotope is used, it should be specified. **E 673, E42**

IOT controller, *n*—a printed wiring board in the image output terminal that controls the operation of the image output terminal and communicates with the electronic scanning system. **F 1457, F05**

IP—abbreviation for Institute of Petroleum. **D 4175, D02**

IPM, *n*—see **integrated pest management**. **E 2114, E06**

ipsilateral, *adj*—located, occurring, or acting on the same side of the body. **F 1646, F13**

IQI sensitivity—in radiography, the minimum discernible image and the designated hole in the plaque-type, or the designated wire image in the wire type image quality indicator. **E 1316, E07**

IR drop—the voltage across a resistance in accordance with Ohm's law:

$$E = IR$$

where:

E = potential (voltage),

I = current, and

R = resistance.

iron

iron—a term used for measuring thickness of sole leather. One iron equals $\frac{1}{48}$ in. (0.53 mm). **D 1517, D31**

iron, enameling—see **enameling iron**. **C 286, B08**

ironing, n—a method of pressing using a heated hand iron, sometimes together with moisture or steam, and a gliding motion. **D 123, D13**

ironing, n—a method of pressing using a heated hand iron, sometimes together with moisture or steam, and a gliding motion. **D 3136, D13**

iron pipe size, IPS, n—the nominal inside dimension of pipe in inches (or millimetres). (Also called *interior pipe size, standard pipe size*.) **E 631, E06**

iron-silicon alloys—a material composition containing up to 5% silicon with balance iron. **A 340, A06**

iron-sodium tartrate, EWNN or FeTNa—a complex tartaric acid salt of sodium and ferric iron. Solutions in aqueous sodium hydroxide will dissolve cellulose. Both the German abbreviation, EWNN, and the English, FeTNa, are to be found in English articles. The details of preparation of the solution should always be given. **D 1695, D01**

iron-sodium tartrate viscosity—the viscosity of a solution or dispersion of cellulose or pulp under standardized condition when dissolved in the iron-sodium tartrate solvent. (see also **iron-sodium tartrate**) **D 1695, D01**

ironstone ware—(stone china, white granite ware)—historic terms for a durable English earthenware. **C 242, C21**

Iron tannage—tannage with salts of iron. **D 1517, D31**

irradiance, n—quotient of the radiant flux incident on an infinitesimal element of surface containing the point, by the area of that element. **E 176, E05**

irradiance, n—the radiant power per unit area incident on a receiver, typically reported in watts per square metre, $W m^{-2}$. **G 113, G03**

irradiance (at a point of a surface), n—ratio of the radiant flux incident on a small but measurable element of surface containing the point, by the area of that element. **E 176, E05**

irradiance at a point on a surface, n—quotient of the radiant flux incident on an element of the surface containing the point by the area of that element. Symbol: $E_e, E; E_e = d\Phi_e/dA$; Unit: Watt per square metre, $W \cdot m^{-2}$.

NOTE—In ultraviolet radiation therapy and photobiology, this quantity is called dose rate (International Photobiology Committee, 1954).

E 349, E21

irradiance, E—the radiant flux (power) per unit area incident on a given surface (unit = W/m^2). **E 1316, E07**

irradiance, E, E_e, n —the radiant flux incident per unit area. **E 284, E12**

irradiance, E, Wm^{-2}, n —See **solar irradiance at a point of surface** in Terminology E 772. **E 1328, E44**

irradiation, n—application of radiation to an object. **E 349, E21**

irradiation—(1) process of exposing a surface or material to radiant flux; (2) at a point on surface, see **radiant exposure**. **E 772, E44**

irregularity factor—*in fatigue loading*, the ratio of the number of zero crossings with positive slope (or mean crossings) to the number of peaks or valleys in a given, force-time history. **E 1823, E08**

irregular loading—See **spectrum loading**. **E 1823, E08**

irregular powder, n—particles lacking symmetry. **B 243, B09**

irregular wear, n—a type of treadwear characterized by substantial variations of tread loss both from projection to projection and frequently from point to point on a given projection. **F 538, F09**

irrelevant question, n—An irrelevant question is designed to be a non-emotion provoking question. Also referred to as “norms” or “neutral questions.” **E 2035, E52**

irreversible adsorption—adsorption in which the desorption isotherm is displaced toward higher equilibrium adsorption capacities from the adsorption isotherm. **D 2652, D28**

irreversible fiber optic chemical sensor, n—a fiber optic chemical

sensor that undergoes a permanent depletion or degradation of the transduction element as a result of the transduction process. **E 131, E13**

irrigation pipe—pipe intended for the distribution of irrigation water by pumping or gravity. **C 822, C13**

IR thermometer, n—an optoelectronic instrument that is capable of noncontact infrared temperature measurement when placed into the auditory canal of a subject (ear canal type) or from the subject's body surface (skin type). **E 344, E20**

IR thermometer type, n—an optoelectronic instrument that is capable of noncontact infrared temperature measurement when placed into the auditory canal of a subject (ear canal type) or from the subject's body surface (skin type). **E 344, E20**

ISCC-NBS color name, n—two- to four-word descriptive phrase for a surface color, such as “vivid orange” or “dark grayish reddish brown,” defined by sections of the Munsell color solid. Developed cooperatively by the Inter-Society Color Council and the National Bureau of Standards. **E 284, E12**

ISL—incremental step load **F 2078, F07**

islanding—a phenomenon that occurs when applied film is not adequately anchored, resulting in migration of film-forming materials to myriads of small pools scattered over the surface and surrounded by completely uncoated areas. **D 2825, D21**

ISL_{th}—threshold from an incremental step-load test **F 2078, F07**

iso—in roofing, see **polyisocyanurate foam board**. **D 1079, D08**

ISO—abbreviation for **International Organization for Standards**. **F 1457, F05**

isoabsorptive point—a wavelength at which the absorptivities of two or more substances are equal. **E 131, E13**

isoband cryogenic fabric—a distinct soil micromorphology, resulting from the processes of freezing and thawing, in which soil particles form subhorizontal layers of similar thickness. **D 7099, D18**

isobar—a plot of quantity adsorbed per unit of adsorbent against equilibrium temperature when concentration or pressure is held constant. **D 2652, D28**

isobar—section, at constant pressure through a phase diagram. **E 7, E04**

isoboard—See **polyisocyanurate foam board**. **D 1079, D08**

isochor—in a phase diagram, a section, or contour, at constant volume. **E 7, E04**

isochrome—a curve showing the distribution of the excess hydrostatic pressure at a given time during a process of consolidation. **D 653, D18**

ISO equation—an equation showing the interrelations between stress, pressure and dimensions in pipe, namely:

$$S = \frac{P (ID + t)}{2t}$$

or

$$S = \frac{P (OD - t)}{2t}$$

where:

S = hoop stress,

P = pressure,

ID = average inside diameter,

OD = average outside diameter, and

t = minimum wall thickness.

(See ISO R 161.)

F 412, F17

isohel—curve on a map showing areas of equal sunshine duration during a given interval of time, normally a year. **E 772, E44**

isokinetic sampling—See **sampling**. **D 1356, D22**

isokinetic sampling—to sample in such a way that the water-sediment mixture moves with no change in velocity as it leaves the ambient flow and enters the sampler intake. **D 4410, D19**

- isolated**—an object that is not readily accessible to persons unless special means of access are used. **F 819, F18**
- isolated cryopeg**—a body of unfrozen ground, in which the temperature is perennially below 0°C, and which is entirely surrounded by perennially frozen ground. **D 7099, D18**
- isolated talik**—a layer or body of unfrozen ground entirely surrounded by perennially frozen ground. **D 7099, D18**
- isolated ungrounded junction, *n***—measuring junctions within the same multi-pair thermocouple that are electrically isolated from the sheath and electrically isolated from each other. **E 344, E20**
- isolation joint, *n***—*in building construction*, a formed or assembled joint specifically intended to separate and prevent the bonding of one element of a structure to another and having little or no transference of movement or vibration across the joint. **C 717, C24**
- isolation test**—in leak testing, a method of determining whether a leak is present in a system, or of obtaining an estimate of its magnitude, by observing the rate of rise of pressure in the evacuated system when the system is isolated from the pump. (See also **rate of rise**.) **E 1316, E07**
- isometric**—a crystal form in which the unit dimension on all three axes is the same. **E 7, E04**
- isomorphous**—having the same crystal structure; usually referring to intermediate phases which form a continuous series of solid solutions. **E 7, E04**
- isomorphous system**—a complete series of mixtures in all proportions of two, or more, components, wherein unlimited mutual solubility exists in both the liquid and solid states. **E 7, E04**
- isoperibol, *adj***—a term used in combustion calorimetry meaning constant temperature jacket (environment). **D 121, D05**
- isoperibol calorimeter, *n***—a calorimeter that has a jacket of uniform and constant temperature. **D 5681, D34**
- isopleth**—in a ternary, or higher order, temperature-concentration, or pressure-concentration, phase diagram, a (vertical) two-dimensional section, having a linear composition series along one axis and temperature, or pressure, along the other axis. **E 7, E04**
- isopleth**—a line on a chart or graph connecting points having a specified constant value of a single variable as a function of two other specified variables. **E 772, E44**
- isopotential point**—for a cell containing an ion-selective electrode and a reference electrode there is often a particular activity of the ion concerned for which the potential of the cell is independent of temperature. That activity, and the corresponding potential, define the isopotential point. The identity of the reference electrode, and the composition of the filling solution of the measuring electrode, must be specified. **D 4127, D19**
- isopropylbenzene**—see **cumene**. **D 4790, D16**
- isosbestic point**—the wavelength at which the absorptivities of two substances, one of which can be converted into the other, are equal. **E 131, E13**
- isostatic pressing, *n***—the pressing of a powder, compact, or sintered object by subjecting it to a nominally equal pressure from every direction. **B 243, B09**
- isostilbil point, *n***—in luminescence, the wavelength at which the intensity of emission of a sample does not change during a physical interaction or chemical reaction. **E 131, E13**
- isotactic, *adj***—pertaining to a type of polymeric molecular structure containing a sequence of regularly spaced asymmetric atoms arranged in like configuration in a polymer chain. **D 883, D20**
- isotactic, *n***—a polymeric molecular structure containing a sequence of regularly spaced asymmetric atoms arranged in like configuration in the polymer chain. **D 1566, D11**
- isotactic, *adj***—pertaining to a type of polymeric molecular structure containing a sequence of regularly spaced asymmetric atoms arranged in like configuration in a polymer chain. **F 412, F17**
- isotactic, *adj***—pertaining to a type of polymeric molecular structure containing a sequence of regularly spaced asymmetric atoms arranged in like configuration in a polymer chain. **F 1251, F04**
- isotere**—a plot of equilibrium concentration or pressure against temperature when the quantity adsorbed per unit of adsorbent is held constant. **D 2652, D28**
- isotherm**—a plot of quantity adsorbed per unit of adsorbent against equilibrium concentration, or pressure, when temperature is held constant. **D 2652, D28**
- isotherm**—a line on a chart that connects all points of equal or constant temperature. **D 7099, D18**
- isotherm**—section, at constant temperature, through a phase diagram. **E 7, E04**
- isothermal annealing, *n***—**austenitizing** a steel object and then cooling it to, and holding it at, a temperature at which austenite transforms to a ferrite-carbide aggregate. **A 941, A01**
- isothermal transformation, *n***—a change in phase at any constant temperature. **A 941, A01**
- isotropic, *adj***—*in carbon and graphite technology*, having an isotropy ratio of 0.9 to 1.1 for a specific property of interest. **C 709, D02**
- isotropic, *n***—having the same value for a property in all directions. **C 1145, C28**
- isotropic, *adj***—*in carbon and graphite technology*, having an isotropy ratio of 0.9 to 1.1 for a specific property of interest. **D 4175, D02**
- isotropic**—having the same value for a property in all directions. **E 7, E04**
- isotropic**—having uniform properties in all directions. The measured properties of an isotropic material are independent of the axis of testing. **E 631, E06**
- isotropic**—having the same magnitude of a property in all directions. **E 1142, E37**
- isotropic**—having uniform properties in all directions. The measured properties of an isotropic material are independent of the axis of testing. **E 1749, E06**
- isotropic diffuser**—see **Lambertian diffuser**. **E 284, E12**
- isotropic mass**—a mass having the same property (or properties) in all directions. **D 653, D18**
- isotropic material**—material in which the magnetic properties are the same for all directions. **A 340, A06**
- isotropic material**—a material whose properties do not vary with direction. **D 653, D18**
- isotropic phase, *n***—*as used in Test Method D 5061*, a binder-phase carbon texture that exhibits optical properties that are the same in all directions when viewed with an optical microscope having mutually exclusive polarized light, for example, crossed nicols. **D 121, D05**
- isotropic radiant energy**—see **radiant energy, isotropic**. **E 772, E44**
- isotropy**—having the same properties in all directions. (ISRM) **D 653, D18**
- isotropy**—the condition of having the same values of properties in all directions. **E 7, E04**
- isotropy ratio, *n***—*in carbon and graphite technology*, the ratio of a given property value in the against grain direction to its corresponding value in the with grain direction (for example, the ratio of coefficients of thermal expansion). **C 709, D02**
- isotropy ratio, *n***—*in carbon and graphite technology*, the ratio of a given property value in the against grain direction to its corresponding value in the with grain direction (for example, the ratio of coefficients of thermal expansion). **D 4175, D02**
- I.S. process**—a bottle-making process using removable, individual forming sections, in which the gob enters the blank or parison mold by gravity. **C 162, C14**
- i^2t , *n***—sum of the instantaneous arc current values squared multiplied by the incremental time values during the arc (A^2s). **F 819, F18**
- item, *n***—(1) an object or quantity of material on which a set of observations can be made: (2) an observed value or test result obtained from an object or quantity of material. **E 456, E11**

J

- jacket, n**—a form of facing applied over insulation. C 168, C16
- jacket, n**—a textile, woven or felted into tubular or sleeve form, ready for covering and shrinking on a machine roll. D 123, D13
- jacket, n**—an integral covering (sometimes fabric, reinforced), which is applied over the insulation, core, shield, or armor of a cable and whose prime function is to provide mechanical or environmental protection for the component(s) that it covers. D 1711, D09
- jacket, n**—a textile, woven or felted into tubular or sleeve form, ready for covering and shrinking on a machine roll. D 4850, D13
- jackhammer**—an air driven percussion drill that imparts a rotary hammering motion to the bit and has a passageway to the bit for the injection of compressed air for cleaning the hole of cuttings. D 653, D18
- jacking**—a method of installing pipe by the trenchless method using equipment and pipe designed for this purpose. C 896, C04
- jacking force**—the force applied to the pipe along the longitudinal axis of the pipeline by the pipe jacking equipment. C 896, C04
- jack-leg**—a portable percussion drill of the jack-hammer type, used in underground work; has a single pneumatically adjustable leg for support. D 653, D18
- jackson turbidity unit, JTU**—unit of measure used with the jackson candle turbidimeter. D 6161, D19
- jamb**—the vertical structural member forming the sidewall of an opening or port in a furnace superstructure, supporting the crown load over that opening. C 162, C14
- jamb**—See **windows and doors**. E 631, E06
- jamming, n**—for *chainsawcut resistance*, the clogging action manifested by a protective garment which can produce a chain stop. F 1494, F23
- japan, n**—a varnish yielding a hard, glossy, dark-colored film. Japans are usually dried by baking at relatively high temperatures. D 16, D01
- japan, n**—a vehicle for japan colors; frequently contains shellac. D 16, D01
- japan color, n**—a paste containing pigment and a grinding japan vehicle used for lettering and decoration. D 16, D01
- japan drier, n**—a resin-base liquid drier. D 16, D01
- japanned**—tumble-pointed. F 547, F16
- japanned leather**—see **patent leather**. D 1517, D31
- jar mill**—a small ball mill (see also **ball mill**). C 286, B08
- jar test**—a laboratory procedure for the evaluation of a treatment to reduce dissolved, suspended colloidal and non settleable matter from water (see Practice D 2035). D 6161, D19
- jasper ware**—a vitreous, opaque, colored, unglazed ceramic ware having white or contrasting relief decorations and containing a substantial amount of barite. C 242, C21
- jaw alignment**—the positioning of the female and male jaws with respect to interdigitation (related to box lock function and ratchet performance). F 921, F04
- jaw face, n**—in *tensiletesting machines*, the surface of a jaw which in the absence of a liner contacts the specimen. D 123, D13
- jaw face, n**—in *tensile testing machines*, the surface of a jaw which in the absence of a liner contacts the specimen. D 4849, D13
- jaw liner, n**—in *tensile testing machines*, any material placed between the jaw face and the specimen to improve the holding power of the jaws. D 123, D13
- jaw liner, n**—in *tensile testing machines*, any material placed between the jaw face and the specimen to improve the holding power of the jaws. D 4849, D13
- jaws, n**—in *tensiletesting machines*, the elements of a clamp which grip the specimen. D 123, D13
- jaws, n**—in *tensile testing machines*, the elements of a clamp which grip the specimen. D 4849, D13
- jaws**—parts that contain serrations to interrupt the flow of blood through any vessel. F 921, F04
- J-clinched point**—pointed end of nail having been driven through member against curved anvil plate, bent sideways and driven back into member. F 547, F16
- "J" configuration**—boom positioned in a "J" shape. F 818, F20
- Jeffries' method**—a method for determining grain size based on counting grains in a prescribed area. See Test Methods E 112. E 7, E04
- Jeffries' multiplier**—a factor used in the Jeffries' method for grain size determinations. See Test Methods E 112. E 7, E04
- jerk-in, n**—in *wovenfabric*, an extra filling thread dragged into the shed with the regular pick and extending only part of the way across the cloth. (Compare **double pick, mispick**.) D 123, D13
- jerk-in, n**—in *wovenfabric*, an extra filling thread dragged into the shed with the regular pick and extending only part of the way across the cloth. (*Syn.* lash-in, pull-in) (Compare **double pick**). D 3990, D13
- jet-blast erosion, n**—(*airfields only*) darkened areas on the pavement surface where bituminous binder has been burned or carbonized; localized burned areas may vary in depth up to approximately 15 mm (½ in.). E 867, E17
- jet-blast erosion, n**—(*airfields only*) darkened areas on the pavement surface where bituminous binder has been burned or carbonized; localized burned areas may vary in depth up to approximately 15 mm (½ in.). E 1778, E17
- jet fuel, n**—any liquid suitable for the generation of power by combustion in aircraft gas turbine engines. D 4175, D02
- jet grouting**—technique utilizing a special drill bit with horizontal and vertical high speed water jets to excavate alluvial soils and produce hard impervious columns by pumping grout through the horizontal nozzles that jets and mixes with foundation material as the drill bit is withdrawn. D 653, D18
- jet, liquid, n**—See **liquid jet**. G 40, G02
- jet segment, n**—See **liquid jet**. G 40, G02
- jetting**—a means of compacting trench backfill by the introduction of water under pressure through a nozzle. C 896, C04
- jetting**—when applied as a drilling method, water is forced down through the drill rods or casings and out through the end aperture. The jetting water then transports the generated cuttings to the ground surface in the annulus of the drill rods or casing and the borehole. The term jetting may also refer to a development technique (see **well screen jetting**). D 653, D18
- jetty**—an elongated artificial obstruction projecting into a body of water from a bank or shore to control shoaling and scour by deflection of the force of water currents and waves. D 653, D18
- jewelers' enamel**—a special type of porcelain enamel used in the manufacture of jewelry, insignia, and art objects. C 286, B08
- jigging**—forming ceramic ware from a plastic body by differential rotation of a profile tool and mold, the mold having the contour of one surface of the ware and the profile tool that of the other surface. C 242, C21
- J-integral, J [FL⁻¹]**—a mathematical expression, a line or surface integral that encloses the crack front from one crack surface to the other, used to characterize the local stress-strain field around the crack front. E 1823, E08
- joggle**—a displacement machined or formed in a structural member to accommodate the base of an adjacent member. E 631, E06
- joggle**—a displacement machined or formed in a structural member to accommodate the base of an adjacent member. E 1749, E06
- john boat (maritime), n**—a skiff with a flat bottom. F 1490, F32
- joining, n**—the juncture of two separate plaster applications of the same coat, usually within a single surface plane. C 11, C11
- joining line, n**—See **seam**. D 4965, D13
- joint**—that portion of the conductor where the ends of two wires, rods, or groups of wires are joined by brazing, soldering, welding, or by mechanical means. B 354, B01
- joint, n**—in *buildingconstruction*, the space or opening between two or more adjoining surfaces. C 717, C24

joint—a connection of two pipe, manhole, or box section ends, made either with or without the use of additional parts and/or materials.

C 822, C13

joint—an individual length of pipe, or the means of closure to form a pipeline.

C 896, C04

joint—the junction of two or more pieces of wood. Usually implies a structural junction in which stress is transmitted from one piece to another.

D 9, D07

joint—a break of geological origin in the continuity of a body of rock occurring either singly, or more frequently in a set or system, but not attended by a visible movement parallel to the surface of discontinuity. (ISRM)

D 653, D18

joint, n

adhesive joint, n—location at which two adherends are held together with a layer of adhesive. (See also **bond, n**.)

edge joint, n—in wood bonding, a joint made by bonding adherends edge to edge (with grain directions parallel) to form wider stock.

finger joint, n—a joint formed by bonding two precut members shaped like fingers.

laminated joint, n—in wood bonding, a joint made by bonding layers of adherends face to face to form thicker stock.

lap joint, n—a joint made by placing one adherend partly over another and bonding together the overlapped portions.

scarf joint, n—a joint made by cutting away similar angular segments of two adherends and bonding the adherends with the cut areas fitted together.

starved joint, n—a joint that has an insufficient amount of adhesive to produce a satisfactory bond.

joint aging time, n—synonym for **joint conditioning time**.

D 907, D14

joint—the junction of two adjacent pieces of wood or veneer.

butt joint—the place where two pieces of wood are joined together end to end.

edge joint—the place where two pieces of wood are joined together edge to edge.

glue joint—the place where two pieces of wood are joined together by means of glue.

open joint—failure of bond or separation of two adjacent pieces of veneer so as to leave veneers.

starved joint—a glue joint that is poorly bonded because of an insufficient quantity of glue.

sunken joint—in the case of plywood, a depression in the surface of the face ply directly above an edge joint in a lumber core or crossband. Usually the result of localized shrinkage in the edge-jointed layer.

D 1038, D07

joint, n—a designed and constructed or sawed space or opening between adjoining pavement surfaces.

D 5535, D04

joint, n—the linear void located between juxtaposed fire-separating elements.

E 176, E05

joint, n—general term. See particular joint of interest. Compare **connection**.

E 631, E06

joint, n—a discontinuity made necessary by design or by interruption of a paving operation.

E 867, E17

joint, n—a discontinuity made necessary by design or by interruption of a paving operation.

E 1778, E17

joint—the location at which two pieces of pipe or a pipe and a fitting are connected together.

F 412, F17

joint—the junction where the scissor blades are secured by a screw allowing the instrument to pivot.

F 1078, F04

joint, adhesive-bonded—a joint made using an adhesive to bond the piping components.

F 412, F17

joint at normal (design) closure—position of the joint when closed to the manufacturer's recommended inside longitudinal separation without joint angular deflection.

C 822, C13

joint backing—See **sealant backing**.

C 717, C24

joint, bell and spigot gasket—a connection between piping components consisting of a bell end on one component, an elastomeric gasket between the components, and a spigot end on the other component. See *joint, push on*.

F 412, F17

joint, butt-fused—a joint in which the prepared ends of the joint components are heated and then placed in contact to form the joint.

F 412, F17

joint compound, n—a compound used for taping or finishing gypsum board, or both.

C 11, C11

joint, compression—a mechanical joint made by deforming a sealing member to form a pressure seal between the fitting or pipe bell and the pipe or tube.

F 412, F17

joint, compression gasket—a mechanical joint that utilizes a compression nut or a gland nut against a gasket to develop a pressure seal.

F 412, F17

joint-conditioning time—the time interval between the removal of the joint from the conditions of heat or pressure, or both, used to accomplish bonding and the attainment of approximately maximum bond strength. (Synonym *joint-aging time*.) (See also **curing time, drying time, and setting time**.)

D 907, D14

joint diagram—a diagram constructed by accurately plotting the strike and dip of joints to illustrate the geometrical relationship of the joints within a specified area of geologic investigation. (ISRM)

D 653, D18

jointed—veneer or other ply components that have machined edges for tightest possible layup.

D 1038, D07

jointed concrete pavement (JCP), n—Portland cement concrete pavement that has transverse joints placed at planned intervals.

E 867, E17

jointed concrete pavement (JCP), n—Portland cement concrete pavement that has transverse joints placed at planned intervals.

E 1778, E17

joint (fault) set—a group of more or less parallel joints. (ISRM)

D 653, D18

joint (fault) system—a system consisting of two or more joint sets or any group of joints with a characteristic pattern, that is, radiating, concentric, etc. (ISRM)

D 653, D18

joint filler, n—a compressible material used in a partial or totally filled expansion, control, or isolation joint by its permanent placement in or between building materials such as concrete or masonry during construction; sometimes used as a sealant backing in a partially filled joint.

C 717, C24

joint, flanged—a mechanical joint using pipe flanges, a gasket, and bolts.

F 412, F17

joint, flare—a mechanical compression connection between flared-end plastic pipe and a fitting specifically designed to accept flared-end plastic pipe.

F 412, F17

joint, heat-fused—a joint made using heat and pressure only.

F 412, F17

jointing yard—[archaic] place between the grinding and polishing operations in the continuous manufacture of plate glass, where the plaster joints are remade, sometimes called "middle yard."

C 162, C14

joint in off-center position—with the joint at normal or design closure, without joint angular deflection, when the spigot or bell has been moved in a radial direction. The maximum off-center position occurs when the outer surface of the spigot and the inner surface of the bell are in contact.

C 822, C13

joint, insert-fitting—a mechanical joint using external metal clamps, rings, or other devices to form a pressure seal between an insert fitting and the pipe or tube.

F 412, F17

joint leakage test—test procedure, utilizing water pressure, air pressure or a vacuum, intended to determine the acceptability of an individual joint relative to leakage.

C 822, C13

joint leakage test apparatus—sealing device used to isolate a single joint so that the joint can be tested for leakage. See **joint leakage test**.

C 822, C13

joint line—See **parting line**.

joint, mechanical—a connection between piping components employing physical force to develop a seal or produce alignment.

F 412, F17

joint pattern—a group of joints that form a characteristic geometrical relationship, and which can vary considerably from one location to another within the same geologic formation. (ISRM) D 653, D18

joint, push on—a joint in which an elastomeric ring gasket is compressed in the annular space between a bell end or socket and a spigot end of pipe.

F 412, F17

joint reinforcement—reinforcement, in or near the joint, intended to enhance the structural characteristics of the joint area of a concrete pipe or box section.

C 822, C13

joint, saddle-fused—a joint in which the curved base of the saddle fitting and a corresponding area of the pipe surface are heated and then placed together to form the joint.

F 412, F17

joint seal deterioration, n—any condition that enables incompressible materials or water to infiltrate into a previously sealed joint from the surface.

E 867, E17

joint seal deterioration, n—any condition which enables incompressible materials or water to infiltrate into a previously sealed joint from the surface.

E 1778, E17

joint shear test—a proof-of-design test procedure to determine minimum shear strength of a joint.

C 822, C13

joint, socket-fused or insert-fused—a joint in which the joining surfaces of the components are heated, and the joint is made by inserting one component into the other.

F 412, F17

joint, solvent-cemented—a joint made using a solvent cement to unite the components.

F 412, F17

joint spalling, n—cracking, breaking, or chipping of concrete pavement edges within 0.6 m (2 ft) of a joint.

E 867, E17

joint spalling, n—cracking, breaking, or chipping of concrete pavement edges within 0.6 m (2 ft) of a joint.

E 1778, E17

joint tape, n—a type of paper, metal, fabric, glass mesh, or other material, commonly used with a cementitious compound, to reinforce the joints between adjacent gypsum boards.

C 11, C11

joint, threaded—a mechanical joint that utilizes threaded pipe and fittings.

F 412, F17

Jordan diagram—a graph showing the variation of some magnetic parameter versus frequency when the excitation is within the Rayleigh range.

A 340, A06

joule, J—the unit of energy in the SI system of units. One joule is one watt-second.

A 340, A06

J-R curve—a plot of resistance to stable crack extension, Δa_p .

E 1823, E08

judge, n—See **assessor**.

E 253, E18

judgment sampling, n—taking of a sample(s) based on judgment that

it will more or less represent the average condition of the population.

D 5681, D34

judgment sampling—the process by which a number of items or areas are selected from the population for analysis without meeting standard random selection and sample size criteria.

E 2135, E53

jumbo—a specially built mobile carrier used to provide a work platform for one or more tunneling operations, such as drilling and loading blast holes, setting tunnel supports, installing rock bolts, grouting, etc.

D 653, D18

jumpers or jumping—see **poppers**.

C 286, B08

junction class, n—the electrical connectivity of a junction. Class U junctions are electrically isolated from conductive sheaths and from reference ground. Class G junctions are electrically connected to conductive sheaths.

E 344, E20

junction potential—the portion of the total observed potential developed between the sensing and reference electrodes that is formed at the liquid/liquid junction between the reference electrode filling solution and the sample solution. For accuracy, the junction potential should be as low and as constant as possible despite variations in the composition of the sample solution. Reference electrode filling solutions should be judiciously chosen to minimize liquid junction potential.

D 4127, D19

junction, n—the interface between two different tire components or different compounds within the same component.

F 538, F09

junction cracking, n—a crack with opening originating at a junction between two components.

F 538, F09

junction opening, n—a separation developing in a junction.

F 538, F09

just noticeable difference, n—See **threshold, difference**.

E 253, E18

just noticeable difference, n—see **just perceptible difference**.

E 284, E12

just-perceptible difference, n—color difference that is just large enough to be perceived in almost every trial.^B

E 284, E12

jute, n—soft fibers from the inner bark of the round pod jute (*Corchorus capsularis*), the long pod jute (*Corchorus olitorius*), and from the inner bark of other closely related plants, such as kenaf, sometimes referred to as Meshta (*Hibiscus cannabinus*).

D 123, D13

juvenile wood—the wood formed adjacent to the pith, characterized by progressive change in cell dimension, different microstructure than mature wood, and greater shrinkage parallel to the grain.

NOTE—In softwoods, juvenile wood is characterized by lower specific gravity and strength. It may vary in quantity from tree to tree and extend from the pith 5 to 20 growth rings.

D 9, D07

J-valve, n—a manually operated, spring-loaded, SCUBA cylinder check valve that incorporates a low air warning/reserve air mechanism.

F 1549, F32

K

Δ_k —empirical expression for that portion of the diaphragm deflection contributed by the shear deformation of the connection system, in. (or mm) **E 631, E06**

Kaiser effect—the absence of detectable acoustic emission at a fixed sensitivity level, until previously applied stress levels are exceeded. **E 1316, E07**

kangaroo—leather made from the hide of the kangaroo. **D 1517, D31**

kaolin—a variety of clay containing a high percentage of kaolinite. **D 653, D18**

kaolin (china clay)—a refractory clay consisting essentially of minerals of the kaolin group and which fires to a white or nearly white color. **C 242, C21**

kaolinite—a common clay mineral having the general formula $Al_2(Si_2O_5)(OH)_4$; the primary constituent of kaolin. **D 653, D18**

kappa number—the number of millilitres of 0.1 *N* potassium permanganate solution consumed by 1 g of oven-dry pulp under specified conditions. It is an indication of the hardness or bleachability of a pulp. An indirect estimate of lignin content. **D 1695, D01**

karat—a twenty-fourth part by weight; thus 18-karat gold is 18/24 pure. **B 374, B08**

karst—a geologic setting where cavities are developed in massive limestone beds by solution of flowing water. Caves and even underground river channels are produced into which surface runoff drains and often results in the land above being dry and relatively barren. (ISRM) **D 653, D18**

K-decreasing test—a test in which the normalized *K*-gradient is nominally negative. In Test Method E 647, *K*-decreasing tests involve force shedding as the crack grows either continuously or by a series of decremental steps. **E 1823, E08**

Keene's cement, n—an anhydrous gypsum plaster characterized by a low mixing water requirement and special setting properties, primarily used with lime to produce hard, dense finish coats. **C 11, C11**

keg—See **barrel**. **D 996, D10**

keg, nail keg—synonymous with 100 lb (45.36 kg) of nails. Round, bulging container for bulk nails, made of wooden staves, steel hoops, and flat heads, usually holding 100 lb of nails. Terms no longer in common usage. **F 547, F16**

K_{EHE} —threshold stress intensity for EHE **F 2078, F07**

Kellner eyepiece—a positive eyepiece consisting of an achromatic eyelen and a single collective, in which the image plane and field diaphragm is external and near the collective. **E 7, E04**

kelly—a heavy-wall tube or pipe, usually square or hexagonal in cross section, which works inside the matching center hole in the rotary table of a drill rig to impart rotary motion to the drill string. **D 653, D18**

kelvin, n—the unit of thermodynamic temperature; the SI unit of temperature for which an interval of one Kelvin (K) equals exactly an interval of one degree Celsius (1°C) and for which a level of 273.15 K equals exactly 0°C. **D 123, D13**

Kelvin—designation of the thermodynamic temperature scale and the degree on this scale, (E 344, E20). **E 1142, E37**

kelvin, K, n—base unit of temperature in the International System of Units (SI). **E 344, E20**

kemp fiber, n—a medullated animal fiber in which the diameter of the medulla is 60 %, or more, of the diameter of the fiber. **D 123, D13**

kemp fiber, n—a medullated animal fiber in which the diameter of the medulla is 60 %, or more, of the diameter of the fiber. **D 4845, D13**

kerf, n—synonym for *sipe*. **F 538, F09**

kerma, K—the quotient of dE_{tr} by dm , where dE_{tr} is the sum of the initial kinetic energies of all the charged ionizing particles liberated by uncharged ionizing particles in a material of mass dm (ICRU).

$$K = dE_{tr} / dm$$

The special name of the unit of kerma is the gray (Gy).

$$1 \text{ Gy} = 1 \text{ J} \cdot \text{kg}^{-1}$$

E 170, E10

kernmantle construction, n—a method of making cord and rope by braiding a sheath or cover (mantle) over a core (kern) of parallel, twisted, or braided strands. **F 1773, F08**

kerosine number—the millilitres of kerosine held per 100 g of felt as determined by Test Method D 727. To obtain the percentage saturating capacity of the felt for any bituminous saturant, obtain the specific gravity of the saturant and multiply that figure by the kerosine number of the felt. **D 1079, D08**

ketones—a class of organic compounds possessing a carbonyl group attached to two hydrocarbon groups. Acetone is the first member of this series. **D 4790, D16**

keV (kilo electron volt)—a unit of energy equal to one thousand electron volts, used to express the energy of X rays, gamma rays, electrons, and neutrons. **E 1316, E07**

key, n—the grip or mechanical bond of one coat of plaster to another coat, or to a substrate. **C 11, C11**

key locking dial—a dial that can be locked with a key to prevent rotation. **F 471, F12**

key locking dial ring—a dial ring containing a key lock to lock dial and prevent rotation. **F 471, F12**

key species—a species of special concern for ecological reasons. **E 943, E47**

key species, n—a species of special concern for ecological reasons. **E 2114, E06**

kick plate—Synonym for **toe board**. **E 631, E06**

kickplate—See **railing systems**. **E 631, E06**

kick plate—Synonym for **toe board**. **E 1481, E06**

kid—originally referring to leathers made from the skins of immature goats, the term is now rather loosely applied to glove and shoe leathers made from goatskins. **D 1517, D31**

kiddie ride—an amusement ride designed primarily for use by children up to 12 years of age. **F 747, F24**

K_{IHE} —threshold stress intensity for IHE **F 2078, F07**

Kikuchi lines—light and dark lines superimposed on the background of a single crystal electron diffraction pattern caused by diffraction of diffusely scattered electrons within the crystal. **E 7, E04**

killed steel, n—a steel deoxidized to such a level that essentially no reaction occurred between carbon and oxygen during solidification. **A 941, A01**

kiln—a chamber used for drying and conditioning lumber, veneer, and other wood products in which the temperature and relative humidity of the circulated air can be varied and controlled, often steam heated and vented. **D 9, D07**

kiln schedule—in kiln drying, the time schedule of predetermined or actual dry-bulb and wet-bulb temperatures used in drying a kiln charge of lumber or other wood products. **D 9, D07**

K-increasing test—a test in which the normalized *K*-gradient is nominally positive. For the standard specimens in Test Method E 647, the constant-force-amplitude test will result in a *K*-increasing test where the normalized *K*-gradient increases but is always positive. **E 1823, E08**

kinematic viscosity, n—the ratio of the viscosity to the density of a liquid. **D 4175, D02**

kinesthesia, n—perception of pressure, position, or motion in muscles, tendons, or joints. **E 253, E18**

kinetic coefficient of friction, n—the coefficient of friction under conditions of macroscopic relative motion between two bodies. **D 4175, D02**

kinetic coefficient of friction, *n*

kinetic coefficient of friction, *n*—the coefficient of friction under conditions of macroscopic relative motion between two bodies.

G 40, G02

kinetic friction, *n*—friction developed between two bodies in motion. (Compare **static friction**.)

D 123, D13

kinetic friction, *n*—the force that resists motion when a surface is moving with a uniform velocity; it is, therefore, equal and opposite to the force required to maintain sliding of the surface with uniform velocity.

D 4175, D02

kinetic friction, *n*—friction developed between two bodies in motion. (Compare **static friction**.)

D 4849, D13

kink, *n*—*in fabric*, a short length of yarn that has spontaneously doubled back on itself to form a loop.

D 123, D13

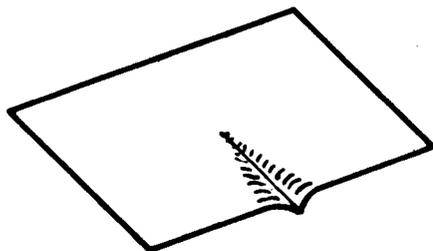
kink, *n*—*in rope*, an abrupt bend or loop in the rope which is the result of an unbalanced twist relationship in the rope structure.

D 123, D13

kink, *n*—*in fabric*, a short length of yarn that has spontaneously doubled back on itself to form a loop. (*Syn.* curl, kinky thread, looped yarn, snarl)

D 3990, D13

kink—a type of waviness occurring interior to the edges, not to be confused with the more abrupt departures as ridges or surface marks. (See also **waviness**.)



F 109, C21

kink (in asbestos)—definite, well defined change in direction of the asbestos in situ that could lead to points of weakness in the fibers when separated.

D 2946, C17

kinky thread—See **kink**.

D 3990, D13

kip—skin from a bovine animal in size between a calf and a cow, weighing in green-salted condition approximately from 15 to 35 lb (6.8 to 15.9 kg).

D 1517, D31

K_{Isc}—threshold stress intensity for stress corrosion cracking

F 2078, F07

kitchen—a space containing facilities primarily for the preparation of food.

E 631, E06

kitchen—See **building space**.

E 631, E06

knapsack sprayer—a sprayer apparatus, carried on the operator's back, consisting of a spray solution tank, pressure source, and an atomizing device that forms and distributes the spray. Spray pressure is supplied by a lever operated manual or engine powered pumps or a compressed air tank. Some knapsack sprayers have air carrier blowers to distribute the spray.

E 1102, E35

knee, *n*—*in anatomy*, the joint between the lower and upper leg.

D 123, D13

knee, *n*—the joint between the lower and upper leg.

D 5219, D13

knee, *n*—*in anatomy*, the joint between the lower and upper leg.

F 1494, F23

knee girth, *n*—*inbody measurements*, with the leg straight, the circumference of the knee over the knee cap and parallel to the floor.

D 123, D13

knee girth, *n*—the maximum horizontal circumference of the knee, taken over the kneecap with the leg straight.

D 5219, D13

knee height, *n*—the vertical distance from the midpoint of the back of the knee (or crease) to the floor, taken with subject standing and without shoes.

knee height (infant special case), *n*—the straight distance from the midpoint (or crease) of the knee to the soles of the feet, taken with subject lying down flat with legs extended and the

foot positioned at 1.57 rad (90°) to the leg. **D 5219, D13**

knife edge pivot—a type of pivot or hinge in which the motion occurs through the rotation of a knife edge resting on a plane or a vee notch.

E 7, E04

knife-grade, *n*—*in building construction*, a compound of such consistency that it is generally applied with a knife or spatula hand tool.

C 717, C24

knife-line attack—intergranular corrosion of an alloy, usually stabilized stainless steel, along a line adjoining or in contact with a weld after heating into the sensitization temperature range.

G 15, G01

knife marks—a series of surface imprints or markings made by the machine knives in dressed lumber.

D 9, D07

knit—a textile process that interlocks, in a specific pattern loop of yarn by means of needles or wires.

D 3878, D30

knit-line—see **weld-line** (preferred terminology). (D20)

F 412, F17

knit-line, *n*—See **weld-line** (the preferred terminology).

D 883, D20

knitted fabric, *n*—a structure produced by interlooping one or more ends of yarn or comparable material.

D 123, D13

knitted fabric—See **knittedfabric** under **fabric**.

D 3878, D30

knitted fabric, *n*—a structure produced by interlooping one or more ends of yarn or comparable material.

D 4850, D13

knitted fabric, *n*—a structure produced by interlooping one or more ends of yarn or comparable material.

D 7023, D13

knob—a component of some manipulation-resistant-locks that is rotated on the dial to operate the cam slide.

F 471, F12

knock, *n*—*in a sparkignition engine*, abnormal combustion, often producing audible sound, caused by autoignition of the air/fuel mixture.

D 4175, D02

knock, *n*—*in an aircraftspark-ignition engine*, abnormal combustion caused by autoignition of the air/fuel mixture.

D 4175, D02

knock condition, *n*—*for octane rating*, when the knock intensity in any cylinder is light knock or greater as described in Annex A1.

D 4175, D02

knockings—the oversize residue obtained in screening a ceramic slip.

C 242, C21

knock intensity, *n*—*for knock testing*, a measure of the level of knock.

D 4175, D02

knockmeter, *n*—*forknock testing*, the 0 to 100 division indicating meter that displays the knock intensity signal from the detonation meter.

D 4175, D02

knock number, *n*—*for octane rating*, a numerical quantification of knock intensity.

D 4175, D02

knock-on—the movement of a constituent of the specimen deeper into the specimen matrix as a result of collisions with the primary particle.

E 673, E42

knockout—(1) a portion of a piece of pressed ware which has been so designed that it can be knocked out to make a hole.

(2) in glass containers, a protrusion of glass caused by missing metal at a junction of mold parts.

C 162, C14

Knoop—See **micro penetrationtester**. In a more restricted sense, a type of diamond hardness indenter having edge angles of 172° 30 min, and 130°.

E 7, E04

Knoop Hardness Number (HK), *n*—an expression of hardness obtained by dividing the force applied to the Knoop indenter by the projected area of the permanent impression made by the indenter.

C 1145, C28

Knoop hardness number, HK, *n*—a number related to the applied force and to the projected area of the permanent impression made by a rhombic-based pyramidal diamond indenter having included edge angles of 172° 30 min and 130° 0 min computed from the equation:

$$HK = P/0.07028d^2$$

where:

P = applied force, kgf, and

d = long diagonal of the impression, mm.

In reporting Knoop hardness numbers, the test force is stated.

E 6, E28

Knoop hardness test, *n*—an indentation hardness test using calibrated machines to force a rhombic-based pyramidal diamond indenter having specified edge angles, under specified conditions, into the surface of the material under test and to measure the long diagonal after removal of the force. E 6, E28

Knoop indenter, *n*—a rhombic-based pyramidal-shaped diamond indenter with edge angles of 172° 30' and 130° 00'. C 1145, C28

knot—an imperfection; an inhomogeneity in the form of a vitreous lump. C 162, C14

knot—that portion of a branch or limb which has been surrounded by subsequent growth of the wood of the tree. As a knot appears on the cut surface it is merely a section of the entire knot, its shape depending upon the direction of the cut.

branch knots—two or more knots diverging from a common point at or near the pith.

centerline knot—a knot whose centroid lies at the center of the width of any lumber face; sometimes referred to as a center knot.

corner knot—an edge knot containing the intersection of adjacent faces.

decayed knot—a knot that, due to advanced decay, is softer than the surrounding wood.

edge knot—(1) a knot located at the edge of the face in a piece of lumber.

(2) in stress grading under Practice D 245, a knot whose perimeter falls within one-sixth of the knot width from the edge of the piece. The knot width is measured along a line transverse to the piece.

elsewhere knot—a knot that is not a centerline, edge, or corner knot.

encased knot—a knot whose rings of annual growth are not intergrown with those of the surrounding wood.

firm knot—a knot that is solid across its face, but which contains incipient decay.

fixed knot—a knot that will hold its place in dry lumber under ordinary conditions, but can be moved under pressure, although not easily pushed out.

group knots—two or more single knots grouped together.

hollow knot—an apparently sound knot containing a hole more than 1/4-in. in diameter.

intergrown knot—a knot whose rings of annual growth are completely intergrown with those of the surrounding wood.

knot cluster—two or more knots grouped together as a unit, the fibers of the wood being deflected around the entire unit. Distinct from a group of single knots in which each is a unit.

loose knot—a knot that is not held firmly in place by growth or position and that cannot be relied upon to remain in place.

oval knot—a knot cut at from 45 to 90° to the long axis of the limb.

pith knot—a sound knot having a pith hole not over 1/4 in. in diameter.

round knot—a knot that is cut at approximately right angles to its long axis of the limb.

single knot—a knot having adjoining wood fibers deflected around it alone and not around another knot.

sound knot—a knot that is solid across its face, at least as hard as the surrounding wood, and shows no indication of decay.

spike knot—a knot cut at from 0 to 45° to the long axis of the limb.

star-checked knot—a knot having radial checks.

tight knot—a knot so fixed by growth or position that it will firmly retain its place in the piece.

unsound knot—a knot which is not solid across the face as a result of decay and is not as hard as the surrounding wood.

watertight knot—having sound and watertight wood completely

intergrown with the surrounding wood on one surface or on the entire projection of one end of the knot. D 9, D07

knot—an imperfection or nonhomogeneity in materials used in fabric construction, the presence of which causes surface irregularities. D 1079, D08

knot breaking force, *n*—*in tensile testing*, the breaking force of a strand having a specified knot configuration tied in the test method portion of the strand mounted between the clamps of a tensile testing machine. (Compare **knot breaking strength**. See also **breaking force**.) D 123, D13

knot breaking force, *n*—*in tensile testing*, the breaking force of a strand having a specified knot configuration tied in the portion of the strand mounted between the clamps of a tensile testing machine. (Compare **knot breaking strength**. See also **breaking force**.) D 4848, D13

knot breaking load, *n*—deprecated term. Use the preferred term, **knot breaking force**. D 4848, D13

knot-breaking strength, *n*—strength expressed in terms of knot breaking force. (See **knot breaking force**.) D 123, D13

knot breaking strength, *n*—strength expressed in terms of knot breaking force. (See also **knot breaking force**.) D 4848, D13

knotholes—voids remaining after removal of knots. D 1038, D07

knowledgeable person, *n*—an individual who has technical knowledge concerning the building or facility, for example, about occupant requirements, building design, mechanical systems, operation, and maintenance. E 631, E06

known, *n*—of established origin associated with the matter under investigation. E 1732, E30

knuckle—See preferred term **crimp**. D 2050, D13

knuckle—the selvage obtained by interlocking adjacent pairs of wire ends and bending the wire back into a loop. F 552, F14

knuckle area—in reinforced plastics, the area of transition between sections of different geometry in a filament-wound part. D 883, D20

knuckles, *n*—small tough rubber pieces scattered throughout a bale of raw rubber that do not disperse easily or accept carbon black and other compounding materials during mixing. D 1566, D11

Knudsen vacuum gage—an absolute manometer based on the principle of the transfer of momentum from a hot to a cold surface by gas molecules as in a radiometer. E 7, E04

knurled—loose term used to denote threaded, fluted, or grooved parallel or nearly parallel to nail axis with deformations not passing around body (see **thread**); also, barbed or deformed in repetitive pattern along surface. F 547, F16

knurling—in glass containers, a raised pattern of beads, ridges, crescents, or other shapes, molded on a glass surface for the purpose of decoration and/or improvement in the mechanical strength of the glass in service. Also known as **stippling**. C 162, C14

Koehler illumination—a specular illumination system. In reflected-light microscopy, used directly for the brightfield mode, and as a preliminary setup for all other modes except darkfield. The image of the field diaphragm is focused on the specimen surface and the image of an undiffused lamp source is focused in the plane of the aperture diaphragm. E 7, E04

Konowalow's law—the vapor of a binary mixture contains the larger proportion of that component, which, upon addition to the liquid, will raise its vapor pressure. E 7, E04

Koopmans energy—a calculated energy of an electron in an orbital, on the assumption that its removal to infinity is unaccompanied by electronic relaxation. E 673, E42

kosher hide—hide of an animal that has been slaughtered according to Jewish religious custom by having its throat cut crosswise, resulting in a different pattern of the hide sometimes referred to as a "cutthroat" or "stuckthroat". D 1517, D31

K radiation—characteristic X-rays produced by an atom when a vacancy in the *K* shell is filled by one of the outer electrons. E 7, E04

K radiation, *n*

K radiation, *n*—characteristic X rays produced by an atom or ion when a vacancy in the K shell is filled by one of the outer electrons. **E 135, E01**

K-radiation, *n*—characteristic X-rays produced by an atom or ion when a vacancy in the K-shell is filled by one of the outer electrons. **E 631, E06**

kraft, *n*—See **paperboard**. **D 996, D10**

kraft pulp—pulp cooked by the alkaline liquor consisting essentially of a mixture of caustic soda and sodium sulfide. The make-up chemical is traditionally sodium sulfate, which is reduced to the sulfide in the chemical recovery process; hence the alternative designation, sulfate pulp. **D 1695, D01**

Krypton 85—a tracer gas used to test for leakage when the radioisotope leak test method is used. **E 1316, E07**

K series—the set of X-ray wavelengths making up K radiation. **E 7, E04**

K-series, *n*—the set of X-ray wavelengths composed of K radiation. **E 135, E01**

Kubelka-Munk absorption coefficient, *K, n*—for a thin layer within an isotropic absorbing and scattering material over a black backing, the limit as the layer thickness approaches zero of the fraction of the incident radiation absorbed by the layer, divided by its thickness. **E 284, E12**

Kubelka-Munk scattering coefficient, *S, n*—for a thin layer within

an isotropic scattering and absorbing material over a black backing, the limit as the layer thickness approaches zero of the fraction of the incident radiation scattered (reflected) by the layer, divided by its thickness. **E 284, E12**

Kubelka-Munk theory, *n*—phenomenological turbid-medium theory relating the reflectance and transmittance of scattering and absorbing materials to optical constants (*Kubelka-Munk absorption coefficient, Kubelka-Munk scattering coefficient*) and the concentrations of their colorants. **E 284, E12**

kurum (Russian)—a general term for all types of coarse formations of broken rocks, on slopes of up to 40°, moving downslope mainly due to creep. **D 7099, D18**

K-value—*EIA*, a kinematic factor (between 0 and 1) that relates the backscattered energy to the incident energy. **E 673, E42**

K-valve, *n*—a simple, manually operated on-off SCUBA cylinder valve. **F 1549, F32**

kV (kilo volt)—a unit of electrical potential difference equal to one thousand volts, used to describe the accelerating potential of an X-ray tube. **E 1316, E07**

K_{xy}—hydraulic conductivity in the horizontal plane, radially from the control well. **D 653, D18**

kyanite (Al₂O₃·SiO₂)—the most abundant of the mineral polymorphs that include andalusite and sillimanite, commonly used as a source of mullite in ceramics. **C 242, C21**

L—total span of a simply supported diaphragm, in. (or mm) **E 631, E06**

label, n—a piece of paper or other material to be affixed to a container or article, on which is printed a legend, information concerning the product, or addresses. It may also be printed directly on the container. (Compare **tag**.) **D 996, D10**

label, n—a piece of paper, cloth, polymer, metal, or other material affixed to something and indicating its contents, destination, or other information. **F 1294, F05**

label, v—for *protective clothing*, to attach a symbol or other identifying mark, the use of which has been authorized by a certification organization. **F 1494, F23**

laboratory accreditation—formal recognition that a testing laboratory is competent to carry out specific tests or specific types of tests, (ISO Guide 2, *B*). **E 1187, E36**

laboratory accreditation system—system having its own rules of procedure and management, for carrying out laboratory accreditation, (ISO Guide 2, *A*). **E 1187, E36**

laboratory assessor—person who carries out some or all functions related to laboratory assessment, (ISO Guide 2). **E 1187, E36**

laboratory bias—See **bias**. **D 1356, D22**

laboratory control sample—an aliquot of the sample matrix, free from the analytes of interest, spiked with verified known amounts of analytes, or a material containing known and verified amounts of analytes. **D 5681, D34**

laboratory error, δ , n—difference between *unadjusted temperature* as measured by an *IR thermometer* and temperature of a blackbody, over specified operating conditions of ambient temperature and humidity and *blackbody* temperature ranges. **E 344, E20**

laboratory performance rating, n—the rating of a product's performance defined by a standard test method. **F 1773, F08**

laboratory rated strength, n—the strength defined by a standard test method that 99.7 %, or more, of a population exceeds. The number shall be derived using a 3-s rating. Rated strength shall be expressed in metric units of force, kilonewtons (kN). **F 1773, F08**

laboratory sample—See *laboratory sample* under **sample**. **D 121, D05**

laboratory sample, n—a portion of material taken to represent the lot sample, or the original material, and used in the laboratory as a source of test specimens. **D 123, D13**

laboratory sample, n—*in wool top*, portions drawn from the lot in accordance with the described procedure. **D 123, D13**

laboratory sample, n—a portion of material taken to represent the lot sample, or the original material, and used in the laboratory as a source of test specimens. **D 4439, D35**

laboratory sample, n—a portion of material taken to represent the lot sample, or the original material, and used in the laboratory as a source of test specimens. **D 4845, D13**

laboratory sample, n—*in wool top*, the portions drawn from the lot in accordance with the described procedure. **D 4845, D13**

laboratory sample, n—a representative portion of the gross sample received by the laboratory for analysis. **D 5681, D34**

laboratory sample—a representative portion of the gross sample delivered to the laboratory for further analysis. **D 5681, D34**

laboratory sample—a representative portion of the gross sample received by the laboratory for analysis. **E 856, D34**

laboratory sample or analysis sample—a portion of one gross sample representative of a lot and taken at random from the gross sample. **D 5681, D34**

laboratory sampling unit, n—a portion of material taken to represent one of the lot sampling units or the original material and used in the laboratory as a source of test specimens. **D 123, D13**

lace leather—a form of rawhide leather (from cattlehides) for lacing together sections of power-transmission belts, sometimes prepared also with an alum and oil, chrome, or combination tannage. **D 1517, D31**

lack of resin fillout—a pultrusion condition where an area contains reinforcement not wetted with sufficient quantity of resin.

NOTE—This condition usually occurs at the edge of a pultrusion. **D 3918, D20**

lacquer, n—a coating composition that is based on synthetic thermoplastic film-forming material dissolved in organic solvent that dries primarily by solvent evaporation. Typical lacquers include those based on nitrocellulose, other cellulose derivatives, vinyl resins, acrylic resins, etc. **D 16, D01**

lacquer—see **cellulose lacquer**. **D 1695, D01**

lacquer-finished—coated with lacquer and often baked, usually in such colors as to match or blend with color of item to be fastened. **F 547, F16**

ladder—See **run**. **D 3990, D13**

ladder code—See **vertical bar code**. **F 1294, F05**

ladder gasket—a lock-strip gasket in the form of a subdivided frame having one or more integrally formed intermediate cross members. **C 717, C24**

ladle—a long-handled, cup-shaped tool for transferring batch or molten glass. **C 162, C14**

ladle analysis—see *heat analysis*. **F 1789, F16**

ladle brick, n—brick suitable for lining ladles used to contain molten metal. **C 71, C08**

lag deposits—the larger and heavier particles that are sorted out and left behind in stream channels. **D 4410, D19**

lagging, n—*in mining or tunneling*, short lengths of timber, sheet steel, or concrete slabs used to secure the roof and sides of an opening behind the main timber or steel supports. The process of installation is also called lagging or lacing. **D 653, D18**

lag phase, n—the period of diminished physiological activity and cell division following the addition of microorganisms to a new culture medium. **D 4175, D02**

lag time—See **analyzer**. **D 1356, D22**

laid fabric, n—a fabric made without filling yarn, the parallel warp yarns being held together by means of rubber latex or other binding material. **D 123, D13**

laid fabric, n—a fabric made without filling yarn, the parallel warp yarns being held together by means of rubber latex or other binding material. **D 4850, D13**

laitance, n—a layer of weak material derived from cementitious material and aggregate fines either: 1) carried by bleeding to the surface or to internal cavities of freshly placed concrete, or 2) separated from the concrete and deposited on the concrete surface or in internal cavities during placement of concrete under water. **C 125, C09**

laitance, n—*in building construction*, a weak layer of cement and aggregate fines on a concrete surface that is usually caused by an overwet mixture, overworking the mixture, improper or excessive finishing, or combinations thereof. **C 717, C24**

lake, n—a special type of pigment consisting essentially of an organic soluble coloring matter combined more or less definitely with an inorganic base or carrier. It is characterized generally by a bright color and a more or less pronounced translucency when made into an oil paint.

Under this term are included two (and perhaps three) types of pigment: (a) the older original type composed of hydrate of alumina dyed with a solution of the natural organic color, (b) the more modern and far more extensive type made by precipitating from solution various coal-tar colors by means of a metallic salt, tannin, or other suitable reagent, upon a base or carrier either previously prepared or coincidentally formed, and (c) a number combining both types in varying degree might be regarded as a third class. **D 16, D01**

lake talik—a layer or body of unfrozen ground occupying a depression in the permafrost table beneath a lake. **D 7099, D18**

Lambertian diffuser, *n*

Lambertian diffuser, *n*—ideal surface that reflects or transmits radiation completely in accordance with Lambert's cosine law. When illuminated from any direction, its radiance is the same for every direction of view. **E 284, E12**

Lambert's law, *n*—the intensity (flux per unit solid angle) emitted in any direction from a surface varies as the cosine of the angle between the normal to the surface and the direction of the emitted flux (also called Lambert's cosine law). See **Lambertian diffuser**. **E 284, E12**

Lambert's (thickness) law, *n*—see **Bouguer's law**. **E 284, E12**

lambskin leather—term applied to leather from either lambskins or sheepskins, which are practically indistinguishable after tanning. **D 1517, D31**

lamb's tongue—See **railing systems**. **E 631, E06**

lamb's tongue—an ornamental curved or tapered fitting terminating a handrail, usually tapered to the tip. **E 631, E06**

lamb's tongue—an ornamental curved or tapered fitting terminating a handrail, usually tapered to the tip. **E 1481, E06**

Lamb wave—a specific mode of propagation in which the two parallel boundary surfaces of the material under examination (such as a plate or the wall of a tube) establish the mode of propagation. The Lamb wave can be generated only at particular values of frequency, angle of incidence and material thickness. The velocity of the wave is dependent on the mode of propagation and the product of the material thickness and the examination frequency. **E 1316, E07**

lamina—a subunit of a laminate consisting of one or more adjacent plies of the same material with identical orientation. **D 3878, D30**

lamina, *n*—composite of the base coat, reinforcement, and finish coat. **E 2110, E06**

lamina orientation—same as **ply orientation**. **D 3878, D30**

laminar flow, *n*—flow in which the head loss is proportional to the first power of the velocity. **D 4439, D35**

laminar flow (streamline flow) (viscous flow)—flow in which the head loss is proportional to the first power of the velocity. **D 653, D18**

laminate, *n*—product made by bonding together two or more layers of material or materials.

cross laminate, *n*—a laminate in which some of the layers of material are oriented at right angles to the remaining layers with respect to the grain or strongest direction in tension. (Compare **parallel laminate**.)

parallel laminate, *n*—a laminate in which all the layers of material are oriented approximately parallel with respect to the grain or strongest direction in tension. (Compare **cross laminate**.) **D 907, D14**

laminate, *v*—to bond layers of material(s). **D 907, D14**

±45° laminate—a balanced symmetric laminate composed of only +45° plies and -45° plies. **D 3878, D30**

laminate—any fiber- or fabric-reinforced composite consisting of laminae (plies) with one or more orientations with respect to some reference direction. **D 3878, D30**

laminate—a product made by bonding together two or more layers of material or materials. **E 631, E06**

laminate—a product made by bonding together two or more layers of material or materials. **E 1749, E06**

laminate—a product made by bonding together two or more layers of material or materials. (See also **multilayered structure**) **F 17, F02**

laminate, *n*—a product made by bonding together two or more layers of material or materials. (See also **cross laminate** and **parallel laminate**.) **F 412, F17**

laminate, *n*—a product made by bonding together two or more layers of material or materials. **F 1251, F04**

laminate—See Terminology F 17. **F 1327, F02**

laminate coordinate axes—a set of coordinate axes, usually right-handed Cartesian, used as reference in describing the directional properties and geometrical structure of the laminate. Usually the

x-axis and the *y*-axis lie in the plane of the laminate and the *x*-axis is the reference axis from which ply angle is measured.

D 3878, D30

laminate, cross-plyed, *n*—a nonparallel laminate. **F 1251, F04**

laminated fabric, *n*—a layered fabric structure wherein a face or outer fabric is joined to a continuous sheet material, such as polyurethane foam, in such a way that the identity of the continuous sheet material is retained, either by the flame method or by an adhesive, and this in turn normally, but not always, is joined on the back with a backing fabric such as tricot. (See also **bonded fabric, coated fabric**.) **D 123, D13**

laminated fabric, *n*—*in fabric roof systems*, a flexible fabric system composed of superimposed layers of fabric firmly united by bonding or impregnating with an adherent polymeric material to one or more surfaces. **D 123, D13**

laminated fabric, *n*—*in fabric roof systems*, a flexible fabric system composed of superimposed layers of fabric firmly united by bonding or impregnating with an adherent polymeric material to one or more surfaces. **D 4850, D13**

laminated glass—(1) in flat glass, an assembly consisting of two or more lites of glass bonded together by an interlayer (see also Specification C 1172) and (2) in tableware, two or more distinct layers of glass fused together. **C 162, C14**

laminated veneer lumber (LVL), *n*—lumber made by laminating veneers in which the grain of all the veneers is essentially parallel to the lengthwise dimension. **D 907, D14**

laminated wood product, *n*—see under **wood laminates**. **D 907, D14**

laminate joint—see **joint**. **D 907, D14**

laminate midplane—the plane that is equidistant from both surfaces of the laminate. **D 3878, D30**

laminate, *n*—a product made by bonding together two or more layers of material or materials. (See also **cross laminate** and **parallel laminate**.) (ISO) **D 883, D20**

laminate, parallel, *n*—a laminate in which all layers or plies are oriented with their principal direction (grain or strongest direction in tension) parallel with the principal direction of the laminate. **F 1251, F04**

laminate principal axis—the laminate coordinate axis that coincides with the direction of maximum inplane Young's modulus. **D 3878, D30**

laminate, symmetrical—a composite laminate in which the ply orientation is symmetrical about the laminate midplane. **E 631, E06**

laminate, symmetrical—a composite laminate in which the ply orientation is symmetrical about the laminate midplane. **E 1749, E06**

lamination, *n*—line of demarcation or elongated void generally parallel to the principal grain direction of a carbon or graphite body. **C 709, D02**

lamination—a stratification of the material in the plane of the wall of a unit. **C 896, C04**

lamination, *n*—1) the process of preparing a laminate. 2) any layer in a laminate. (Compare **laminate, *n*** and **wood laminate**.) **D 907, D14**

lamination, *n*—line of demarcation or elongated void generally parallel to the principal grain direction of a carbon or graphite body. **D 4175, D02**

lamination—imperfection in flat products resulting from the presence of voids or inclusions aligned approximately parallel to the worked surface. **E 7, E04**

lamination—*in flexible barrier materials*, the process of preparing a laminate which consists of two or more flexible barriers bonded together (see also **laminate**). **F 17, F02**

lamination—See Terminology F 17. **F 1327, F02**

lamination crack, *n*—*in a rigid die system*, a defect(s) roughly parallel to the punch faces of the part (these defects usually occur when powder is compressed to high density and the relaxation

forces during pressure release exceed the binding force between the particles). **B 243, B09**

lamination factor, (space factor, stacking factor), *S*—a numeric, less than unity and usually expressed as a percentage, which is defined as the ratio of the uniform solid height *h* of the magnetic material in a laminated core to the actual height *h'* (core buildup) when measured under a specified pressure. *S* is thus equal to the ratio of the volume of magnetic material in a uniform laminated core to the overall geometric volume of the core. **A 340, A06**

lamination stack resistance—the electrical resistance measured in the direction perpendicular to the plane of lamination in a stack of laminations. **A 340, A06**

lamination surface insulation—the insulation between core laminations produced by a surface condition or layer either formed or applied for this purpose.

NOTE—In commercial practice, this insulating layer is frequently designated as core plate. **A 340, A06**

lamination thickness, *d*—the active thickness of a single lamination cut from sheet stock, including any core plate material. **A 340, A06**

lamination width, *w*—the width of a core lamination perpendicular to the direction of the induction therein. **A 340, A06**

lampworking—forming glass articles from tubing and cane by heating in a gas flame. **C 162, C14**

lance—(1) see **hackle**.

(2) a piece of hardware used for introducing a controlled atmosphere gas flow into molten glass or into parts of the furnace structure. **C 162, C14**

landfill—a place, location, tract of land, area, or premises used for the disposal of solid wastes as defined by state solid waste regulations. The term is synonymous with the term solid waste disposal site and is also known as a garbage dump, trash dump, or similar term. **D 5681, D34**

landfill—see **hazardous waste landfill**.

landfill, *n*—a disposal facility where waste is placed in or on land. **E 2201, E50**

landfill—a land disposal technique that uses excavated pits to contain the oil spill waste material. The waste is placed in the excavation, covered over, and left to degrade. **F 1600, F20**

landfill gas—biogas produced from the natural degradation of the organic material in landfills. **E 1705, E48**

landfill liner—continuous layer of natural or man-made materials, beneath or on the sides of a surface impoundment, landfill, or landfill cell, which restricts the downward or lateral escape of hazardous waste, hazardous waste constituents, or leachate. **E 631, E06**

landscape mode, *adj*—a printer output orientation in which the printed lines run parallel to the direction of movement of the paper. (See **portrait mode**.) **F 1457, F05**

landslide—the perceptible downward sliding or movement of a mass of earth or rock, or a mixture of both. (ISRM) **D 653, D18**

landslide (slide)—the failure of a sloped bank of soil or rock in which the movement of the mass takes place along a surface of sliding. **D 653, D18**

lane-to-shoulder dropoff, *n*—(*highways, roads and streets only*) difference in elevation between the traveled surface and the shoulder surface. **E 867, E17**

lane-to-shoulder dropoff, *n*—(*highways, roads and streets only*) difference in elevation between the traveled surface and the shoulder surface. **E 1778, E17**

lane-to-shoulder separation, *n*—(*highways, roads and streets only*) widening of the joint between the edge of the slab and the shoulder. **E 867, E17**

lane-to-shoulder separation, *n*—(*highways, roads and streets only*) widening of the joint between the edge of the slab and the shoulder. **E 1778, E17**

langelier saturation index, LSI—an index calculated from total dissolved solids, calcium concentration, total alkalinity, pH, and

solution temperature that shows the tendency of a water solution to precipitate or dissolve calcium carbonate (see Practice D 3739). **D 6161, D19**

Langmuir adsorption theory—the theory that assumes that the surface of an adsorbent has only uniform energy sites and that adsorption is limited to a monomolecular layer. **D 2652, D28**

Langmuir-Blodgett (LB) membrane—synthetic membrane formed by sequential depositing of one or more monolayers of surface active component onto a porous support. **D 6161, D19**

Langmuir isotherm—a plot of isothermal adsorption data which to a reasonable degree fits the Langmuir adsorption equation. **D 2652, D28**

lap—(1) an imperfection; a fold in the surface of a glass article caused by incorrect flow during forming. **C 162, C14**

(2) a tool used for polishing glass.

lap, *n* (for coatings)—the region where one area of a coated surface merges into an adjacent freshly-coated area during application of a single coat to the entire surface. **D 16, D01**

lap—a condition in which adjacent veneers overlap one another instead of making a smooth edge joint. **D 1038, D07**

lap—(1) a surface imperfection on worked metal caused by folding over a fin overflow, or similar surface condition and then impressing this into the surface by subsequent working without welding it.

(2) A flat surface which holds an abrasive for polishing operations. **E 7, E04**

lap cement, *n*—the cementitious material used to seal the side and end laps of corrugated roofing. **C 1154, C17**

lap cement—the cementitious material used to seal the side and end laps of corrugated roofing. **D 2946, C17**

lap joint, *n*—a joint made by placing one adherend partly over another and bonding together the overlapped portions. **D 907, D14**

lapped seam, *n*—a complex seam formed on the inside of the object with neither raw edge enclosed, and having one visible line of topstitching on the face side and a small fold formed by the topstitching. (Compare **tucked seam**.) **D 123, D13**

lapped seam— except the topstitching is farther from the fold than that of a lapped seam 6 to 10 mm (¼ to ¾ in.). **D 4965, D13**

lapped seam for leather or nonwoven material, *n*—*in home sewing*, a complex seam formed on the outside of the product, with neither cut edge enclosed, and having one or two rows of stitching and a cut edge visible from the outside. (Compare **lapped seam for woven or knitted fabric**.) **D 123, D13**

lapped seam for leather or nonwoven material, *n*—*in home sewing*, a complex seam formed on the outside of the product, with neither cut edge enclosed and having one or two rows of stitching and a cut edge visible from the outside. (Compare **lapped seam for woven or knitted fabric**.) **D 4965, D13**

lapped seam for woven or knitted fabric, *n*—*in home sewing*, a complex seam formed on the inside of the product with neither raw cut edge enclosed, and having one visible line of topstitching on the face side and a small fold formed by topstitching. (Compare **tucked seam**.) **D 123, D13**

lapped seam for woven or knitted fabric, *n*—*in home sewing*, a complex seam formed on the inside of the product with neither raw cut edge enclosed, and having one visible line of topstitching on the face side and a small fold formed by the topstitching. (Compare **tucked seam**.) **D 4965, D13**

lapping—rubbing two surfaces together, with or without abrasives, for the purpose of obtaining extreme dimensional accuracy or superior surface finish. **B 374, B08**

lapping—the abrasive removal of material using graded abrasive particles in a loose form as in a liquid slurry on a platen. **E 7, E04**

lap sealant joint, *n*—*in building construction*, a joint where sealant is applied within the joint between approximately parallel substrates that are face-to-face. **C 717, C24**

lapse rate, *n*—the rate of change of the absolute value of any meteorological element with increase of height. **D 1356, D22**

large grain(s), (LG), *n*

large grain(s), (LG), *n*—as used in *fractography*, a volume-distributed flaw that is a single (or cluster of) grain(s) having a size significantly greater than that encompassed by the normal grain size distribution. **C 1145, C28**

large head—larger than standard head, usually more than 3 to 3½ times shank diameter. **F 547, F16**

large particle emulsion—see **quick breaking emulsion**. **E 609, E35**

large volume testing—using a large volume of the material to be tested as an inoculum in direct detection of mycoplasma. **E 1705, E48**

larrigan leather—oil-tanned light cattlehides, used for moccasins. **D 1517, D31**

LAS—an abbreviation for alkyl benzene sulfonate in which the alkyl radical is a straight chain. **D 459, D12**

LASER—light amplification by stimulated emission of radiation. **F 1457, F05**

laser beam welding, *n*—a welding process that uses a laser beam as the heat source. **A 941, A01**

laser diffraction, *n*—in particle measurement, the creation of a spatial pattern of light produced by the impingement of a laser beam on one or more dispersed particles, wherein the particle size distribution may be inferred from the nature of the pattern. **E 1620, E29**

laser glass—a glass of special composition that emits amplified electromagnetic radiation upon proper electromagnetic stimulation. **C 162, C14**

laser light scattering—a phenomenon suitable for the measurement of particle size in that particles illuminated by a collimated laser beam cause the light to be scattered through angles which are inversely proportional to the size (generally expressed as a diameter) of the particles. **C 242, C21**

laser marking, *n*—etching of data by lasers that directly mark a surface such as metal, wood, and fiberboard. **F 1294, F05**

laser printer—a nonimpact printer that employs a laser light source drive by digital signals to create images on a photoconductor. See **electrophotographic printer**. **F 909, F05**

laser scanner—an optical scanning device that uses the intense monochromatic light beam given off by a laser as its source of illumination. **F 149, F05**

laser scanner, *n*—an optical bar code reading device using a low energy laser light beam as its source of illumination. **F 1294, F05**

lash-in—See **jerk-in**. **D 3990, D13**

Laskin nozzle—a type of portable air-operated aerosol generator capable of producing droplets in the size range from 1 to 2 µm. **E 1620, E29**

last, *n*—a piece of wood, metal, or synthetic material roughly following the shape of the foot and acting as a form on which a shoe is made.

v—to shape a fitted upper to the last using the stretch of the leather (or other material) and then fix it temporarily or permanently to the insole. **F 869, F08**

last nonseizure load, *n*—the last load at which the measured scar diameter is not more than 5 % greater than the compensation value at that load. **D 4175, D02**

latent heat of fusion—the amount of heat required to melt all the ice (or freeze all of the pore water) in a unit mass of soil or rock. **D 7099, D18**

latent image—a condition produced and persisting in the image receptor by exposure to radiation and able to be converted into a visible image by processing. **E 1316, E07**

lateral, *adj*—a descriptive term for a textile fiber composed of two or more polymers at least two of which have a continuous longitudinal external surface. **D 123, D13**

lateral, *adj*—a descriptive term for a textile fiber composed of two or more polymers at least two of which have a continuous longitudinal external surface. **D 4466, D13**

lateral—away from the midline. (Opposite: medial) **F 869, F08**

lateral accretion deposits—See **point bar**. **D 4410, D19**

lateral crack—a crack produced beneath and generally paralleling a glass surface during the unloading phase of mechanical contact with a hard, sharp object. (See **cleavage crack**.) **C 162, C14**

lateral force coefficient, *n*—of a tire, the ratio of lateral force to normal force. **F 538, F09**

lateral force [F], *n*—of a tire, the component of the tire force vector in the *Y'* direction. **F 538, F09**

lateral groove, *n*—a groove that has its long dimension oriented at a direction non-parallel to the tire circumferential centerline; it most frequently opens into a void at both ends. **F 538, F09**

lateral holding strength, *n*—the force required to disengage a snap fastener resulting from a pull in the plane parallel to the material to which the snap fastener is attached. **D 123, D13**

lateral order—the degree of regularity of arrangement of atoms and atomic groups in the direction normal to the molecular chain axes in linear polymers. Quantitative evaluation is impossible without further specification and without description of the particular experimental technique. **D 1695, D01**

lateral resistance of metal connector plate—resistance to slip or pulling, or both, from wood, in direction of applied external shear force, of integral teeth or separate nails, or both, fastening connector plate to wood members. Also called *tooth holding resistance*, *grip resistance*, and *peel resistance* to cover specific events; yet, preferably called *lateral resistance*. See **shear strength of metal connectorplate**. **E 631, E06**

lateral scroll—See **railing systems**. **E 631, E06**

lateral scroll—a fitting that curves in a horizontal plane, used to terminate a handrail; often ending as a round plate covering the top of a post. **E 631, E06**

lateral scroll—a fitting that curves in a horizontal plane, used to terminate a handrail; often ending as a round plate covering the top of a post. **E 1481, E06**

lateral talik—a layer or body of unfrozen ground overlain and underlain by perennially frozen ground. **D 7099, D18**

latewood—the denser, smaller-celled, later-formed part of a growth layer. A synonym is *summerwood*. **D 9, D07**

latex, *n*—a stable dispersion of polymeric substance in an essentially aqueous medium. **D 907, D14**

latex, creamed, *n*—a latex, the rubber concentration of which has been increased by creaming and removal of the separated serum. **D 1566, D11**

latex, creaming, *n*—a reversible process consisting of gravitational accumulation of rubber particles surrounded by serum, near the top or bottom of the latex. **D 1566, D11**

latex, creaming agent, *n*—a material added to latex to promote creaming. See **latex, creaming**. **D 1566, D11**

latex, field, *n*—natural rubber latex with or without a preservative and prior to concentration or any other processing. **D 1566, D11**

latex foam rubber, *n*—in *building construction*, an elastomeric open-cell material made by whipping or stirring air or some other gas into rubber latex compound as it is gelled and before it is subsequently cured. **C 717, C24**

latex, mechanical stability, *n*—the ability of latex to resist coagulation under the influence of mechanical agitation **D 1566, D11**

latex paint—under **paint**, see **latex paint**. **D 16, D01**

latex rubber, *n*—colloidal aqueous dispersion of rubber. **D 1566, D11**

lath—see **gypsum lath**. **C 11, C11**

lath—thin, narrow strips of rough wood. **D 9, D07**

lathe—the machine on which rotary, half-round, and rift veneer is cut. **D 1038, D07**

lather—a foam or froth when a detergent is agitated in water or other liquid. **D 459, D12**

lath nail—See **metal-lath nail, wood-lath nail**. **F 547, F16**

latigo leather—a type of lace leather, alum and vegetable tanned, used in saddlery. **D 1517, D31**

latitude—when the photographic process is represented by an H and D curve, the latitude is the projection on the exposure axis of that

- part of the curve which approximates a straight line within the tolerance permitted for the purpose at hand. **E 7, E04**
- latitudinal limit of permafrost**—the southernmost latitude at which permafrost occurs in a lowland region of the northern hemisphere, or the northernmost latitude for the same in the southern hemisphere. **D 7099, D18**
- latitudinal zonation of permafrost**—the subdivision of a permafrost region into permafrost zones, based on the percentage of the area that is underlain by permafrost. **D 7099, D18**
- lattice**—(1) a space lattice is a set of equal and adjoining parallelepipeds formed by dividing up space by three sets of parallel planes, the planes in any one set being equally spaced. There are seven ways of so dividing space, corresponding to the seven crystal systems. The unit parallelepiped is usually chosen as the unit cell of the system.
(2) a point lattice is a set of points in space so located that each point has identical surroundings. There are fourteen ways of so arranging points in space, corresponding to the 14 Bravais lattices. **E 7, E04**
- lattice parameter**—the term is used for the fractional coordinates x , y , z of lattice points when these are variable. Also used to indicate the lengths of the axes a , b , c , and their included angles α , β , γ . **E 7, E04**
- lattice pattern**—in reinforced plastics, a pattern of filament winding with a fixed arrangement of open voids. **D 883, D20**
- Laue equations**—the three simultaneous equations which state the conditions which must be met for diffraction from a three-dimensional network of diffraction centers. **E 7, E04**
- Laue method (for crystal analysis)**—a method of X-ray diffraction employing a beam of white radiation, a fixed single crystal specimen and a flat photographic film usually normal to the incident beam. If the film is located on the same side of the specimen as the X-ray source, the method is known as the back reflection Laue method, if on the other side as the transmission Laue method. **E 7, E04**
- laundability, n—in buttons**, the ability of a button to undergo multiple cycles of laundering without damage such as cracks or loss of finish. **D 123, D13**
- laundability, n**—the ability of a button to undergo multiple cycles of laundering without damage such as cracks or loss of finish. **D 5497, D13**
- laundering, n—intextile product care**, a process intended to remove soil or stains by treatment (washing) with an aqueous detergent solution (and possibly bleach) and normally including subsequent rinsing, extracting, and drying. **D 123, D13**
- laundering**—a process intended to remove soils or stains, or both, by washing in an aqueous detergent solution, that normally includes subsequent rinsing, extracting, and drying. (See Guide D 5548.) **D 459, D12**
- laundering, n—intextile product care**, a process intended to remove soil or stains by treatment (washing) with an aqueous detergent solution (and possibly bleach) and normally including subsequent rinsing, extracting, and drying. **D 3136, D13**
- laundering, n**—a process used to refurbish a textile product or parts thereof by (1) cleaning it in water containing a cleaning agent, and possibly bleach, (2) drying it, and (3) usually ironing or pressing it. **D 5497, D13**
- laundry additive**—a separately added product that contributes to the effectiveness of laundering or provides a specialized function, or both. (See Guide D 5548.) **D 459, D12**
- laundry formula, n**—a list of chemicals, amounts, and procedures used in a laundry operation. **F 1494, F23**
- lawn, n—as in microbiology**, a cloudy, uniform growth of bacteria in a thin layer of top agar in a petri dish. **F 1494, F23**
- lay, n**—one turn of the helix of a wire or member of a standard conductor. See also **direction of lay** and **length of lay**. **B 354, B01**
- lay, v**—to arrange the wires or members of a conductor either by twisting them or by forming them into one or more layers helically applied. **B 354, B01**
- lay, n**—(1) the length of twist produced by stranding filaments, such as fibers, wires, or roving; (2) the angle that such filaments make with the axis of the strand during a stranding operation. **D 883, D20**
- layer**—{archaic} person who has charge of laying the glass in plaster on the grinding and polishing tables. **C 162, C14**
- layer, n—as related to veneer and plywood**, a single veneer ply or two or more plies laminated with grain direction parallel. **D 907, D14**
- layer**—a single veneer ply or two or more plies laminated with grain direction parallel. Two or more plies laminated with grain direction parallel is a parallel laminated layer. **D 1038, D07**
- layered cryostructure**—the cryostructure of frozen silt or loam in which ice layers alternate with mineral layers that have a massive cryostructure. **D 7099, D18**
- layer insulation, n**—paper, 5 to 1200 μm thick, used to insulate between layers of conductors in transformers or other inductive apparatus. **D 1711, D09**
- layer lattice**—a type of structure found in crystals which tend to form in thin sheets. **E 7, E04**
- layer of reinforcement**—circumferential reinforcement that is one bar or wire in thickness. **C 822, C13**
- lay factor**—the ratio of the length of lay to the external diameter of the corresponding layer of wires or members in the stranded conductor. **B 354, B01**
- laying length**—the centerline length of an installed pipeline system, section, or fitting. **F 412, F17**
- laying yard**—{archaic} place where the rough glass is laid on grinding and polishing tables with plaster. **C 162, C14**
- lay up, n**—in reinforced plastics, an assembly of layers of resin-impregnated material ready for processing. **D 883, D20**
- lay up, v**—in reinforced plastics, to assemble layers of resin-impregnated material for processing. **D 883, D20**
- lay-up, n**—(1) the stack of plies in specified sequence and orientation before cure or consolidation; (2) the complete stack of plies, bagging material, breather material, and so on before cure or consolidation; and (3) a description of the component materials, geometry, and so on of a laminate. **D 3878, D30**
- lay-up, v**—to stack plies of material in specified sequence and orientation. **D 3878, D30**
- lay-up**—a process of fabrication involving the placement of successive layers of materials. **E 631, E06**
- lay-up**—a process of fabrication involving the placement of successive layers of materials. **E 1749, E06**
- lay-up code**—a designation system for abbreviating the stacking sequence of laminated composites. **D 3878, D30**
- LBP**—lead-based paint. **E 631, E06**
- LC₅₀, n**—a measure of lethal toxic potency; the concentration of gas or smoke calculated statistically from concentration-response data to produce lethality in 50 % of test animals within a specified exposure and postexposure time. **E 176, E05**
- LC50**—a statistically or graphically estimated concentration that is expected to be lethal to 50 % of a group of organisms under specified conditions. **E 943, E47**
- LCA, n**—see **life-cycle assessment**. **E 2114, E06**
- LD-50**—concentration required for 50 % mortality (lethal dose). **D 6161, D19**
- LD50**—a statistically or graphically estimated dose that is expected to be lethal to 50 % of a group of organisms under specified conditions. **E 943, E47**
- L/D ratio**—one measure of the resolution capability of a neutron radiographic system. It is the ratio of the distance between the entrance aperture and the image plane (L) to the diameter of the entrance aperture (D). **E 1316, E07**
- lea, n—in cottonyarns**, the number of 120-yd lengths of yarn per pound; an indirect yarn numbering system. **D 123, D13**
- lea, n—in linyarns**, the number of 300-yd lengths of yarn per pound; an indirect yarn numbering system. **D 123, D13**

- lea, *n***—*in cotton yarns*, the number of 120-yd lengths of yarn per pound; an indirect yarn numbering system. **D 4849, D13**
- lea, *n***—*in linen yarns*, the number of 300-yd lengths of yarn per pound; an indirect yarn numbering system. **D 4849, D13**
- leach, *n***—a weekly addition of water to solid material that is performed either dropwise or by flooding for a specified time period. **D 5681, D34**
- leachate**—liquid drainage normally associated with contaminated soils and solid waste landfills. **C 896, C04**
- leachate**—liquid that has percolated through or passed over a solid waste or other medium and contains dissolved or suspended materials, or both, from the medium. **D 5681, D34**
- leachate, *n***—the liquid including any suspended components in the liquid that has percolated through or drained from a pile or cell of solid materials. **E 2201, E50**
- leachate**—the liquid residue from the migration of environmental pollutants mediated by surface or ground water. **F 1600, F20**
- leaching**—the removal in solution of the more soluble materials by percolating or moving waters. (ISRM) **D 653, D18**
- leaching**—the removal of soluble soil material and colloids by percolating water. **D 653, D18**
- leaching, *v***—the operation, natural or designed, of producing leachate. **E 2201, E50**
- leaching (latex), *n***—a process in which latex articles are washed in water to remove water-soluble substances. **D 1566, D11**
- lead abatement contractor**—any business entity, public unit, or person performing the actual abatement for a lead abatement project. **E 631, E06**
- lead angle, helix angle**—angle made by helix of thread with plane perpendicular to nail axis; measured at pitch line; small lead angle usually refers to less than 20°; medium lead angle usually refers to 55° to 65°; large lead angle refers to 65° to 75°; extra large lead angle refers to 80° to 85°. **F 547, F16**
- lead-based paint, *n***—a dried paint film or other surface coating that contains lead in excess of the limits set by authorities having jurisdiction. **E 1605, E06**
- lead-based paint activities**—in the case of target housing and child-occupied facilities, inspection, risk assessment, and abatement. **E 1605, E06**
- lead-based paint inspection, *n***—a surface-by-surface investigation to determine the presence of lead-based paint including a report explaining the results of the investigation. **E 1605, E06**
- lead-based paint removal**—action or process of abatement, that entails stripping lead-based paint from surfaces of components. **E 631, E06**
- lead climbing, *n***—the skill of climbing first up a pitch, utilizing a belayer, climbing rope, and intermediate protection anchors. **F 1773, F08**
- lead-containing paint**—lead-based paint or other similar surface-coating materials containing lead or a lead compound, and in which the lead content is in excess of 0.06 % by weight of the total nonvolatile content of the paint, or the weight in the dried paint film. **E 631, E06**
- lead-containing paint, *n***—paint or other similar surface-coating materials containing lead in excess of 0.06 % by mass of the total nonvolatile content of the paint, or by the mass of the dried paint film. **E 1605, E06**
- leaded**—characteristic of a metallic body containing metallic lead in dispersed form. **E 7, E04**
- leaded dust**—dust containing lead or lead compounds at potentially hazardous concentrations. **E 631, E06**
- leaded dust hazard, *n***—a condition that might result in adverse human health effects due to lead in surface dust. **E 1605, E06**
- leaded glass**—pieces of glass fixed together at their edges with soldered strips of lead or other ductile metal. **C 162, C14**
- leaded paint**—paint or other coatings containing lead compounds at potentially hazardous concentrations. **E 631, E06**
- leaded paint**—paint or other coatings containing lead compounds. See **lead-containing paint**. **E 1605, E06**
- leaded paint characterization**—a procedure for determining the presence of lead in painted surfaces that are expected to be disturbed by planned work. **E 1605, E06**
- leaded paint hazard, *n***—a condition that might result in adverse human health effects due to lead in deteriorated paint on all building surfaces, lead in paint on chewable surfaces, impact surfaces, or dust-producing friction surfaces. **E 1605, E06**
- leaded soil, *n***—bare soil containing lead compounds at potentially hazardous concentrations. **E 1605, E06**
- leaded soil hazard, *n***—a condition that might result in adverse human health effects due to lead in bare soil. **E 1605, E06**
- leader mark**—See **decating mark**. **D 3990, D13**
- lead exposure**—subjection to the presence of a lead hazard that could result in ingestion or inhalation of lead-containing substances. **E 631, E06**
- lead-free (deprecated)**—term used to describe a dwelling that contains no **lead-based paint**, lead-contaminated dust, or lead-contaminated soil. Use of this term is discouraged because **leaded paint** may be present, and there is normally a small amount of lead in any paint, dust, and soil. **E 1605, E06**
- lead hazard, *n***—a leaded-dust hazard, leaded-soil hazard, leaded-paint hazard, or any other condition that may cause exposure to lead that may result in adverse human health effects. **E 1605, E06**
- lead hazard activities, *n***—procedures, measures, and actions including **abatement**, **clearance examination**, control, inspection, maintenance, management, quality systems, reduction, and risk assessment pertaining to lead hazards in buildings and associated grounds. **E 1605, E06**
- lead hazard assessment**—investigation of an assessed unit conducted to determine and report the location, type, severity of lead hazards which are accessible to children. **E 1605, E06**
- lead hazard control**—activities intended to control exposures to lead hazards and actual or potential sources of lead hazard, including **abatement** and in-place management. **E 1605, E06**
- lead hazard management**—activities intended to characterize the presence of lead hazards and actual or potential sources of lead hazards in a defined facility or group of facilities, develop a specific plan to control and eliminate lead hazards based on these findings, and implement a program based on this plan. **E 1605, E06**
- lead hazard reduction, *n***—any measure that results in a lessening of the number or extent, or both, of lead hazards. **E 1605, E06**
- lead hazard screen**—a limited risk assessment activity that involves limited paint and dust sampling as described in applicable Federal, state, or local regulations. **E 1605, E06**
- lead head, cast lead head, compressed lead head**—lead encasement pressed or cast onto or around small $\frac{3}{32}$ -in. steel head, or both. **F 547, F16**
- lead-head nail**—See **roofing nail**. **F 547, F16**
- leading**—a typographical term indicating the amount of white space between lines of printed characters. **F 1457, F05**
- leading edge**—the edge of a form that is used as a base for locating the first line of data to be scanned. **F 149, F05**
- leadless glaze**—See **leadless glaze** under **glaze**. **C 242, C21**
- lead paint (deprecated)**—a term that is sometimes used as an alternative to **lead-based paint**. Use of this term is discouraged because it is unclear what level of lead it refers to. **E 1605, E06**
- lead paint hazard**—presence of lead-based paint in places and site conditions posing a danger of ingestion or inhalation. **E 631, E06**
- lead poisoning**—toxic condition caused by excessive exposure to lead. **E 631, E06**
- lead positive/negative**—qualitative (not quantitative) judgment of lead content that determines abatement action measures. **E 631, E06**

- lead screen**—see **intensifying screen (a)**. E 1316, E07
- lead screen (deprecated)**—a term sometimes used for **lead hazard screen**. Its use is discouraged because there are several alternatives in use, and this one is particularly unclear. E 1605, E06
- leaf**—the sandwich layer of flat-sheet membrane/product channel spacer/flat-sheet membrane, glued together on the sides and across the outer end in a spiral wound element. D 6161, D19
- leak**—a hole, or void in the wall of an enclosure, capable of passing liquid or gas from one side of the wall to the other under action of pressure or concentration differential existing across the wall, independent of the quantity of fluid flowing. E 1316, E07
- leak**—any opening in a flexible package that is contrary to intention and either lets contents escape or permits substances to enter. F 1327, F02
- leakage**, *n*—the flow of liquid from one hydrogeologic unit to another. D 653, D18
- leakage current**—current flow through the insulation between test points. F 2112, F01
- leakage field**—see **field, magnetic leakage**. E 1316, E07
- leakage flux**—the flux outside the boundary of the practical magnetic circuit. A 340, A06
- leakage rate**—the flow rate of a liquid or gas through a leak at a given temperature as a result of a specified pressure difference across the leak. Standard conditions for gases are 25°C and 100 kPa. Leakage rates are expressed in various units such as pascal cubic metres per second or pascal litres per second. E 1316, E07
- leakance**, $n(T^{-1})$ —the ratio K'/b' , in which K' and b' are the vertical hydraulic conductivity and the thickness, respectively, of the confining beds. D 653, D18
- leak artifact**—a device used to introduce gas into a system at a controlled rate, usually 10^{-7} mol/s or less. E 1316, E07
- leak detector**—a device for detecting, locating, or measuring, or combination thereof, leakage. E 1316, E07
- leak exit**—the point where a leak appears. E 631, E06
- leak exit**—the point where a leak appears. E 1749, E06
- leak path**—the path a leak follows from the leak source to the leak exit. E 631, E06
- leak path**—the path a leak follows from the leak source to the leak exit. E 1749, E06
- leak source**—the point where a leak starts. E 631, E06
- leak source**—the point where a leak starts. E 1749, E06
- leak testing**—comprises procedures for detecting or locating or measuring leakage, or combinations thereof. E 1316, E07
- leaky aquifer**, *n*—aquifers, whether artesian or unconfined, that lose or gain water through adjacent less permeable beds. D 653, D18
- lean gas**—natural gas containing little or no hydrocarbons commercially recoverable as liquid products. D 4150, D03
- lease**—grant or rights by a lessor to a lessee to possess and use real or personal property for a period of time in exchange for rent or other consideration. E 2135, E53
- lease (bail)**—contract between the owner of real property (lessor) and another party (lessee) for the possession and use of the property for a specified term in return for rent or other income. E 631, E06
- lease (bail)**—contract between the owner of real property (lessor) and another party (lessee) for the possession and use of the property for a specified term in return for rent or other income. E 1480, E06
- leash**—a cord-like device wherein one end is attached to the top surface of the snowboard, or the binding, and the other end provides an apparatus to attach to one of the rider's legs. F 1107, F27
- least count**, *n*—*in tensile testing machines*, the smallest change in the indicated property that can customarily be determined. (See **sensitivity**) D 123, D13
- least count**, *n*—*in tensile testing machines*, the smallest change in the indicated property that can customarily be determined. D 4849, D13
- least count**, *n*—the smallest change in indication that can customarily be determined and reported. E 6, E28
- least difference of practical importance**, δ , *n*—the smallest difference based on engineering judgment deemed to be of practical importance when considering whether a significant difference exists between two statistics or between a statistic and a hypothetical value. D 123, D13
- leather**—a general term for hide or skin that still retains its original fibrous structure more or less intact, and that has been treated so as to be imputrescible even after treatment with water. The hair or wool may or may not have been removed. Certain skins, similarly treated or dressed, and without the hair removed, are termed “fur.” No product may be described as leather if its manufacture involves breaking down the original skin structure into fibers, powder or other fragments by chemical or mechanical methods, or both, and reconstituting these fragments into sheets or other forms. D 1517, D31
- leatherboard**—a type of fiberboard in which the fiber content is at least 75 % leather, usually with asphaltic or resinous binder. D 1517, D31
- Le Chatelier's theorem**—if a system in equilibrium is subjected to a constraint by which the equilibrium is altered, a reaction takes place which opposes the constraint, that is, one by which its effect is partially annulled. E 7, E04
- LED**—light emitting diode. F 1457, F05
- LF, see **line feed**.
- ledeburite**—intimate mixture of austenite and cementite in metastable equilibrium, formed on rapid cooling during the eutectic reaction in alloys of iron and carbon containing greater than 2 percent but less than 6.67 percent carbon. Further slow cooling causes decomposition of the austenite into ferrite and cementite (pearlite) as a result of the eutectoid reaction. E 7, E04
- ledge**—see **bedrock**. D 653, D18
- ledger paper**, *n*—a paper characterized by strength, high tearing resistance, erasability, water resistance, ink receptivity, uniformity of surface, and smoothness. D 1968, D06
- leeches**—permanent magnets or electromagnets that are attached to the electrodes carrying magnetizing current and that are strong enough to hold electrode contact firmly. E 1316, E07
- leg**—staple part connecting staple crown with staple point; driven through and into or through materials being fastened. F 592, F16
- legging**—the drawing of filaments or strings when adhesive-bonded substrates are separated. (See also **stringiness** and **webbing**.) (Compare **teeth**.) D 907, D14
- legs**, *n*—*in zippers*, the two portions of a separate element that affix the element to the bead. D 123, D13
- legs**, *n*—the two portions of a separate element that affix the element to the bead. D 2050, D13
- leg thickness**—maximum dimension of staple-leg cross section measured parallel to staple-crown axis. F 592, F16
- leg width**—maximum dimension of staple-leg cross section measured perpendicular to staple-crown axis. F 592, F16
- lehr**, **lehr**—a long, tunnel-shaped oven for heat treating glass by continuous passage. C 162, C14
- lehr loader**—a device for properly placing and spacing glass articles on a continuous lehr belt. C 162, C14
- length**, *n*—the maximum dimension of the tile measured parallel to the water channels or perpendicular to the eave of the roof. C 43, C15
- length**, *n*—horizontal dimension of the face of a unit when the unit is positioned as a stretcher. C 1232, C15
- length**, *n*—*of a fabric*, the distance from one end of a fabric to the other, measured parallel to the side edge of the fabric while it is under zero tension and is free of folds or wrinkles. D 123, D13
- length**, *n*—*of a fabric*, the distance from one end of a fabric to the other, measured parallel to the side edge of the fabric while it is under zero tension and is free of folds or wrinkles. D 4850, D13
- length**—distance between beginning and end of point, measured along edge of point. F 547, F16
- length**—distance measured parallel to shank axis from maximum

length

diameter of bearing surface of head to extreme end of point; except in case of cement-coated, brad-headed, and oval-countersunk-headed nails where measurement includes complete head.

Discussion—In evaluating nail performance, length is measured to and including one third of length of point. F 547, F16

length analyzer, *n*—an instrument which determines the upper-half-mean length and length uniformity index of a test beard of cotton. D 123, D13

length analyzer, *n*—an instrument which determines the upper-half-mean length and length uniformity index of a test beard of cotton. D 7139, D13

length between, *L_b*, *n*—in *textile unevenness testing*, the length between which unevenness is measured, the equivalent of the length of strand segments weighed in a direct method of measuring unevenness. D 4849, D13

length between, *L_b*, *n*—in *textile unevennesstesting*, the length between which unevenness is measured; the equivalent of the length of strand segments weighed in a direct method of measuring unevenness. D 123, D13

length change, *n*—in *cement testing*, an increase or decrease in linear dimension due to causes other than applied load, usually measured along the longitudinal axis of a test specimen and expressed as a percentage of a gage length. C 219, C01

length/depth—the distance between the two edges of a form, reached by moving at right angle to a nominal data line. F 149, F05

length distribution, *n*—of *staple fibers*, a graphic or tabular presentation of the proportion or percentage (by number or by mass weight) of fibers having different lengths. D 123, D13

length distribution, *n*—of *staple fibers*, a graphic or tabular presentation of the proportion or percentage (by number or by mass) of fibers having different lengths. D 4849, D13

length group, *n*—all fibers, or pulls, whose lengths fall within a given length interval. D 123, D13

length group, *n*—all fibers, or pulls, whose lengths fall within a given length interval. D 7139, D13

length interval, *n*—a class interval of 1/8 in. (3 mm), usually designated by its midpoint length in odd-numbered sixteenths of an inch. D 123, D13

length interval, *n*—a class interval of 1/8 in. (3 mm), usually designated by its midpoint length in odd-numbered sixteenths of an inch. D 7139, D13

length of lay—the axial length of one turn of the helix of a wire or member. B 354, B01

length of lay, *n*—the axial distance required to make one complete revolution of any element of a strand or cord. D 6477, D13

length of metal connector plate—dimension of metal connector plate parallel to longitudinal axis of coiled metal strip from which plate was sheared during its fabrication, not necessarily along the long plate dimension. E 631, E06

length of tear, *n*—in *tear testing of fabrics*, the measured distance propagated in a specimen by a tearing force from the initiation of the test to the termination of the test. D 123, D13

length of tear, *n*—in *tear testing of fabrics*, the measured distance propagated in a specimen by a tearing force from the initiation of the test to the termination of the test. D 4850, D13

length of the bulb—the distance from the bottom of the bulb to the junction of the bulb and the lower part of the sheath; that is, the point where the internal bulb diameter begins to decrease as the bulb merges into the capillary tube. E 344, E20

length of the scale, *n*—the length of the nominal range in the stem, not including graduations extending above and below the nominal limits. E 344, E20

lengths—straight pieces of the product. B 846, B05

lengths, ends—straight pieces, shorter than the nominal length, left over after cutting the product into mill lengths, stock lengths, or specific lengths. They are subject to minimum length and maximum weight requirements. B 846, B05

lengths, multiple—straight lengths of integral multiples of a base

length, with suitable allowance for cutting, if and when specified. B 846, B05

lengths, random—run of mill lengths without any indicated preferred length. B 846, B05

lengths, specific—straight lengths that are uniform in length, as specified, and subject to established length tolerances. B 846, B05

lengths, specific with ends—specific lengths, including ends. B 846, B05

lengths, standard—uniform lengths recommended in a Simplified Practice Recommendation or established as a Commercial Standard. B 846, B05

lengths, stock with ends—stock lengths, including ends. B 846, B05

lengthwise direction, *n*—in *textiles*, the direction in a machine-made fabric parallel to the warp yarns. D 123, D13

lengthwise direction, *n*—in *textiles*, the direction in a machine-made fabric parallel to the warp yarns. D 5684, D13

length within, *L_w*, *n*—in *textile unevenness testing*, the length over which unevenness is measured. D 4849, D13

length within, *L_w*, *n*—in *textile unevennesstesting*, the length over which unevenness is measured. D 123, D13

leno weave, *n*—a weave in which two adjacent warp yarns cross each other between the picks. D 123, D13

leno weave, *n*—a weave in which two adjacent warp yarns cross each other between the picks. D 7018, D13

lens ice—ground ice occurring as lenses. D 7099, D18

lens-type cryostructure—the cryostructure of frozen silt or loam containing numerous ice lenses. D 7099, D18

lenticular anisotropic phase, *n*—as used in *Test Method D 5061*, a group of binder-phase anisotropic carbon textures distinguished by their lens-shaped domains (that is, length (*L*) to width (*W*) ratio of $2W < L < 4W$) and subdivided based on domain widths as fine lenticular (1.0- to 3.0- μ m), medium lenticular (3.0- to 8.0- μ m), and coarse lenticular (8.0- to 12.0- μ m) size categories. D 121, D05

lesion, *n*—any pathological or traumatic discontinuity of tissue or loss of function of a part. In this guide, “skin lesion” is intended to encompass skin wounds and skin ulcers. F 2312, F04

let-go, *n*—an area in laminated glass over which an initial adhesion between interlayer and glass has been lost. D 883, D20

lethal load XX (LLXX), *n*—a statistically or graphically estimated loading rate of test material that is expected to be lethal to XX % of a group of organisms under specified conditions for a specified time. D 4175, D02

lethal load XX (LLXX), *n*—a statistically or graphically estimated loading rate of test material that is expected to be lethal to XX % of a representative subpopulation of organisms under specified conditions. D 4175, D02

lethal load XX (LLXX), *n*—a statistically or graphically estimated loading rate of test material that is expected to be lethal to XX % of a subpopulation of organisms under specified conditions. D 4175, D02

lethal load XX (LLXX), *n*—a statistically or graphically estimated loading rate of test material that is expected to be lethal to XX % of a subpopulation of organisms under specified conditions. D 6384, D02

let-off mark, *n*—in *woven fabrics*, a corrugated defect pattern distributed across the fabric width. (See **crack mark** and **shier**.) D 123, D13

let-off mark, *n*—in *woven fabrics*, a corrugated defect pattern distributed across the fabric width. (Compare **shier**.) D 3990, D13

lettered head—head with raised or depressed, identifying letter or letters on top surface of head. F 547, F16

letter quality printer—term implies that printer output quality matches that of a typical office electric typewriter. F 909, F05

leuco dye, *n*—color precursors, examples of which are triphenyl methane and fluoran classes which react with a developer to form a colored image. F 1623, F05

Levant—term applied to goatskin on which the grain pattern is

accentuated in tannage. Goatskin embossed to give a Levant pattern is properly described as "Levant-grained goatskin." Sheep, seal, and other skins bearing this pattern should not be described as "Levant leather" but as "Levant-grained sheepskin," etc.

D 1517, D31

level, n—of serviceability, a number indicating the relative serviceability of a building for one topic on a predetermined range, for example, a range from 1 to 9. **E 631, E06**

level crossings—in *fatigueloading*, the number of times that the load-time (strain-time) history crosses a given load (strain) level with a positive slope or a negative slope, or both, as specified during a given period. **E 1823, E08**

leveling, n—(1) the process whereby a film of liquid coating flows out after application so as to minimize any surface irregularities such as brush marks, orange peel, peaks, or craters, that have been produced by the mechanical process of application. (2) a measure or rating of the leveling ability of a coating. **D 16, D01**

leveling—the property of a freshly spread polish to dry to a uniform and streak-free appearance. **D 2825, D21**

leveling action—the ability of a plating solution to produce a surface smoother than that of the substrate. **B 374, B08**

leveling-off degree of polymerization, LODP—the nearly constant degree of polymerization of cellulose reached after very prolonged mild hydrolysis or short drastic hydrolysis. **D 1695, D01**

level, L—ten times the common logarithm of the ratio of a quantity proportional to power or energy to a reference quantity of the same kind. (See **sound power level**, **sound pressure level**.) The quantity so obtained is expressed in decibels. **C 634, E33**

level (of a factor), n—a given value, a specification of procedure or a specific setting of a factor. **E 456, E11**

level (of a factor), n—a given value, a specification of procedure or a specific setting of a factor.

NOTE—*Version* is a general term applied both to quantitative and qualitative factors. The more restrictive term *level* is frequently used to express more precisely the quantitative characteristic. For example, two versions of a catalyst may be presence and absence. Four levels of a heat treatment may be 110°C, 120°C, 140°C, and 160°C.

E 1325, E11

level one (1) test, n—a simple series of measurements designed to provide quantitative data on various aspects of instrument performance and information on which to base the diagnosis of problems. **E 131, E13**

level pile, n—for *pile yarn floor covering*, pile in which all tuft legs are of substantially the same length. **D 123, D13**

level pile, n—for *pile yarn floor covering*, pile in which all tuft legs are of substantially the same length. **D 5684, D13**

level reduction, LR—in a specified frequency band, the decrease in sound pressure level, measured at the location of the receiver, when a barrier or other sound-reducing element is placed between the source and the receiver. **C 634, E33**

level zero (0) test, n—a routine check of instrument performance, that can be done in a few minutes, designed to virtually detect significant changes in instrument performance and provide a database to determine instrument function over time. **E 131, E13**

lever—a part or component that retracts the bolt after alignment of proper combination. **F 471, F12**

lever principle—in a phase diagram, the relative proportions of the conjugate phases, at a stated value of temperature and pressure, or both, is such that a state of mechanical balance would obtain, if the corresponding weight of each phase were placed upon its composition point upon the tie-element (tie-line, tie-triangle, etc.) and the fulcrum were located at the gross composition point of the mixture. **E 7, E04**

lever screw—attached lever to the bolt. **F 471, F12**

lever spring—applies directional force to the lever. **F 471, F12**

Libbey-Owens sheet process—{archaic} See **Colburn sheet process**. **C 162, C14**

lid—abbreviation for **liquid development**. **F 335, F05**

life cycle, n—See **study period**. **E 833, E06**

life-cycle, n—(1) The length of time over which an investment is analyzed.

(2) Consecutive and interlinked stages of a product system, from raw material acquisition or generation of natural resources to the final disposal. **E 2114, E06**

life-cycle assessment, LCA, n—a method of evaluating a product by reviewing the ecological impact over the life of the product. **E 2114, E06**

life-cycle cost (LCC) method—a technique of economic evaluation that sums over a given study period the costs of initial investment (less resale value), replacements, operations (including energy use), and maintenance and repair of an investment decision (expressed in present or annual value terms). **E 631, E06**

life-cycle cost (LCC) method, n—a technique of economic evaluation that sums over a given study period the costs of initial investment (less resale value), replacements, operations (including energy use), and maintenance and repair of an investment decision (expressed in present or annual value terms). **E 833, E06**

life-cycle cost (LCC) method, n—a technique of economic evaluation that sums over a given study period the costs of initial investment (less resale value), replacements, operations (including energy use), and maintenance and repair of an investment decision (expressed in present or annual value terms). **E 2114, E06**

life-cycle test—a comparative study in which organisms, that are subjected to different treatments, are observed at least from a life stage in one generation to the same life stage in the next generation. **E 943, E47**

life expectancy designation, n—for *paper*, a rating in years for the life expectancy of paper, when stored under prescribed conditions. **D 1968, D06**

life expectancy (LE), n—for *paper*, length of time a product can be expected to maintain its functional (that is, physical, chemical, appearance, and so forth) characteristics when stored under prescribed conditions. **D 1968, D06**

lift—a defect characterized by the spontaneous separation of large pieces of porcelain enamel from the base metal. **C 286, B08**

lift, n—the concrete placed between two consecutive horizontal construction joints. **C 717, C24**

lift, n—the depth of soil and other materials placed in an embankment or fill that can be compacted to the specified density with the available equipment. **E 2201, E50**

lift hole—a small hole cast or drilled in the wall of the pipe or section for inserting a bolt, loop of cable or other device used in handling the pipe or section. **C 822, C13**

lifting point—structural point on the end connector or along the length of a boom section designed for the attachment of a lifting device, such as a crane. **F 818, F20**

lift off—the removal of one or more images of copy from the substrate by transferring to an intermediate member. **F 221, F05**

lift-off effect—the effect observed in an electromagnetic test system output due to a change in magnetic coupling between a test specimen and a probe coil whenever the distance between them is varied. **E 1316, E07**

light—(1) a term used for optical glass having a low index of refraction. (2) an architectural term for a panel or sheet of glass. See also **lite**. **C 162, C14**

light, n—Use **lite** (preferred term). **C 717, C24**

light, adj—*highlyreflecting*, as in the term "light green" (see **Terminology E 284**). **D 2946, C17**

light, n—electromagnetic radiation in the spectral range detectable by the normal human eye (approximately 380 to 780 nm). **D 2946, C17**

light, n—for *colordetermination*, radiant energy evaluated according to the CIE photopic spectral luminous efficiency function. **D 2946, C17**

light, n—(1) electromagnetic radiant power that is visually detectable

light, *n*

- by the normal human observer, radiant power having wavelengths from about 380 nm to about 780 nm.
- (2) radiant power evaluated with respect to wavelength according to the CIE spectral luminous efficiency function. **E 284, E12**
- light**, *adj*—referring to the color of a non-self-luminous body, having a high luminous reflectance factor, as “light green” or “light gray.” **E 284, E12**
- light**—See **windows and doors**. **E 631, E06**
- light**—electromagnetic radiation in the spectral range detectable by the normal human eye (wavelengths of approximately 380 to 780 nm). **E 1316, E07**
- light amplification by stimulated emission of radiation**, *n*—a device that generates a narrow beam of coherent light. (See **LASER**.) **F 1457, F05**
- light decay**—reduction of apparent surface voltage caused by exposure to light. **F 335, F05**
- light decay rate**—the reduction of apparent surface voltage at specific exposure conditions. **F 335, F05**
- light-duty**, *adj*—in internal combustion engine operation, characterized by average speeds, power output, and internal temperatures that are generally much lower than the potential maximums. **D 4175, D02**
- light-duty**, *adj*—in internal combustion engine operation, characterized by average speeds, power output, and internal temperatures that are generally much lower than the potential maximums. **D 4725, D15**
- light-duty engine**, *n*—in internal combustion engine types, one that is designed to be normally operated at substantially less than its peak output. **D 4175, D02**
- light duty engine**, *n*—in internal combustion engine types, one that is designed to be normally operated at substantially less than its peak output. **D 4725, D15**
- light duty tires**, *n*—tires weighing less than 40 lb (18.2 kg), used on passenger cars and light trucks. **D 5681, D34**
- light emitting diode**, *n*—a solid-state electronic device or transistor which emits light. (See **LED**.) **F 1457, F05**
- light end**—See **fine end**. **D 3990, D13**
- lightfastness**, *n*—the ability of a material to withstand color change on exposure to light. **E 284, E12**
- lightfastness**, *n*—ability of an image to resist fading on exposure to different lighting conditions. **F 1857, F05**
- lightfastness standards**, *n*—See **AATCC blue wool lightfastness standards**. **E 284, E12**
- lightfield illumination**—See **brightfield illumination**. **E 7, E04**
- light filling**—See **thin filling**. **D 3990, D13**
- light filter**—See **color filter**. **E 7, E04**
- light flame**, *n*—a flame approximately 6 in. (152 mm) long. **E 176, E05**
- light (glazing)**, *n*—use **lite**. **E 631, E06**
- lighting** (éclairage):
- ambient light** (lumière ambiante)—surrounding light, such as that reaching an object in a room from all light sources in the room.
- glare** (éblouissement)—effect of brightness or brightness differences within the visual field sufficiently high to cause annoyance, discomfort, or loss of visual performance.
- task lighting** (éclairage de travail localisé)—localized lighting system consisting of a functional arrangement of luminaires to accommodate the specific visual task or work area needs. **E 1480, E06**
- light intensity**—the light energy reaching a unit area of surface per unit time. **E 1316, E07**
- lightness**—(1) The attribute by which a perceived color is judged to be equivalent to a member of a series of grays ranging from black to white. (2) The attribute of color perception by which a non-luminous body is judged to reflect more or less light. **C 242, C21**

- lightness**—under **color of an object**, see **lightness**. **D 16, D01**
- lightness**, *n*—(1) the attribute of color perception by which a non-self-luminous body is judged to reflect more or less light. (2) the attribute by which a perceived color is judged to be equivalent to one of a series of grays ranging from black to white. **E 284, E12**
- light pen**, *n*—ina bar code system, a handheld scanning wand that is used as a contact bar code reader where the operator traverses the reader across the bar code symbol. **F 1294, F05**
- light pick**—See **thin filling**. **D 3990, D13**
- light-reducing glass**—a term applied to flat glass having reduced light transmittance. **C 162, C14**
- light source**, *n*—for **symbology readers**, light energy can be emitted in straight lines from a point source or from several points as an extended source. **F 1294, F05**
- light stability**—in **optical character recognition**, the resistance to change of the color of the image when exposed to radiant energy. **F 149, F05**
- light stability**—resistance to change of color of the image with exposure to radiant energy. **F 221, F05**
- light truck tires**, *n*—tires with a rim diameter of 16 to 19.5 in. (40.6 to 49.5 cm), manufactured specifically for light truck use. **D 5681, D34**
- light unmanned air vehicle, light-UAV**, *n*—UAV with a maximum gross takeoff weight of 1320 lbs or less. **F 2395, F38**
- lightweight aggregate concrete**, *n*—concrete made with aggregates of expanded clay, shale, slag, or slate or sintered fly ash, and weighing 1360 to 1840 kg/m³ (85 to 115 pcf). **E 176, E05**
- lightweight concrete**, *n*—concrete with a density of less than 115 lb/ft³ (1840 kg/m³). **F 141, F06**
- lightweight concrete masonry unit**—unit whose oven-dry density is less than 105 lb/ft³ (1680 kg/m³). **C 1209, C15**
- ligne**, *n*—a unit of measure for buttons, one ligne equals 0.635 mm (0.025 in.). **D 123, D13**
- ligne**, *n*—a unit of measure for buttons; one ligne equals 0.635 mm (0.025 in.). **D 5497, D13**
- ligne size**, *n*—a unit of measure for button diameter; one ligne equals 0.635 mm (0.025 in.). **D 123, D13**
- lignin**—that part of plant material which is not saccharified by the action of 72 % sulfuric acid or 42 % hydrochloric acid, after the resins, waxes, and tannins have been removed. **D 1695, D01**
- lignin**, *n*—an amorphous, noncarbohydrate polymer of high molecular weight, primarily composed of aromatic organic molecules, which is found within and between the cell walls of most plants. **D 1968, D06**
- lignin**—the noncarbohydrate, polyphenolic, structural constituent of wood and some other plant tissues that encrusts the cell walls and cements the cells together. **E 1705, E48**
- lignin plastics**—plastics based on lignin resins. (ISO) **D 883, D20**
- lignin resin**—a resin made by heating lignin or by reaction of lignin with chemicals or resins, the lignin being in greatest amount by mass. (ISO) **D 883, D20**
- lignite A**—See **lignite A** under **rank**. **D 121, D05**
- lignite B**—See **lignite B** under **rank**. **D 121, D05**
- lignitic class**—See **lignitic class** under **rank**. **D 121, D05**
- lime**—a general term which includes the various chemical and physical forms of quicklime, hydrated lime, and hydraulic lime. It may be high-calcium, magnesian, or dolomitic. **C 51, C07**
- lime**—calcium oxide (CaO), or a mixture of calcium oxide (CaO) and magnesium oxide (MgO). **C 162, C14**
- lime**—specifically, calcium oxide (CaO₂); also loosely, a general term for the various chemical and physical forms of quicklime, hydrated lime, and hydraulic hydrated lime. **D 653, D18**
- lime**—a commercial product derived from the calcination of high calcium or dolomitic limestone. **D 5681, D34**

lime— $\text{Ca}(\text{OH})_2$, calcium hydroxide, a common water treatment chemical. **D 6161, D19**

lime, n —calcium oxide (CaO). **E 2201, E50**

lime glass—jargon for soda-lime-silicate glass. **C 162, C14**

lime mortar—a lime putty mixed with an aggregate, suitable for masonry purposes. **C 51, C07**

lime putty—the product obtained by slaking quicklime with water according to the directions of the manufacturer or by mixing hydrated lime and water to a desired consistency. **C 51, C07**

lime-saturated water, n —in cement testing, water containing calcium hydroxide at a saturated level and in contact with solid calcium hydroxide so that saturation is maintained. **C 219, C01**

lime soda softening—use of lime and Na_2CO_3 for softening water. **D 6161, D19**

limestone—an initially sedimentary rock consisting chiefly of calcium carbonate or of the carbonates of calcium and magnesium. Limestone may be of high calcium, magnesian, or dolomitic.

(1) *dolomitic limestone*—limestone containing from 35 to 46 % magnesium carbonate (MgCO_3).

(2) *magnesium limestone*—a limestone containing from 5 to 35 % MgCO_3 .

(3) *high-calcium limestone*—a limestone containing from 0 to 5 % MgCO_3 . **C 51, C07**

limestone—a rock of sedimentary origin composed principally of calcium carbonate (the mineral calcite), or the double carbonate of calcium and magnesium (the mineral dolomite), or some combination of these two minerals. **C 119, C18**

limestone—either calcitic limestone (CaCO_3) or dolomitic limestone ($\text{CaCO}_3 \cdot \text{MgCO}_3$). **C 162, C14**

limestone—a sedimentary carbonate rock, composed chiefly of calcite (CaCO_3), but sometimes containing appreciable dolomite. **C 242, C21**

limestone—either calcite limestone (CaCO_3) or dolomitic limestone ($\text{CaCO}_3 \cdot \text{MgCO}_3$). **D 6161, D19**

limestone marble—compact, dense limestone that will take a polish is classified as marble in trade practice. Limestone marble may be sold as limestone or as marble. **C 119, C18**

liming material—a general term which includes the various chemical and physical forms of lime, limestone, mollusk shells, marl, and slag whose calcium and magnesium compounds are capable of neutralizing acidity. **C 51, C07**

95 % limit (difference between two results)—the maximum absolute difference expected for approximately 95 % of all pairs of results from laboratories similar to those in the interlaboratory study. **E 1547, E15**

limited solid solution—a crystalline miscibility series whose composition range does not extend all the way between the components of the system, that is, the system is not isomorphous. **E 7, E04**

limiting current density: (1) *cathodic*—the maximum current density at which satisfactory deposits can be obtained.

(2) *anodic*—the maximum current density at which the anode behaves normally, without excessive polarization. **B 374, B08**

limiting current density—current density at which dramatic increases in resistance are observed such as in an ion exchange membrane system under the influence of an applied electric field between the upstream and downstream. Limiting current density is the point where liquid phase ionic diffusion rate limitations result in substantial depletion of ion concentrations at the membrane surface. **D 6161, D19**

limiting quality level (LQL or n)—in acceptance sampling, the fraction of nonconforming items at which the process average can be considered barely tolerable; the process average at which the risk of acceptance is called the **consumer's risk**. **D 123, D13**

limiting resolution—the highest spatial frequency of a target that an imaging sensor is able to resolve. **E 1316, E07**

limiting viscosity number—see **viscosity, intrinsic**. **D 1695, D01**

limit of detection—a calibration curve ordinarily has the shape shown in Fig. 1 of D 4127.

By analogy with definitions adopted in other fields, the limit of detection should be defined as the concentration for which, under the specified conditions, the potential E deviates from the average potential in region I by some arbitrary multiple of the standard error of a single measurement of the potential in region I .

In the present state of the art, and for the sake of practical convenience, a simple (and more convenient) definition is recommended at this time. The practical limit of detection may be taken as the activity (or concentration) of A at the point of intersection of the extrapolated linear segments of the calibration curve, as shown in Fig. 2 of D 4127. Since many factors affect the detection limit, the experimental conditions used should be reported, that is composition of the solution, the history and preconditioning of the electrode, stirring rate, etc. **D 4127, D19**

limit of detection, n —the lowest content that can be measured with reasonable statistical certainty. **E 1732, E30**

Lindemann glass—a high X-ray transmittance glass composed of the oxides of lithium, beryllium, and boron. (No elements with an atomic number above 8.) **C 162, C14**

line, n —a collection of points that define part of a pattern piece. **D 6963, D13**

line, n —of a tire, a group of similar tires of different sizes but common construction type (bias, belted bias or radial) all with a common tire name. **F 538, F09**

lineage structure—orientation deviations, of the order of minutes or a few degrees at most, from perfect alignment of the crystal axes of parallel arms of a dendrite. **E 7, E04**

linear absorption coefficient of an absorbing medium, n —quotient of the internal absorbance of a path element traversed by the radiation, by the length d of this element. Symbol: a ; $-d\Phi = a\Phi dl$; Unit: m^{-1} ; $al = \ln 10D_t$.

NOTE—The linear absorption coefficient is also the part of the linear attenuation coefficient that is due to absorption.

NOTE—In German practice, a linear absorption coefficient is also defined for a homogeneous medium of finite thickness d , as the quotient of the "Absorptions-mass" (logarithm of the reciprocal of the internal transmittance), by the thickness d of the layer. According to whether the natural logarithm or the logarithm to the base 10 is used, one may distinguish the "natürliche Absorptionskoeffizient" (m_n) quotient of the "natürliche Absorptionsmass" (see Note, **internal transmission density**) by the thickness d of the layer traversed by the radiation, and the "dekadische Absorptionskoeffizient" (m) quotient of the internal transmission density by the thickness d of the layer.

NOTE— a/ρ , where ρ is the density of the medium, is called "mass absorption coefficient." **E 349, E21**

linear accelerator—an electron generator in which the acceleration of the particles is connected with the propagation of a high-frequency field inside a linear or corrugated waveguide. **E 1316, E07**

linear attenuation coefficient—a measure of the fractional decrease in radiation beam intensity per unit of distance traveled in the material (cm^{-1}). **E 1316, E07**

linear attenuation (extinction) coefficient of an absorbing and diffusing medium, for a collimated beam of radiation, n —quotient of the relative decrease in spectral concentration of radiant or luminous flux of a collimated beam of radiation during traversal with normal incidence of an infinitesimal layer of the medium by the thickness of that layer. Symbol: μ ; $-d\Phi = \mu\Phi dl$; Unit: m^{-1} .

NOTE—This concept only applies strictly to slightly diffusing media.

NOTE— μ/ρ , where ρ is the density of the medium, is called the "mass attenuation coefficient." **E 349, E21**

linear density—mass per unit length. **B 354, B01**

linear density, n —for fiber and yarn, mass per unit length. **D 123, D13**

linear density, n

linear density, n —mass per unit length; the quotient obtained by dividing the mass of a fiber or yarn by its length. **D 4439**, D35

linear density, n —mass per unit length. **D 4848**, D13

linear density, n —*for fiber and yarn*, mass per unit length. **D 4849**, D13

linear dispersion—the derivative, $dx/d\lambda$, where x is the distance along the spectrum, in the plane of the exit slit, and λ is the wavelength. **E 131**, E13

linear dispersion, n —the derivative $dx/d\lambda$ where x is the distance along the spectrum and λ is the wavelength. **E 135**, E01

linear expansion, coefficient of, $\bar{\alpha}$ —the change in length per unit length per degree change in temperature or

$$\bar{\alpha} = \frac{L_1 - L_0}{L_0 \Delta T}$$

where:

L_1 = length of specimen at the higher temperature,

L_0 = length at lower temperature, and

ΔT = difference between temperatures.

A 340, A06

linear expansion, L_e (**D**)—the increase in one dimension of a soil mass, expressed as a percentage of that dimension at the shrinkage limit, when the water content is increased from the shrinkage limit to any given water content. **D 653**, D18

linear integrator, n —*in textile unevenness testing*, an integrator that operates continuously and reports unevenness for a certain, and unchanging, time past. (*Syn.* fading memory integrator) **D 123**, D13

linear integrator, n —*in textile unevenness testing*, an integrator that operates continuously and reports unevenness for a certain, and unchanging, time past. **D 4849**, D13

linearity—See **analyzer**. **D 1356**, D22

linearity—the maximum deviation of output points from the “best fit” linear curve to the data excluding proven outliers expressed as a percentage of the full-scale computed output. **E 2161**, E37

linearity (amplitude)—a measure of the proportionality of the amplitude of the signal input to the receiver, and the amplitude of the signal appearing on the display of the ultrasonic instrument or on an auxiliary display. **E 1316**, E07

linearity (time or distance)—a measure of the proportionality of the signals appearing on the time or distance axis of the display and the input signals to the receiver from a calibrated time generator or from multiple echoes from a plate of material of known thickness. **E 1316**, E07

linear lea, n —an indirect yarn numbering system in the linen spinning system equal to the number of 300-yd lengths per pound. **D 123**, D13

linear low density polyethylene plastics, (**LLDPE**) n —those linear polyethylene plastics, q.v., having a standard density of 0.919 to 0.925 g/cm³. **D 883**, D20

linearly mixable, *adj*—a property is deemed to be linearly mixable in a mass or volume measurement unit if the property of the mixed material can be calculated from the quantities and properties of the materials used to produce the mixture. **D 4175**, D02

linear magnification—See **magnification**. **E 7**, E04

linear medium density polyethylene plastics, (**LMDPE**) n —those linear polyethylene plastics, q. v., having a standard density of 0.926 to 0.940 g/cm³. **D 883**, D20

linear (normal) strain—the change in length per unit of length in a given direction. (*ISRM*) **D 653**, D18

linear polyethylene plastics, n —those containing insignificant amounts of long-chain branching but which may contain significant amounts, by design, of short-chain branching. **D 883**, D20

linear shrinkage, L_s (**D**)—decrease in one dimension of a soil mass, expressed as a percentage of the original dimension, when the water content is reduced from a given value to the shrinkage limit. **D 653**, D18

linear symbol, n —a one-dimensional, linear sequence of rectangular bars and spaces that are arranged in a predetermined pattern following specific rules to represent elements of data that are defined as characters. **F 1294**, F05

linear (tensile or compressive) strain, n —the change per unit length due to force in an original linear dimension. **E 6**, E28

linear variable differential transformer (LVDT)—a device for measuring movements that utilize a sliding core within a variable magnetic field. **E 2265**, E06

line-at-a-time printer—*syn.* **line printer**. **F 909**, F05

lineation—the parallel orientation of structural features that are lines rather than planes; some examples are parallel orientation of the long dimensions of minerals; long axes of pebbles; striae on slickensides; and cleavage-bedding plane intersections. (*ISRM*) **D 653**, D18

line ending, n —an electronic code sequence denoting the end of a printed line or of a command. **F 1457**, F05

line feed, n —an ASCII command, which when sent to a printer will advance the printing to the next line. (*See LF.*) **F 1457**, F05

line-focus collection—see **collector, line-focus**. **E 772**, E44

line focus (in X-ray tubes)—a long-narrow focal spot. **E 7**, E04

line indices—the Miller indices of the set of planes producing a diffraction line. **E 7**, E04

line (in X-ray diffraction patterns)—an array of small diffraction spots so arranged that they appear to form a continuous line on the film. **E 7**, E04

line item—a single line entry on a reporting form that indicates a quantity of property having the same description. **E 2135**, E53

linen, n —a yarn or fabric made solely from flax fibers. **D 123**, D13

linen, n —a yarn or fabric made solely from flax fibers. **D 6798**, D13

linen blend, n —a yarn or fabric made from a combination of flax and other fibers. **D 123**, D13

linen blend, n —a yarn or fabric made from a combination of flax and other fibers. **D 6798**, D13

line, neutral, n —*of a tire*, a line of tires to which a brand name may be added after their manufacture. **F 538**, F09

line of creep (path of percolation)—the path that water follows along the surface of contact between the foundation soil and the base of a dam or other structure. **D 653**, D18

line of reinforcement—circumferential reinforcement comprised of one or more layers. **C 822**, C13

line of seepage (seepage line) (phreatic line)—the upper free water surface of the zone of seepage. **D 653**, D18

line of sight, LOS, n —direct, point-to-point contact between a transmitter and receiver. See R-103-2004. **F 2395**, F38

line pair, n —*in atomic emission spectrometry*, an analytical line and the internal standard line with which it is compared. **E 135**, E01

line pairs per millimetre—a measure of the spatial resolution of an image conversion device. A line pair test pattern consisting of one or more pairs of equal width, high contrast lines and spaces is utilized to determine the maximum density of lines and spaces that can be successfully imaged. The value is expressed in line pairs per millimetre. **E 1316**, E07

line pair test pattern—a pattern of one or more pairs of objects with high contrast lines of equal width and equal spacing. The pattern is used with an imaging device to measure spatial resolution. **E 1316**, E07

line post—the intermediate post in a fence line supporting the top rail or tension wire and barb arm where applicable. **F 552**, F14

line post cap—a cap or top with a loop used to position the top rail or tension wire on top of the line posts. **F 552**, F14

line printer—(1) a device that prints a line of characters as a unit. *Syn.* **line-at-a-time printer**;

(2) contrast with character printer, page printer. **F 909**, F05

line quality, n —the sum total of the attributes of the writing movement (for example, speed, pressure, and skill). **E 2195**, E30

liner—a small block of stone secured to the rear face of a dimension

- stone panel with pins and adhesive for the purpose of providing a concealed horizontal bearing surface. **C 119, C18**
- liner**, *n*—*in packaging*, (1) generally, any linear material that separates a product within a **container** from the basic walls of the **container**, (2) in **fiberboard containers**, a creased fiberboard sheet inserted in a container and usually fitting against the side and end panels (*liner* is sometimes erroneously used for *linerboard* or *facing*). (Compare **divider**.)
- case liner (bag liner)*—a lining, usually paper, or treated materials placed inside a shipping container for the purpose of preventing sifting, or entrance of moisture, dust, or dirt. **D 996, D10**
- liner**, *n*—a structure of natural and/or manufactured products that serves as a barrier to minimize leachate from reaching or mixing with the ground water. **E 2201, E50**
- liner**, *n*—a foot protective device worn inside the footwear. **F 1494, F23**
- line rail clamp**—See **boulevard clamp**. **F 552, F14**
- linerboard**—See **paperboard**. **D 996, D10**
- line reflector**, *n*—reflector in the form of a line, the width of which subtends a very small solid angle at the observer's eye, so that the observer cannot readily distinguish its width. **E 284, E12**
- liner or external gasket**, *n*—a ring-shaped sealing component made of a deformable material used to make a pressure-tight joint between the pump and container. **D 6655, D10**
- liner pitting**, *n*—cavities that develop on the coolant side of cast iron cylinder liners as a result of cavitation corrosion. **D 4725, D15**
- lines**—fine cords or strings, usually on the surface of sheet glass. **C 162, C14**
- line scanner**—an apparatus that scans along a single line of a scene to provide a one-dimensional thermal profile of the scene. **E 1316, E07**
- line skew**—the angular displacement of a line in relation to its intended position. **F 149, F05**
- lines of force**—a conceptual representation of magnetic flux based upon the line pattern produced when iron filings are sprinkled on paper laid over a permanent magnet. **E 1316, E07**
- line spacing**—the distance between the average base line of one line to the average base line of the next line. **F 149, F05**
- line tender**, *n*—the individual who controls the diver's search pattern. **F 1549, F32**
- lining**—coating or layer adhered to or in intimate contact with the interior surface and ends of asbestos-cement pipe and related fittings, with said coating or layer being more chemically resistant than the pipe and related fittings. **D 2946, C17**
- lining fabric**, *n*—*for apparel*, a textile used to cover the inner sides of garments. **D 123, D13**
- lining fabric**, *n*—*for apparel*, a textile used to cover the inner sides of garments. **D 7022, D13**
- lining leather**—any leather used for making shoe linings which includes sheep, lamb, kid, goat, cattle, calf, kip and splits. **D 1517, D31**
- linoleum**, *n*—a surfacing material composed of a solidified mixture of linseed oil, pine rosin, fossil or other resins or rosins, or an equivalent oxidized oleoresinous binder, ground cork, wood flour, mineral fillers, and pigments, bonded to a fibrous or other suitable backing. **F 141, F06**
- linoleum cement**—the binder in linoleum consisting of a mixture of linseed oil, pine rosin, fossil or other resins or rosins, or an equivalent oxidized oleoresinous binder. **F 141, F06**
- lino-nail**—bright, regular-stock-steel, $\frac{5}{8}$ by 0.062-in. nail with oval head and medium diamond point. **F 547, F16**
- lint**, *n*—*in loose cotton*, fibers mostly of spinnable length. (See also **linters**.) **D 123, D13**
- lint**, *n*—*in loose cotton*, fibers mostly of spinnable length. (See also **linters**.) **D 7139, D13**
- lint ball**—See **fuzz ball**. **D 3990, D13**
- lint content**, *n*—that portion of a mass of cotton fiber consisting of fiber, including normal moisture content, but excluding foreign matter. **D 123, D13**
- lint content**, *n*—that portion of a mass of cotton fiber consisting of fiber, including normal moisture content, but excluding foreign matter. **D 7139, D13**
- lint cotton**, *n*—loose cotton fibers in any form, either raw or processed, free of seeds and not bound together in yarn or fabric. (See also **ginned lint**.) **D 123, D13**
- lint cotton**, *n*—loose cotton fibers in any form, either raw or processed, free of seeds and not bound together in yarn or fabric. (See also **ginned lint**.) **D 7139, D13**
- linters**, *n*—the short fibrous material adhering to the cotton seed after the spinnable lint has been removed by ginning and which is subsequently recovered from the seed by a process called "delinting." **D 123, D13**
- linters**—the short fibrous material adhering to cotton seed after the ginning operation. After removal from the seed it is used to a limited extent as a fibrous raw material for special papers. The principal use, however, is for chemical cellulose, that is, as the raw material for the manufacture of cellulose derivatives. **D 1695, D01**
- linters**, *n*—the short fibrous material adhering to the cotton seed after the spinnable lint has been removed by ginning and which is subsequently recovered from the seed by a process called "delinting." **D 7139, D13**
- lip**—the inner face of the tip of a flange on a lock-strip gasket. **C 717, C24**
- lip**—overhang of tool nose when magazine rests flush with work surface. **F 592, F16**
- lipophilic emulsifier**—see **emulsifier lipophilic**. **E 1316, E07**
- lip pressure**—the pressure exerted by the lip of a lock-strip gasket on material installed in the channel, when the lock-strip is in place. **C 717, C24**
- lip seal pressure**—the lip pressure required to effect a seal against the passage of water and air. **C 717, C24**
- liptinite**—See **liptinite** under **macerals**. **D 121, D05**
- liquefaction**—the process of transforming any soil from a solid state to a liquid state, usually as a result of increased pore pressure and reduced shearing resistance. **D 653, D18**
- liquefaction potential**—the capability of a soil to liquefy or develop cyclic mobility. **D 653, D18**
- liquefaction (spontaneous liquefaction)**—the sudden large decrease of the shearing resistance of a cohesionless soil. It is caused by a collapse of the structure by shock or other type of strain and is associated with a sudden but temporary increase of the prefluid pressure. It involves a temporary transformation of the material into a fluid mass. **D 653, D18**
- liquefied natural gas (LNG)**—natural gas that has been liquefied, after processing, for storage or transportation purposes. (This definition is from ISO NP 14532.) **D 4150, D03**
- liquefied petroleum gas (LPG)**, *n*—a mixture of normally gaseous hydrocarbons, predominantly propane or butane or both, that has been liquefied by compression or cooling, or both, to facilitate storage, transport, and handling. **D 4175, D02**
- liquid**, *n*—(flammability regulations) a substance that has a definite volume but no definite form, except such given by its container. It has a viscosity of 1×10^{-3} to 1×10^3 St (1×10^{-7} to 1×10^{-1} m² s⁻¹) at 104°F (40°C) or an equivalent viscosity at agreed upon temperature. (This does not include powders and granular materials.) Liquids are divided into two classes:
- Class A, low viscosity*—a liquid having a viscosity of 1×10^{-3} to 25.00 St (1×10^{-7} to 25.00×10^{-4} m² s⁻¹) at 104°F (40°C) or an equivalent viscosity at an agreed upon temperature.
- Class B, high viscosity*—a liquid having a viscosity of 25.01 to 1×10^3 St (25.01×10^{-4} to 1×10^{-1} m² s⁻¹) at 104°F (40°C) or an equivalent viscosity at an agreed upon

liquid, *n*

- temperature. **D 16, D01**
- liquid bituminous material**—one having a definite volume but no definite form, except as provided by its container. It has a viscosity of 0.1 to 1×10^5 cSt (mm^2/s) at 40°C . This does not include powders or granular materials. **D 1079, D08**
- liquid curing medium (LCM), *n***—a molten phase, generally a molten mixture of sodium nitrate, that is used as a heating medium for the continuous vulcanization of a rubber mix, usually following extrusion. **D 1566, D11**
- liquid development**—development by means of a toner dispersed in an organic liquid carrier. **F 335, F05**
- liquid drop, *n***—a small body of liquid held together primarily by surface tension. **G 40, G02**
- liquid impingement, *n***—impingement by liquid particles. **G 40, G02**
- liquid impingement damage, *n***—See **damage**. **G 40, G02**
- liquid impingement erosion, *n***—progressive loss of original material from a solid surface due to continued exposure to impacts by liquid drops or jets. **G 40, G02**
- liquid infiltration, *v***—densification of a composite by infiltration with a liquid. **C 1145, C28**
- liquid-in-glass thermometer, *n***—a temperature-measuring instrument whose indications are based on the temperature coefficient of expansion of a liquid relative to that of its containing glass bulb. **E 344, E20**
- liquid ion-exchange electrode membrane**—a porous plastic disk, permeable to the ion exchanger, and impermeable to water, which allows the ion exchanger to contact the sample solution and separates the internal filling solution from the sample. **D 4127, D19**
- liquidity index (water-plasticity ratio) (relative water content), *B, R_w, I_L* (D)**—the ratio, expressed as a percentage, of: (1) the natural water content of a soil minus its plastic limit, to (2) its plasticity index. **D 653, D18**
- liquid jet, *n***—a body of liquid projected into motion, usually of approximately cylindrical shape, such as could be produced by discharging the liquid through an orifice. In liquid impingement testing two kinds of liquid jet are used:
- (1) **continuous jet**—a continuous flow of liquid in the form of a jet.
- (2) **slug, or jet segment**—a body of liquid projected into motion, in the form approximately of a finite cylinder whose length is usually no more than several times its diameter and which moves in a direction approximately parallel to its length. **G 40, G02**
- liquid level**—the level of liquid in a borehole or well at a particular time. The liquid level can be reported as an elevation or as a depth below the top of the land surface. If the liquid in ground water is known as water level. **D 653, D18**
- liquid limit, *LL, L_w, w_L* (D)**—(a) the water content corresponding to the arbitrary limit between the liquid and plastic states of consistency of a soil.
- (b) the water content at which a pat of soil, cut by a groove of standard dimensions, will flow together for a distance of $\frac{1}{2}$ in. (12.7 mm) under the impact of 25 blows in a standard liquid limit apparatus. **D 653, D18**
- liquid medium**—liquid used to quench a steel fastener to achieve desired mechanical properties. The selection of the medium must be compatible with the basic material and geometry to avoid quench cracks. **F 1789, F16**
- liquid nitrogen freezers**—freezers that operate by a refrigeration system in which cooling is provided by a refrigerant such as liquid nitrogen. **E 1705, E48**
- liquid nitrogen storage**—storage directly in liquid nitrogen or in the vapor phase above liquid nitrogen. **E 1705, E48**
- liquid penetrant examination**—a nondestructive test that uses suitable liquids that penetrate discontinuities open to the surface of solid materials and, after appropriate treatment, indicate the presence of discontinuities. **E 1316, E07**
- liquid phase**—contaminant residing as a liquid in vadose zone pore space, often referred to as “free product.” **D 653, D18**
- liquid phase sintering, *v***—sintering of a compact, or loose powder aggregate, under conditions in which a liquid phase is present during part of the sintering cycle. **B 243, B09**
- liquid suspension**—the system resulting from the intimate, physical mixing of a liquid and particulate solids or dispersible materials, to form a time-stable, uniform, fluid mixture. **C 242, C21**
- liquid-tight**—for the purpose of this practice, referring to the absence of detectable liquid penetration inside the chemical protective suit when sprayed with the liquid at specified pressure, direction and duration. **F 1494, F23**
- liquidus, *n***—the lowest temperature at which an alloy under equilibrium conditions begins to freeze on cooling or is completely melted on heating. **B 899, B02**
- liquidus**—the locus of points in a phase diagram, representing the temperature, under equilibrium conditions, at which each composition in the system begins to freeze during cooling, or completes melting during heating. **E 7, E04**
- liquidus**—locus of points in a phase diagram, representing the temperature, under equilibrium conditions, at which each composition in the system begins to freeze during cooling, or completes melting during heating. (E 7, E04). **E 1142, E37**
- liquidus temperature**—the maximum temperature at which equilibrium exists between the molten glass and its primary crystalline phase. **C 162, C14**
- liquid-volume measurement**—in grouting, measurement of grout on the basis of the total volume of solid and liquid constituents. **D 653, D18**
- liquor finish**—very thin wire coating produced by wire immersion in metallic salts, usually copper, offering very limited corrosion resistance. **F 547, F16**
- liquor-finished wire**—wire, usually of ferrous material, drawn through a wet solution of metallic salts, that is, tin or copper, to facilitate drawing and to enhance the appearance and surface characteristics of the finished wire, and not to provide the properties of a coated wire. **B 354, B01**
- lisle, *n***—a fine high-twisted and hard-twisted thread, at least two-ply, used especially for hosiery. **D 123, D13**
- lisle, *n***—for a definition of cotton lisle see Rule 3 of the “Amended Trade Practice Rules for the Hosiery Industry,” as promulgated by the Federal Trade Commission, Aug. 30, 1960 and amended June 10, 1964. **D 123, D13**
- lisle, *n***—a fine high-twisted and hard-twisted thread, at least two-ply, used especially for hosiery. **D 4850, D13**
- list, *v***—for protective clothing, to publish a register of equipment or materials which has been verified by a certification organization as being acceptable and meeting the requirements of standard specifications. **F 1494, F23**
- lite, *n***—one piece of glazing (also spelled light), synonym: pane. **C 717, C24**
- lite, *n***—one piece of glazing (preferred term); (also spelled light) (synonym—pane). **E 631, E06**
- lighting (éclairage):** **E 631, E06**
- lite**—See **windows and doors**. **E 631, E06**
- lite, light**—a panel or sheet of glass. **C 162, C14**
- lithology**—(1) Physical character of a rock, generally as determined megascopically or with the aid of a low power magnifier. (2) The macroscopic study and description of rocks. **D 121, D05**
- lithology**—the description of rocks, especially sedimentary clastics and especially in hand specimens and in outcrops, on the basis of such characteristics as color, structures, mineralogy, and particle size. **D 653, D18**
- lithotype, *n***—(1) Rock form defined on the basis of certain selected physical characteristics. (2) One of the four macroscopically recognized constituents of banded coal: vitrain, clarain, durain and fusain. **D 121, D05**

live field—in video-based automatic image analysis, the visible, real-time gray level image from the television camera. **E 7, E04**

live load—the portion of the load transmitted to pipe from wheel or tread impacts. **C 896, C04**

live load—See **load**. **D 996, D10**

live load—portion of load transmitted to the pipe from wheel or traveling loads or other surcharged load. **F 412, F17**

liver—in dry process enameling, a defect characterized by a wave-like form of abnormally thick porcelain enamel. **C 286, B08**

livestock, *n*—cattle, sheep, swine, and other domesticated meat animals. **F 2463, F10**

load—See **pull**. **C 162, C14**

load, *vt*—to apply a force. **D 123, D13**

load, *n*—(1) the force in weight units applied to a body; (2) the weight of the contents of a **container** or transportation device; (3) a qualitative term denoting the contents of a container.

constant load, *n*—a load that is invariable or unchanging.

dead load, *n*—a constant load that, in structures (as a bridge, building, or machines) is due to the weight of the members, the supporting structure, and permanent attachments or accessories (*Webster*).

dynamic load, *n*—an imposed force in motion; that is, one that may vary in magnitude, sense, and direction.

floating load—(1) a shipment, usually a **unitized load** (or loads), or a large individual article, so prepared that it may move in the carrying vehicle, the movement being restricted or retarded by friction between the load and the vehicle; (2) a method of packing in which the contents of the **container** are supported within the container by **cushioning** devices or **materials**; (3) **floating controlled load**—a **floating load** within a vehicle in which the movement is retarded, snubbed, or restrained by suitable devices.

live load, *n*—a moving load on a structure.

palletized load—a load made up of articles, loose or in **containers** placed on **pallets** or skids.

palletized unit load—a **unitized load** fixed to a pallet.

static load, *n*—an imposed stationary force, constant in magnitude, sense and direction.

unitized load—in **packaging**, a type of unit load consisting of articles or containers secured together so as to be handled as an entity.

unit load—in **distribution**, an item or assembly of items assembled or restrained for handling and transportation as a single entity. **D 996, D10**

load—(1) the amount of nonprotein material in vegetable-tanned leather.
(2) the amount of tannin in vegetable-tanned leather. **D 1517, D31**

load—deprecated term. Use the preferred term, **force**. **D 4848, D13**

load, *vt*—to apply a force. **D 4848, D13**

load—See **static load**. **E 631, E06**

load—see **force**. **E 1823, E08**

load—the amount of food to be cooked during a cooking energy efficiency (see **cooking energy efficiency**) test. **F 1827, F26**

load at specified elongation (LASE)—deprecated term. Use the preferred term, **force at specified elongation (FASE)**. **D 4848, D13**

load-bearing partition, *n*—a partition designed to support a portion of the building structure. **C 11, C11**

loadbearing tile, *n*—tile for use in masonry constructions designed to carry superimposed loads. See Specification C 34. **C 43, C15**

load-carrying capacity, *n*—of a **lubricating grease**, the maximum load or pressure that can be sustained by a lubricating grease without failure of the sliding contact surfaces as evidenced by seizure or welding. **D 4175, D02**

load cell—see **force transducer**. **E 1823, E08**

load-deformation curve, *n*—deprecated term. Use the preferred term, **force-deformation curve**. **D 4848, D13**

loaded condition—equipment doing processing work on solids, liquids, or gases, or all of these, (for example, moving material, changing its characteristics, or separating it into different streams). **D 5681, D34**

loaded radius [*L*], *n*—of a **tire**, the wheel plane distance from the center of tire contact in the footprint to the wheel center, specified as a static or dynamic (rolling) measurement. **F 538, F09**

load-elongation curve, *n*—deprecated term. Use the preferred term, **force-elongation curve**. **D 4848, D13**

load [*F*], *n*—in mechanical testing, an external force or system of forces or pressures, or both, that act upon the test object. **E 6, E28**

load [*F*]—see **force**. **E 1823, E08**

load index, *n*—a numerical code associated with the maximum load a tire can carry at the speed indicated by its speed symbol under specified conditions. **F 538, F09**

loading, *n*—the act of placing a load on or in; to load a car, a vessel, or a test specimen. (See also **unitization**.)

anti-skid plate—a device, generally metal, about 4 by 6 in. (100 by 150 mm), with sharp projections on each face, placed under, against, or between containers and car floor, to retard shifting of load in transit.

blocking, *n*—material used to prevent or control movement of the unit or **load** or to facilitate handling (A 700, A01).

bracing, *n*—material or devices used to hold articles or sections of loads in position and prevent shifting within a transportation vehicle or within a **container**. (See **molded shape, strapping**.)

diagonal bracing—(1) a member reaching at an angle from a gate or other structure to the wall or floor of a freight car or truck to strengthen and reinforce the gate or structure; (2) a member, single or multiple, of a **crate** or **box** attached diagonally or at an angle to add reinforcement to the container.

dunnage, *n*—(1) in a carrying vehicle, the temporary **blocking**, flooring or lining, racks, standards, strips, stakes, or similar **bracing**, or supports not constituting a part of the carrying vehicle, used to protect and make freight secure in, or on a carrying vehicle (Classification, Rule 30); (2) in a **container**, materials not constituting a part of the container, frequently by-product or scrap, used for filling space, for **blocking** or **bracing**, or otherwise to protect and secure the contents.

dynamic compression loading—in **packaging**, the application of a force in motion that usually occurs in 10 s or less.

edge protector—a right-angle piece placed over the edge of **boxes, crates, bundles** and gates, or **bracing** to distribute the pressure from metal bands or ties in order to prevent cutting.

spreader, *n*—(1) a horizontal wooden member placed between two gates in a car to hold the gates in position against the load; (2) a rigid device placed between sling legs, lifting cables, or ropes to prevent them from damaging cargo being loaded or unloaded.

static compression loading—in **packaging**, the application of a force for an extended period, often days, weeks, or months. **D 996, D10**

loading—the addition of glucose, magnesium sulfate, or other materials necessary to give leather the physical properties needed for working in modern shoe machinery. (Also known as filling or stuffing.) **D 1517, D31**

loading, *n*—the product of the weekly concentration for a constituent of interest and the weight of solution collected that may be interpreted for water quality impacts. **D 5681, D34**

loading rate, *n*—the ratio of test material to aqueous medium used in the preparation of a water accommodated fraction (WAF) and in interpretation of the results of a toxicity study with a poorly water soluble lubricant or lubricant component. **D 4175, D02**

loading rate, *n*—the ratio of test material to aqueous medium used in the preparation of WAF, WSF, or mechanical dispersion and in the

loading rate, *n*

interpretation of the results of a toxicity study with a poorly water-soluble lubricant or lubricant component. **D 4175, D02**

loading rate, *n*—the ratio of test material to aqueous medium used in the preparation of WAF, WSF, or mechanical dispersion and in the interpretation of the results of a toxicity study with a poorly water-soluble lubricant or lubricant component. **D 6384, D02**

loading (unloading) rate [F T⁻¹]—the time rate of change in the monotonic increasing (decreasing) portion of the force-time function. **E 1823, E08**

load limit—(1) the maximum force, in weight units, a body can withstand without damage; (2) the greatest allowable weight that may be placed in a **container** or vehicle. For containers, load limit is often expressed in terms of the gross weight of the container and its contents. **D 996, D10**

load range, *n*—a letter designation (A, B, C, D) or, for P-metric tires, standard load (SL) or extra load (XL), used to identify a given size tire with its load and inflation limits when used in a specific type of service. **F 538, F09**

load rating [M], *n*—the maximum load a tire is rated to carry for a given usage at a specified cold inflation pressure. **F 538, F09**

load ratio, R, A, *n*—in fatigue loading, the algebraic ratio of the two loading parameters of a cycle. **F 1582, F04**

load symbol, *n*—a code associated with the maximum load a tire can carry at the speed indicated by its speed symbol under specified conditions. **F 538, F09**

load type, *n*—a qualitative description of the contents of a **container** with respect to **density**, fragility, and degree of **blocking, bracing**, and **cushioning** necessary. Load types are further divided into the following categories:

Type I load (easy)—a qualitative term denoting contents of low or moderate **density** conforming to the shape of the **container** and lending support to all faces of the container.

Type II load (average)—a qualitative term denoting contents of low or moderate density providing, when packed directly into a **shipping container**, nonshifting support at several points on the face of the container.

Type III load (difficult)—a qualitative term denoting contents characterized by irregular shape not lending support to the container, or by great density or extreme fragility. **D 996, D10**

load (water load)—an amount of water used to moderate the microwave radiation absorbed by a susceptor during simulated microwave heating tests. **F 1479, F02**

load-wear index, *n*—an index of the ability of a lubricant to prevent wear at applied loads. (Synonym—*load-carrying property of a lubricant.*) **D 4175, D02**

load-wear index (or the load-carrying property of a lubricant), *n*—an index of the ability of a lubricant to minimize wear at applied loads. Under the conditions of this test, specific loadings in kilograms-force (or newtons) having intervals of approximately 0.1 logarithmic units, are applied to the three stationary balls for ten runs prior to welding. The load-wear index is the average of the sum of the corrected loads determined for the ten applied loads immediately preceding the weld pair. **D 4175, D02**

loam—a mixture of sand, silt, or clay, or a combination of any of these, with organic matter (see **humus**). **D 653, D18**

local—indicates measurements or observations of a small part of a larger region of interest. **E 1620, E29**

local action corrosion—corrosion caused by local corrosion cells on a metal surface. **G 15, G01**

local corrosion cell—an electrochemical cell created on a metal surface because of a difference in potential between adjacent areas on that surface. **G 15, G01**

localized corrosion—corrosion at discrete sites, for example, pitting, crevice corrosion, and stress corrosion cracking. **G 15, G01**

local magnetization—magnetization of a prescribed volume or surface of a part. **E 1316, E07**

local shear failure—see **shear failure**. **D 653, D18**

local street directories—directories published by private (or sometimes government) sources that show ownership, occupancy, or use of sites, or combination thereof, by reference to street addresses. Often local street directories are available at libraries of local governments, colleges or universities, or historical societies. **D 5681, D34**

local testing, *n*—testing conducted at one laboratory or test site for the purpose of comparing a number of candidate tires for selected characteristic properties. **F 538, F09**

local thickness—mean of the thickness measurements of which a specified number is made within a reference area. **F 1789, F16**

local velocity, *n*—in *channel flow*, the velocity at a specific point in the flow region of a channel. May be expressed as a direction-dependent quantity with components V_x , V_y , and V_z . **D 653, D18**

locating boss—an integral part of the case used to align the lock in mounting (not used in all locks). **F 471, F12**

location accuracy, *n*—a value determined by comparison of the actual position of an AE source (or simulated AE source) to the computed location. **E 1316, E07**

location, cluster, *n*—a location technique based upon a specified amount of AE activity located within a specified length or area, for example: 5 events within 12 linear inches or 12 square inches. **E 1316, E07**

location, computed, *n*—a source location method based on algorithmic analysis of the difference in arrival times among sensors.

NOTE—Several approaches to computed location are used, including linear location, planar location, three dimensional location, and adaptive location.

(a) *linear location, *n**—one dimensional source location requiring two or more channels.

(b) *planar location, *n**—two dimensional source location requiring three or more channels.

(c) *3D location, *n**—three dimensional source location requiring five or more channels.

(d) *adaptive location, *n**—source location by iterative use of simulated sources in combination with computed location. **E 1316, E07**

location, continuous AE signal, *n*—a method of location based on continuous AE signals, as opposed to hit or difference in arrival time location methods.

NOTE—This type of location is commonly used in leak location due to the presence of continuous emission. Some common types of continuous signal location methods include signal attenuation and correlation analysis methods.

(a) *signal attenuation-based source location, *n**—a source location method that relies on the attenuation versus distance phenomenon of AE signals. By monitoring the AE signal magnitudes of the continuous signal at various points along the object, the source can be determined based on the highest magnitude or by interpolation or extrapolation of multiple readings.

(b) *correlation-based source location, *n**—a source location method that compares the changing AE signal levels (usually waveform based amplitude analysis) at two or more points surrounding the source and determines the time displacement of these signals. The time displacement data can be used with conventional hit based location techniques to arrive at a solution for the source site. **E 1316, E07**

location marker—a number or letter made of lead (Pb) or other highly radiation attenuative material that is placed on an object to provide traceability between a specific area on the image and the part. **E 1316, E07**

location, source, *n*—any of several methods of evaluating AE data to determine the position on the structure from which the AE originated. Several approaches to source location are used, including zone location, computed location, and continuous location. **E 1316, E07**

location, zone, *n*—any of several techniques for determining the

general region of an acoustic emission source (for example, total AE counts, energy, hits, and so forth).

NOTE—Several approaches to zone location are used, including independent channel zone location, first hit zone location, and arrival sequence zone location.

(a) *independent channel zone location, n*—a zone location technique that compares the gross amount of activity from each channel.

(b) *first-hit zone location, n*—a zone location technique that compares only activity from the channel first detecting the AE event.

(c) *arrival sequence zone location, n*—a zone location technique that compares the order of arrival among sensors. **E 1316, E07**

lock case—the housing into which all components parts are installed or attached. **F 471, F12**

lockdown—adhesion of original or electrostatic copy to bearing surface as due to static charges. **F 335, F05**

locking ability—characteristic intentionally manufactured or added to a fastener to resist loosening. **F 1789, F16**

lock signal (NMR)—the NMR signal used to control the field-frequency ratio of the spectrometer. It may or may not be the same as the reference signal. **E 131, E13**

lockstitch, n—*inhome sewing*, a type of stitch formed with two threads: one needle thread and one bobbin thread interlaced with each other. **D 5646, D13**

lock stitch—a double stitch used at beginning and end of manufacturer's seam on corrugated boxes. **F 592, F16**

lock-strip cavity—the groove in the face of a lock-strip gasket designed to receive and retain the lock-strip. **C 717, C24**

lock-strip gasket, n—*in building construction*, a gasket in which sealing pressure is attained by inserting a keyed locking strip into a mating keyed groove in one face of the gasket. **C 717, C24**

lock strip or locking strip—the strip that is designed to be inserted in the lock-strip cavity to force the lips against material placed in the channel. **C 717, C24**

lockup, n—*of a wheel*, the condition of a wheel in which its rotational velocity about the wheel spin axis is zero and it is prevented from rotating in the presence of applied wheel torque. **F 538, F09**

loess—a uniform aeolian deposit of silty material having an open structure and relatively high cohesion due to cementation of clay or calcareous material at grain contacts. **D 653, D18**

loess—a buff-colored wind-blown deposit of fine silt. **D 7099, D18**

loftiness—the measure of the loose specific volume of an asbestos fiber. This is inversely related to the dry bulk density. **D 2946, C17**

log—a section of the trunk of a tree usually referring to a length suitable for conversion to commercial products. **D 9, D07**

logarithmic (acoustic emission) amplitude distribution(*V*)—see **distribution, logarithmic(acoustic emission) amplitude**. **E 1316, E07**

logarithmic decrement—the natural logarithm of the ratio of any two successive amplitudes of like sign, in the decay of a single-frequency oscillation. **D 653, D18**

logarithmic decrement—*in dynamic mechanical measurement*, natural logarithm of the ratio of any two (or more) successive amplitudes of like sign, in the decay of a single

$$\text{oscillation: } \Delta = \frac{1}{k} \ln \frac{A_n}{A_{(n+k)}}$$

where:

A_n and $A_{(n+k)}$ are amplitudes (in radians of rotation) of two oscillations and K is the number of oscillations separating the two amplitude measurements. **E 1142, E37**

logarithmic decrement, Δ (*in dynamic mechanical measurement*)—the natural logarithm of the ratio of any two (or more) successive amplitudes of like sign, in the decay of single frequency oscillation:

$$\Delta = \frac{1}{k} \ln \frac{A_n}{A_{n+k}}$$

where A_n and A_{n+k} are amplitudes (in radians of rotation) of two oscillations, and k is the number of oscillations separating the two amplitude measurements. **D 4092, D20**

logbook, n—notebook that accompanies each XRF analyzer instrument, for recording such information as daily performance, maintenance problems, and average reading time. **E 631, E06**

log file, n—a usually free form set of text or data, or both, that sequentially lists or enumerates events, many of which may be independent, while some may be chained or interrelated. **E 867, E17**

logger tires, n—a special tire designed for the logging industry. **D 5681, D34**

log normal distribution—drop size distribution described by the following equation:

$$f_n(D) = (1/\sqrt{\pi}) \int_{-\infty}^{K \times \ln(D/D_{gm})} \exp(-z^2) dz$$

where:

$f_n(D)$ = the number fraction of drops of diameter less than D ,

D_{gm} = the geometric mean diameter,

K = $1/[(\sqrt{2})\sigma_{gm}]$, and

σ_{gm} = the standard deviation of the geometric mean diameter. **E 1620, E29**

log-normal distribution—the distribution of N when $\log(N)$ is normally distributed. (Accordingly, it is convenient to analyze $\log(N)$ using methods based on the normal distribution.) **E 1823, E08**

logo—see **logotype**. **F 1457, F05**

logotype, n—a single image which generally contains a symbol, trademark, or identifying name of a business, association, or product. (See **logo**.) **F 1457, F05**

log phase, n—the period of growth of microorganisms during which cells divide at a positive constant rate. **D 4175, D02**

log run—in relation to lumber manufacture in softwoods, the total yield of a log or group of logs in lumber without any grading; in hardwood, certain lower grades are excluded. **D 9, D07**

log scale—the measure of the potential lumber content of a log or logs based on particular cuttings and sizes, with the measure varying according to the exact nature of the log scale or log rule involved. **D 9, D07**

long—a comparative term signifying a slow-setting glass. **C 162, C14**

long barb, n—barbs having an average length of $1.2 \pm 5\%$. **F 1379, F14**

long float, n—*forinflatable restraints fabrics*, a small change in the weave pattern where a warp or filling yarn extends over six or more filling or warp yarns with which it should be interlaced. **D 6799, D13**

longitudinal—generally, the direction parallel to the grain of wood. Sometimes the long axis of a wood specimen. **D 9, D07**

longitudinal corrugation—a condition similar to dish except that the sense of curvature changes sign at least once across the width of the strip. **B 846, B05**

longitudinal cracking, n—cracks in the pavement predominantly parallel to the direction of traffic. **E 867, E17**

longitudinal cracking, n—cracks in the pavement predominantly parallel to the direction of traffic. **E 1778, E17**

longitudinal direction—that direction which is parallel to the direction of maximum elongation in a worked material. (See also **cross direction**.) **E 7, E04**

longitudinal element, n—a component whose long axis is parallel, or nearly so, to the long axis of the spine. **F 1582, F04**

longitudinal force [F], *n*—*of a tire*, the component of the tire force vector in the X' direction. **F 538, F09**

longitudinal force, tire (F_x)—the component of a tire force vector in the X' direction. **E 867, E17**

longitudinal groove, n—an endless groove that has its major (long)

longitudinal groove, *n*

dimension substantially parallel to the tire circumferential centerline; the walls of the groove may not be perfectly parallel planes, but may have short alternating sections of the wall at angles to the tire circumferential centerline. **F 538, F09**

longitudinal magnetization—a magnetic field wherein the lines of force traverse the part in a direction essentially parallel with its longitudinal axis. **E 1316, E07**

longitudinal profile, *n*—the perpendicular deviations of the pavement surface from an established reference parallel to the lane direction, usually measured in the wheel tracks. **E 867, E17**

longitudinal profile—the perpendicular deviations of the pavement surface from an established reference parallel to the lane direction, usually measured in the wheel tracks. (See Terminology E 867). **E 867, E17**

longitudinal profile measurement, *n*—a series of elevation values taken at a constant interval along a wheel track. **E 867, E17**

longitudinal reinforcement—reinforcement, in a concrete pipe or box section, running parallel to the intended flow. **C 822, C13**

longitudinal rod wave—see **compression wave**. **D 653, D18**

longitudinal slip velocity [LTI], *n*—the effective rolling radius multiplied by the difference between the spin velocity (in rad/unit time) of a driven or braked tire and that of a free rolling tire when each is traveling in a straight line. **F 538, F09**

longitudinal sonic pulse, *n*—a sonic pulse in which the displacements are in the direction of propagation of the pulse. **C 709, D02**

longitudinal sonic pulse, *n*—a sonic pulse in which the displacements are in the direction of propagation of the pulse. **D 4175, D02**

longitudinal thread—multiple flutes parallel or nearly parallel to nail axis, rolled onto nail shank, having a lead angle of or closely approaching 90°. **F 547, F16**

longitudinal wave—those waves in which the particle motion of the material is essentially in the same direction as the wave propagation. (E 494) **E 1316, E07**

longitudinal wave, v_l (LT⁻¹)—wave in which direction of displacement at each point of medium is normal to wave front, with propagation velocity, calculated as follows:

$$v_l = \sqrt{(E/\rho)[(1 - \nu)/(1 + \nu)(1 - 2\nu)]} = \sqrt{(\lambda + 2\mu)/\rho}$$

where:

- E = Young's modulus,
- ρ = mass density,
- λ and μ = Lamé's constants, and
- ν = Poisson's ratio.

D 653, D18

long knot, *n*—*inraw silk*, knots which have loose ends from 3 to 25 mm in length. **D 123, D13**

long knot, *n*—*inraw silk*, knots which have loose ends from 3 to 25 mm in length. **D 3990, D13**

long line, *n*—flax fiber bundles that have a minimum length of 50 cm. **D 123, D13**

long line, *n*—*influx*, flax fiber bundles that have a minimum length of 50 cm. **D 6798, D13**

long-line current—electric current through the earth from an anodic to a cathodic area of a continuous metallic structure. (Usually used only where the areas are separated by considerable distance and where the current results from concentration-cell action.) **G 15, G01**

long magazine—magazine providing space for more than regular capacity of a particular tool style. **F 592, F16**

long point—point with 20° or smaller included angle for 0.040 to 0.065-in. wire diameter; 25° or smaller included angle for 0.072 to 0.225-in. wire diameter; 30° or smaller included angle for 0.250 to 0.325-in. wire diameter. **F 547, F16**

long slug, *n*—*inraw silk*, a slug which exceeds 10 mm (½ in.) in length or which is very much larger in diameter than the yarn. **D 123, D13**

long slug, *n*—*inraw silk*, a slug which exceeds 10 mm (½ in.) in length or which is very much larger in diameter than the yarn. **D 3990, D13**

long-term hydrostatic strength (LTHS)—the hoop stress that when applied continuously will cause failure of the pipe at 100 000 h (11.43 years). **F 412, F17**

long term standard deviation, σ_{LT} , *n*—sample standard deviation of all individual (observed) values taken over a long period of time. **E 456, E11**

long-term strength—the failure strength of a material after a long period of creep deformation. **D 7099, D18**

long wave (quer wave), W (LT⁻¹)—dispersive surface wave with one horizontal component, generally normal to the direction of propagation, which decreases in propagation velocity with increase in frequency. **D 653, D18**

loom fly, *n*—waste fibers created during weaving, that are woven into a fabric. **D 123, D13**

loom fly, *n*—waste fibers created during weaving that are woven into a fabric. (*Syn.* flyer) **D 3990, D13**

loop, *n*—*for inflatable restraint fabrics*, a continuous yarn that curls back on itself and protrudes from the surface of the fabric. (*Syn.* kink, snag.) **D 6799, D13**

loop, *n*—a formation that curves and crosses itself. **E 2195, E30**

loopback test, *n*—a test in which a known signal is sent from a source to a remote device or interface, and the received signal is then returned and checked against the transmitted signal to verify that no change occurred. **F 1457, F05**

loop breaking force, *n*—*in tensile testing*, the breaking force of a specimen consisting of two lengths of strand from the same supply looped together in a specified configuration and mounted between the clamps of a tensile testing machine. (Compare **loop breaking strength**. See also **breaking force**.) **D 123, D13**

loop breaking force, *n*—*in tensile testing*, the breaking force of a specimen consisting of two lengths of strand from the same supply looped together in a specified configuration and mounted between the clamps of a tensile testing machine. (Compare **loop breaking strength**. See also **breaking force**.) **D 4848, D13**

loop breaking load, *n*—deprecated term. Use the preferred term, **loop breaking force**. **D 4848, D13**

loop-breaking strength, *n*—strength expressed in terms of loop breaking force. (See **loop breaking force, strength**.) **D 123, D13**

loop breaking strength, *n*—strength expressed in terms of loop breaking force. (See also **loopbreaking force, strength**.) **D 4848, D13**

loop cap—See **line post cap**. **F 552, F14**

looped yarn—See **kink**. **D 3990, D13**

loop pile floor covering, *n*—a pile yarn floor covering in which the pile is composed only of uncut loops. **D 123, D13**

loop pile yarn floor covering, *n*—a pile yarn floor covering in which the pile is composed only of uncut loops. **D 123, D13**

loop pile yarn floor covering, *n*—a pile yarn floor covering in which the pile is composed only of uncut loops. **D 5684, D13**

loop spacer wire, *n*—wire that is attached loop-to-loop (or on consecutive attachment points) on the barbed tape to preset the loop spacing. **F 1379, F14**

loop tension, *n*—*in elastic material testing*, the total tension at any specified extension that is exerted on a specimen in a loop formation. **D 123, D13**

loop tension, *n*—*in elastic material testing*, the total tension at any specified extension that is exerted on a specimen in a loop formation. **D 4850, D13**

loopy, *adj*—a descriptive term for yarns having randomly sized loops of fibers or filaments protruding from the yarn surface. **D 123, D13**

loopy, *adj*—a descriptive term for yarns having randomly sized loops of fibers or filaments protruding from the yarn surface. **D 4849, D13**

- loopy edge*—See **loopy selvage**. **D 3990, D13**
- loopy selvage**, *n*—an improperly woven selvage of uneven width or a selvage containing irregular filling loops extending beyond the outside selvages. **D 123, D13**
- loopy selvage**, *n*—an improperly woven selvage of uneven width or a selvage containing irregular filling loops extending beyond the outside edges. (*Syn.* beaded selvage, corded selvage, loopy edge, rough selvage) **D 3990, D13**
- loose course**, *n*—in knitted fabrics, a row of loops in the widthwise direction that is larger, looser, or longer than the stitches in the main body of the fabric. **D 123, D13**
- loose course**, *n*—in knitted fabrics, a row of loops in the widthwise direction that is larger, looser, or longer than the stitches in the main body of the fabric. **D 3990, D13**
- loose edge*—See **slack selvage**. **D 3990, D13**
- loose fill insulation**, *n*—insulation in granular, nodular, fibrous, powdery, or similar form designed to be installed by pouring, blowing, or hand placement. **C 168, C16**
- loose-laid membrane**—a ballasted roofing membrane that is attached to the substrate only at the edges and penetrations through the roof. **D 1079, D08**
- loose paint**—see **deteriorating paint**. **E 631, E06**
- loose pick*—See **slack pick**. **D 3990, D13**
- loose RO**—see **nanofiltration**. **D 6161, D19**
- loose side**—in knife-cut veneer, the side of the sheet that was in contact with the knife as the sheet was being cut, and that contains cutting checks. (See **tight side**.) **D 1038, D07**
- losing stream**, *n*—a stream or reach of a stream in which water flows from the stream bed into the ground. **D 653, D18**
- loss angle*, *n*—synonym for **delta** (δ). **D 1566, D11**
- loss angle**, δ —the angle whose tangent is the dissipation factor or $\arctan \kappa''/\kappa'$. It is also the difference between 90 deg and the phase angle. **D 2864, D27**
- loss angle*, δ —see **phase angle**. **D 4092, D20**
- loss angle*, δ —see **phase angle**. **E 1142, E37**
- loss angle, dielectric*—same as **loss angle**. **D 2864, D27**
- loss angle, magnetic**, γ —the mean angle by which the fundamental component of core loss current leads the fundamental component of exciting current, *I*, in an inductor having a ferromagnetic core.
- NOTE—The loss angle, γ , is the complement of the hysteretic angle, β .
- NOTE—Because of hysteresis, the instantaneous value of the loss angle will vary during the cycle of *SCM* excitation; however, γ is taken to be the mean effective value of this angle. **A 340, A06**
- loss angle (phase defect angle)**, δ , *n*—the angle whose tangent is the dissipation factor or $\arctan \kappa''/\kappa'$. It is also the difference between 90° and the phase angle. **D 1711, D09**
- loss factor*, *n*—synonym for **tandel** ($\tan\delta$) (η). **D 1566, D11**
- loss factor**—obsolete term; see **loss index**. **D 1711, D09**
- loss factor*—see **tan δ** . **D 4092, D20**
- loss factor*—see **tangent delta**. **E 1142, E37**
- loss factor**, ϵ'' —the magnitude of the imaginary part of the complex permittivity. (See **permittivity, complex**.) **E 1142, E37**
- loss index*—the same as **loss index, dielectric**. **D 2864, D27**
- loss index, dielectric**, $\kappa''(\epsilon'')$ —the product of the “relative permittivity” and the dissipation factor and is a measure of the ac dielectric loss. It is also the magnitude of the imaginary part of the “relative complex permittivity.” **D 2864, D27**
- loss index**, $\kappa''(\epsilon'')$, *n*—the magnitude of the imaginary part of the relative complex permittivity. It is the product of the relative permittivity and dissipation factor. **D 1711, D09**
- loss modulus**— $M''(\text{Pa})$ —[loss compliance O'' (Pa^{-1}):] the imaginary part of the complex modulus (compliance). **D 4092, D20**
- loss modulus**—quantitative measure of energy dissipation, defined as the ratio of stress 90° out of phase with oscillating strain to the magnitude of strain, (D 4092, D20). **E 1142, E37**
- loss of back reflection**—an absence or significant reduction in the amplitude of the indication from the back surface of the part under examination. **E 1316, E07**
- loss of circulation**—the loss of drilling fluid into strata to the extent that circulation does not return to the surface. **D 653, D18**
- loss of tuft definition**, *n*—for pile yarn floor coverings, the bursting, opening, and untwisting of pile yarn, decrimping of the fibers in the surface pile, or any combination of these. **D 123, D13**
- loss of tuft definition**, *n*—for pile yarn floor coverings, the bursting, opening, and untwisting of pile yarn, decrimping of the fibers in the surface pile, or any combination of these. **D 5684, D13**
- loss on ignition**—the percent loss in weight of a material on being calcined at a temperature sufficiently high, and for a time long enough, to achieve constant weight without melting, expressed as a percent of the initial weight of the dry material (without free moisture). **C 242, C21**
- loss on ignition (LOI)**, *n*—the weight change of a material when it is heated under prescribed conditions. The LOI level for coal combustion products is determined in accordance with ASTM Method D 3178 Instrumental Method. **E 2201, E50**
- loss rate**—rate at which oil is lost past a boom (m^3/h). **F 818, F20**
- loss tangent*—same as **dissipation factor**. **D 2864, D27**
- loss tangent*—see **tan delta**. **D 4092, D20**
- loss tangent*—in dielectric measurements, see **tangent delta**. **E 1142, E37**
- lot**, *n*—a finite quantity of a given product manufactured under production conditions that are considered uniform. **A 644, A04**
- lot**, *n*—a finite quantity of a given product, produced under conditions that are considered uniform for sampling purposes. **A 902, A05**
- lot**, *n*—a definite quantity of product manufactured under conditions that are considered uniform. **A 941, A01**
- lot**, *n*—a specified quantity of product manufactured under traceable, controlled conditions as agreed between producer and user. **B 243, B09**
- lot**, *n*—a quantity of metal made under conditions that, for sampling purposes, are considered uniform. **B 899, B02**
- lot**, *n*—a quantity of a single material that is considered as a unit, such as that manufactured during a single production run, offered at one time for sale, or offered at one time for inspection, or the contents of one or more transport containers drawn from one or more bins of material from a single production run, sequentially packaged from one or more bins, or a group of samples secured from one of the above. **C 219, C01**
- lot**—an assemblage of concrete pipe, all being of like size, material, and strength designation, manufactured by the same process. The lot size may differ from the quantity designated in the contract or order. **C 822, C13**
- lot**—specific group of clay products having characteristics of sufficient similarity that individual specimens selected from that group may be considered representative of the whole group. **C 896, C04**
- lot**, *n*—in conduit, each 1000 lengths of conduit or less, of a given class, type and size manufacture on each machine during a 24-h period. **C 1154, C17**
- lot**, *n*—in nonpressure sewer pipe, for pipe sizes 150 mm (6 in.) and smaller, those lengths of pipe of that size, class and type manufactured during the same work shift. For pipe sizes 200 mm (8 in.) through 525 mm (21 in.), each 300 lengths of pipe or less, of identical size, class, and type manufactured on each machine during a 24-h period. For pipe sizes larger than 525 mm (21 in.) each 300 lengths of pipe or less, of identical size, class, and type manufactured on each machine during a period of consecutive working days not exceeding seven days. **C 1154, C17**
- lot**, *n*—in underdrain pipe, each 400 m (1300 ft) of pipe or less of a given type and size manufactured on each machine during a 24-h period. **C 1154, C17**
- lot**—any number of concrete masonry units or related units designated

lot

- by the producer of any configuration or dimension manufactured by the producer using the same materials, concrete mix design, manufacturing process, and curing method. **C 1209, C15**
- lot, n**—a discrete quantity of coal for which the overall quality to a particular precision needs to be determined. **D 121, D05**
- lot, n**—*in acceptancesampling*, that part of a consignment or shipment consisting of material from one production lot. **D 123, D13**
- lot, n**—*in acceptancesampling of cotton*, the main stock, supply, or source of fibers to be sampled. **D 123, D13**
- lot, n**—*in bonded, fused, or laminated fabric*, a single run on the bonding or laminating machine in which the processing is carried out without stopping or changing processing conditions, and consisting of either a single dye lot or a single gray goods lot. **D 123, D13**
- lot, n**—*in wool top*, the entire quantity, not exceeding 20 000 lb (9100 kg) of a single combing, that comprises a single unit for which a test for neps, vegetable matter, or colored fiber, or all three combined is desired. **D 123, D13**
- lot**—in roofing, (1) production lot—all material produced in one eight-hour shift of the same type (and color when applicable); (2) *delivery lot*—all material of the same type delivered at one time by one truck or railroad car. **D 1079, D08**
- lot**—(“inspection lot”)—a collection of units of product from which a sample is to be drawn and inspected to determine conformance with the acceptability criteria, and is to be accepted or rejected as a whole. It may differ from a collection of units designated as a lot for other purposes for example, production, shipment, etc. **D 1517, D31**
- lot, n**—a mass or collection of articles of similar composition and characteristics. **D 1566, D11**
- lot, n**—an entity of electrical insulating material or product which, insofar as is practicable, consists of a single type, grade, class, size, or composition that was manufactured under essentially the same conditions and is available to the user for sampling at one time. **D 1711, D09**
- lot, n**—*of paper or paperboard*, a quantity of paper or paperboard of a single type, grade, grammage, thickness, and composition about which it is desired to make a judgment (usually as to conformance to specification) by examining or testing a small fraction called the sample. **D 1968, D06**
- lot, n**—*for asbestos*, not fewer than 2 and not more than 2000 bags of asbestos fiber of the same type and grade offered at any one time for delivery or testing. **D 2946, C17**
- lot, n**—*for asbestos-cementconduit*, each 1000 lengths of conduit or less, of a given class, type and size manufactured on each machine during a 24-h period. **D 2946, C17**
- lot, n**—*for asbestos-cementnonpressure sewer pipe*, for pipe sizes 150 mm (6 in.) and smaller, those lengths of pipe of that size, class and type manufactured during the same work shift. For pipe sizes 200 through 525 mm (8 through 21 in.), each 300 lengths of pipe or less, of identical size, class and type manufactured on each machine during a 24-h period. For pipe sizes larger than 525 mm (21 in.) each 300 lengths of pipe or less, of identical size, class and type manufactured on each machine during a period of consecutive working days not exceeding seven days. **D 2946, C17**
- lot, n**—*for asbestos-cementpressure pipe, storm drain, and transmission pipe*, for pipe sizes 525 mm (21 in.) in diameter and smaller, each 300 lengths of pipe or less, of identical class and size manufactured on each machine during a 24-h period. For pipe larger than 535 mm (21 in.), each 300 lengths of pipe or less, of identical class and size manufactured on each machine during a period of consecutive working days not exceeding seven days. **D 2946, C17**
- lot, n**—a quantity of carbon black that is essentially uniform in composition and characteristics. **D 3053, D24**
- lot, n**—a definite quantity of a product or material accumulated under conditions that are considered uniform for sampling purposes. **D 4175, D02**
- lot, n**—a unit of production, or a group of other units or packages, taken for sampling or statistical examination, having one or more common properties and being readily separable from other similar units. **D 4439, D35**
- lot, n**—*in acceptancesampling*, that part of a consignment or shipment consisting of a material from one production lot. **D 4845, D13**
- lot, n**—*in wool, top*, the entire quantity, not exceeding 20 000 lb (9100 kg) of a single combing, that comprises a single unit for which a test for neps, vegetable matter or colored fiber, or all three combined is desired. **D 4845, D13**
- lot, n**—a large designated quantity of a material which can be represented by a properly selected gross sample. **D 5681, D34**
- lot**—a large designated quantity of RDF-3. **D 5681, D34**
- lot**—a large designated quantity (greater than the quantity of the final sample) of RDF which can be represented by a properly selected gross sample. **D 5681, D34**
- lot, n**—*in acceptance sampling of cotton*, the main stock, supply, or source of fibers to be sampled. **D 7139, D13**
- lot**—a unit of material processed at one time and subjected to similar processing variables. **E 7, E04**
- lot, n**—*in sampling*, a collection of material regarded as a unit. **E 135, E01**
- lot, n**—a quantity of thermocouples manufactured from the same continuous length of mineral-insulated, metal-sheathed thermocouple cable. **E 344, E20**
- lot, n**—that quantity of finished thermocouple material manufactured from: tubing from the same heat; wire from the same spool and heat; insulation from the same batch; assembled and processed together under controlled production conditions, to the required final outside diameter. **E 344, E20**
- lot**—a definite quantity of a product or material accumulated under conditions that are considered uniform for sampling purposes. **E 456, E11**
- lot**—a batch or fraction thereof, in which each unit is identical in chemical composition, physical properties, and dimensions. **E 631, E06**
- lot**—a designated quantity of refuse-derived fuel that can be represented by a properly selected gross sample. **E 856, D34**
- lot**—a batch or fraction thereof, in which each unit is identical in chemical composition, physical properties, and dimensions. **E 1749, E06**
- lot**—an aggregation of documents, records, articles, or actions selected for review due to common characteristics; often used in sales. For evaluation of the lot, all characteristics for which a lot is tested must be common to all units within the lot. Also referred to as universe or population. **E 2135, E53**
- lot, n**—a collection of units of product manufactured under conditions of production that are considered uniform. **F 412, F17**
- lot, n**—a definite quantity of a product or material accumulated under conditions that are considered uniform for sampling. **F 1773, F08**
- lot**—quantity of product of one part number that has been processed essentially under the same conditions from the same heat treatment lot and produced from one mill heat of material and submitted for inspection at one time. **F 1789, F16**
- lot number, n**—a unique alphanumeric designation for a lot that is traceable to manufacturing records. **B 899, B02**
- lot number, n**—the number used by a producer to identify an entity of electrical insulating material or product. **D 1711, D09**
- lot number, n**—see **batch number**. **E 2363, E55**
- lot quality protection**—a type of protection in which there is prescribed some chosen value of limiting percent defective in a lot (lot tolerance percent defective, (LTPD)) and also some chosen value for the probability (called the consumer’s risk) of accepting a submitted lot that has a percent defective equal to the lot tolerance percent defective. **E 456, E11**
- lot sample, n**—one or more shipping units taken at random to represent an acceptance sampling lot and used as a source of laboratory samples. (See **bulk sample**.) **D 123, D13**
- lot sample, n**—*incotton*, a relatively large sample taken in the field to

represent a consignment, shipment, or lot, for use in the preparation of the laboratory samples. **D 123, D13**

lot sample, *n*—a quantity of carbon black selected to represent a lot for testing purposes and taken in accordance with Practice D 1799 or D 1900. **D 3053, D24**

lot sample, *n*—one or more shipping units taken at random to represent an acceptance sampling lot and used as a source of laboratory samples. **D 4439, D35**

lot sample, *n*—one or more shipping units taken at random to represent an acceptance sampling lot and used as a source of laboratory samples. **D 4845, D13**

lot sample, *n*—*in cotton*, a relatively large sample taken in the field to represent a consignment, shipment, or lot, for use in the preparation of the laboratory samples. **D 7139, D13**

lot sampling inspection—random sample drawn from a lot and performing specified inspections and tests to determine the acceptability of the lot. **F 1789, F16**

lot sampling unit, *n*—a portion of material taken to represent a lot and used as a source of laboratory sampling units or test specimens, or both. (See **primary sampling unit**.) **D 123, D13**

lot size—the number of units of product in a lot. **D 1517, D31**

lot (solid sample)—a discrete quantity of material. It may contain a single batch or several batches or be the product of continuous process broken into units on the basis of time or shipment. It is very desirable that individual batches in a lot be specifically identified so that they may become individual or stratified units for inspection. **E 1547, E15**

lot tolerance fraction defective, *n*—the process average at which quality is considered barely tolerable; the process average at which the risk of acceptance is called the consumer's risk. **D 123, D13**

lot tolerance percent defective (LTPD)—the percentage of defective units in a batch or lot for which, for purposes of acceptance sampling, the consumer wishes the probability of acceptance to be restricted to a specified low value, specifically 10 % for this practice. This is also referred to by the more general term *limiting quality* taken at 10 % consumer risk. **E 456, E11**

louver blade, *n*—a shaped asbestos-cement product used to guard ventilation ports. **C 1154, C17**

louver blade—a shaped asbestos-cement product used to guard ventilation ports. **D 2946, C17**

louver cloth, *n*—*in coated glass yarn fabrics*, a woven netting having an approximately even-spaced mesh of fewer than 12 by 12 yarns per 25.4 mm (1 in.). **D 123, D13**

louver cloth, *n*—*in coated glass yarn fabrics*, a woven netting having an approximately even-spaced mesh of fewer than 12 by 12 yarns per 25 mm (1 in.). **D 7018, D13**

Lovibond color system, *n*—a system of color specification based on the optical densities of yellow, red, and blue filter glasses required to modify light from a standard source to obtain light matching some given light. **E 284, E12**

Lovibond tintometer, *n*—instrument for evaluating the colors of materials by visual comparison with the colors of glasses of the Lovibond color system. **E 284, E12**

low-acid food—any food, other than alcoholic beverages, with a finished equilibrium pH greater than 4.6 and a water activity (a_w) greater than 0.85. Tomatoes and tomato products having a finished equilibrium pH less than 4.7 are not classed as low-acid foods. **F 17, F02**

low-alloy steel, *n*—a steel, other than a carbon steel or an interstitial-free steel, that conforms to a specification that requires the minimum content for each specified alloying element to be lower than the applicable limit in the definition for alloy steel. **A 941, A01**

low carbon martensite—as-quenched phase of low carbon steels, particularly to which Boron has been intentionally added to increase the hardenability of the material, and some stainless steels. **F 1789, F16**

low-carbon-steel—See **steel grades**. **F 547, F16**

low-center polygon—an ice wedge polygon in which thawing of ice-rich permafrost has left the central area in a relatively depressed condition. **D 7099, D18**

low-density particleboard—a particleboard as previously defined with a density of less than 640 kg/m³ (40 lb/ft³) based on a reported moisture content at the time of weight and volume measurements. **D 1554, D07**

low-density polyethylene plastics (LDPE), *n*—those branched polyethylene plastics, having a standard density of 0.910 to 0.925 g/cm³. (D20) **F 412, F17**

low density polyethylene plastics, (LDPE) *n*—those branched polyethylene plastics, q. v., having a standard density of 0.910 to 0.925 g/cm³. **D 883, D20**

low elongation ropes, *n*—ropes with low elongation or stretch properties used principally for static loads. Low elongation ropes sometimes are referred to as *static ropes*. **F 1773, F08**

low-energy gamma radiation—gamma radiation having energy less than 200 keV. **E 1316, E07**

low-energy photon radiation—gamma- and X-ray photon radiation having energy less than 200 keV (excluding visible and ultraviolet light). **E 1316, E07**

lower body, *n*—that part of the human body which includes all portions between the waist and feet, not to include the feet. **F 1494, F23**

lower capability index (CPL), *n*—the difference between the sample mean (\bar{x}) and the lower specification limit divided by three times the standard deviation.

$$CPL = \frac{(\bar{x} - LSL)}{3 \times s}$$

A 644, A04

lower control limit (LCL), *n*—control limit for points below the central line. **E 456, E11**

lower critical point—in a phase diagram, a specified value of composition, temperature and pressure or combinations thereof occurring as a minimum in temperature, or pressure, for the coexistence of two, or more, conjugate phases and at which the conjugate phases become identical. **E 7, E04**

lower heating value, LHV, *n*—a synonym for net calorific value. **D 5681, D34**

lower heating value (LHV)—a synonym for net calorific value. **E 856, D34**

lower limit of flammability or lower flammable limit (LFL), *n*—the minimum concentration of a combustible substance that is capable of propagating a flame through a homogeneous mixture of the combustible and a gaseous oxidizer under the specified conditions of test. **E 1445, E27**

lower process capability index, C_{pkl} , *n*—index describing process capability in relation to the lower specification limit. **E 456, E11**

lower process performance index, P_{pkb} , *n*—index describing process performance in relation to the lower specification limit. **E 456, E11**

lower range value, *n*—the lowest quantity that an instrument is adjusted to measure. **E 344, E20**

lower specification limit (LSL), *n*—the lowest specified value. **A 644, A04**

lower temperature limit of flammability, (LTL), *n*—the lowest temperature, corrected to a pressure of 101.3 kPa (760 mm Hg, 1013 mbar), at which application of an ignition source causes a homogeneous mixture of a gaseous oxidizer and vapors in equilibrium with a liquid (or solid) specimen to ignite and propagate a flame away from the ignition source under the specified conditions of test. **E 1445, E27**

lower tolerance limit (LTL) (lower specification limit), *n*—a tolerance limit that defines the lower conformance boundary for an individual unit of a manufacturing or service operation. **E 456, E11**

lower valve or seal valve, *n*

lower valve or seal valve, *n*—a valve that restricts the flow of product down the dip tube during the pressurization stage and promotes the flow of product from the container into the body during the filling stage. **D 6655, D10**

lower yield strength, *LYS* [FL^{-2}], *n*—the minimum stress recorded during discontinuous yielding, ignoring transient effects. **E 6, E28**

lowest-observed-effect concentration (LOEC)—in a toxicity test, the tested concentration of one or more chemicals immediately above the highest tested concentration that did not result in a statistically significant change in the particular toxicological variable compared to that value in the control (s). **E 943, E47**

low-flow sampling—a ground water sampling technique where the purge and sampling rates do not result in significant changes in formation seepage velocity. **D 5681, D34**

low point, *Low*—the point on the reloading portion of an unloading-reloading cycle where the force is one half the high point force. **E 1823, E08**

low-power stretch, *n*—that property of a fabric whereby it exhibits high fabric stretch and good recovery from low tension **D 123, D13**

low power stretch, *n*—that property of a fabric whereby it exhibits high fabric stretch and good recovery from low tension. **D 123, D13**

low-power stretch, *n*—that property of a fabric whereby it exhibits high fabric stretch and good recovery from low tension. **D 4850, D13**

low-pressure air test—testing procedure, utilizing compressed air, intended to determine the acceptability of a pipe section, joint, or pipeline. **C 822, C13**

low-pressure molding, *n*—a method of molding or laminating in which the pressure is 1400 kPa (200 psi) or less. **D 883, D20**

low-pressure steam cooker—equipment wherein the cooking compartment operates between 3 and 9.9 psig. See **steam cooker**. **F 1827, F26**

low profile tile, *n*—tile having a rise to width ratio equal to, or less than 1:4. **C 43, C15**

low reflecting coating—a dielectric coating applied to an air-glass surface to reduce light reflection to a minimum. **E 7, E04**

low-silicate coolant concentrate, *n*—an engine coolant concentrate containing not more than 250 ppm silicon. **D 4725, D15**

low slope, *adj*—in roofing, that which commonly describes an incline of a roof which is 14° (25 % or 3 in./ft) or less. **D 1079, D08**

low-sloped surfaces—surfaces with a slope smaller than 9.5°. The roofing industry has widely accepted a slope of 2:12 or less as a definition of low-sloped roofs. This corresponds to a slope of approximately 9.5° (16.7 %). **E 631, E06**

low stretch rope (rope systems), *n*—a class of ropes that is used for rescue work and rappelling with an elongation greater than 6 % and less than 10 % at 10 % of its minimum breaking strength. **F 1490, F32**

low temperature preservation—stabilizing viable or biologically active material by freezing or freeze-drying. **E 1705, E48**

low volatile bituminous coal—See **low volatile bituminous coal** under **rank**. **D 121, D05**

low-voltage power supply, *n*—a source of electrical power which provides voltage at logic levels, usually internal to the component. **F 1457, F05**

LPG—abbreviation for liquefied petroleum gas. **D 4175, D02**

L-radiation—characteristic X-rays produced by an atom when a vacancy in the L-shell is filled by one of the outer electrons. **E 7, E04**

L radiation, *n*—characteristic X rays produced by an atom or ion when a vacancy in the L shell is filled by one of the outer electrons. **E 135, E01**

L-radiation, *n*—characteristic X-rays produced by an atom or ion when a vacancy in the L-shell is filled by one of the outer electrons. **E 631, E06**

LRV—Log Reduction Value—a measure of the particle removal

efficiency of the membrane system expressed as the log of the ratio of the particle concentration in the untreated and treated fluid. For example a 10-fold reduction in particle concentration is an LRV of 1. **D 6161, D19**

L-series—the set of X-ray wavelengths making up L-radiation. **E 7, E04**

L-series, *n*—the set of X-ray wavelengths composed of L radiation. **E 135, E01**

LSI—langelier saturation index, measure of CaCO₃ solubility in brackish waters. See Practice D 3739 and **S&DSI**. **D 6161, D19**

Lubbock nozzle—a variable-area nozzle in which a moveable plunger exposes additional inlet area as pressure increases. **E 1620, E29**

lubricant—a solution that, when applied to glass fibers, facilitates their handling by reducing mutual abrasion. (See also **moldd lubricant**.) **C 162, C14**

lubricant, *n*—any material interposed between two surfaces that reduces the friction or wear between them. **D 4175, D02**

lubricant, *n*—any material interposed between two surfaces that reduces the friction or wear, or both, between them. **D 4175, D02**

lubricant, *n*—any material interposed between two surfaces that reduces friction or wear between them. **D 4175, D02**

lubricant, *n*—(1) a material used to reduce the friction between two mating surfaces that are being joined by sliding contact. (2) an additive that is added to a plastic compound to lower the viscosity or otherwise improve the processing or product characteristics. **F 412, F17**

lubricant, *n*—any material interposed between two surfaces that reduces the friction or wear between them. **G 40, G02**

lubricant base stock, *n*—a liquid that may be used alone as a lubricant, but normally is used as a major ingredient in formulated lubricants. **D 4175, D02**

lubricant bloom—See **bloom**. **D 883, D20**

lubricant (mold), *n*—See **release agent (mold)**, the preferred term. **D 1566, D11**

lubricated, *adj*—in describing an elastomeric test specimen having at least two plane parallel faces and to be tested in compression, one in which the plane parallel faces are separated from plane parallel platens of the apparatus by a lubricant, thereby eliminating, insofar as possible, friction between the elastomer and platens, permitting the contact surfaces of the specimen to expand in area as the platens are moved closer together. **D 1566, D11**

lubricating, *n*—mixing with, or incorporating in, a powder, some agent to facilitate pressing and ejecting the compact from the die body; applying a lubricant to the die walls and punch surfaces. **B 243, B09**

lubricating grease, *n*—a semi-fluid to solid product of a dispersion of a thickener in a liquid lubricant. **D 4175, D02**

lubricating oil, *n*—a liquid lubricant, usually comprising several ingredients, including a major portion of base oil and minor portions of various additives. **D 4175, D02**

lubricity—in *grouting*, the physico-chemical characteristic of a grout material flow through a soil or rock that is the inverse of the inherent friction of that material to the soil or rock; comparable to “wetness.” **D 653, D18**

lubricity, *n*—a qualitative term describing the ability of a lubricant to minimize friction between and damage to surfaces in relative motion under load. **D 4175, D02**

Lüder's lines—markings which appear on the surface of metals stretched past the yield point. The markings are approximately parallel to the direction of maximum shear stress and essentially independent of crystal orientation; also called *stretcher strains*, *flow figures*, *Hartmann lines*. **E 7, E04**

lug—See preferred term **bail**. **D 2050, D13**

lugeon—a measure of permeability defined by a pump-in test or pressure test, where one Lugeon unit is a water take of 1 L/min per metre of hole at a pressure of 10 bars. **D 653, D18**

lugging, *adj*—in *internal combustion engine operation*, characterized

by a combined mode of relatively low-speed and high-power output. **D 4175, D02**

Luggin probe or Luggin-Haber capillary—a device used in measuring the potential of an electrode with a significant current density imposed on its surface. (The probe minimizes the IR drop that would otherwise be included in the measurement and without significantly disturbing the current distribution on the specimen.)

G 15, G01

lumber—the product of the sawmill and planing mill usually not further manufactured other than by sawing, resawing, passing lengthwise through a standard planing machine, crosscutting to length, and matching.

blanked lumber—lumber planed to a size in excess of the corresponding standard-dressed size to permit remanufacture or special use.

boards—lumber less than 2 in. in nominal thickness. Boards less than 6 in. in width may be classified as strips.

common lumber—in softwoods, a general term for nonstress graded lumber that has appearance quality less than select grade but is suitable for general construction and utility purposes.

dimension—lumber from nominal 2 in. through 4 in. thick and 2 or more inches wide.

dressed lumber—lumber that is surfaced by a planing machine on one side (S1S), two sides (S2S), one edge (S1E), two edges (S2E), or any combination of sides and edges (S1S1E, S2S1E, S1S2E, or S4S). Dressed lumber may also be referred to as planed or surfaced.

dressed size—the dimensions of lumber after surfacing with a planing machine. Usually 1/4 or 3/4 in. less than nominal size. The American Softwood Lumber Standard lists standard dressed sizes.

factory and shop lumber—lumber that is produced or selected primarily for manufacture into nonstructural products. It is graded on the basis of the percentage of the area that will produce a limited number of cuttings of a specified minimum size and quality.

finish—lumber suitable for millwork or for the completion of the interior of a building. Chosen particularly because of appearance or ability to accept a high quality finish.

framing lumber—lumber used for the structural members of a building, such as studs and joists.

matched lumber—lumber that is edge or end dressed and shaped to make a close tongued-and-grooved joint at the edges or ends when laid edge-to-edge or end-to-end.

patterned lumber—lumber that is shaped to a pattern in addition to being dressed, matched, or shiplapped, or any combination of these workings.

plain end lumber—worked lumber without end matching or with plain trimming and square ends.

planed lumber—See *dressed lumber*.

remanufactured lumber—lumber that has been further processed to change its size or shape after grading.

resawn lumber—the product of sawing any thickness of lumber to develop thinner lumber. The term as used in commercial transactions is mostly to denote the product of resawing dressed and graded lumber.

ripped lumber—the product of sawing any width of lumber to develop narrower lumber. The term as used in commercial transactions is mostly to denote the product of ripping dressed and graded lumber.

rough lumber—lumber as it comes from the saw prior to any dressing operation.

saw-sized lumber—sawn rough lumber of near-exact, uniform, net size, with a plus or minus sawing tolerance permitted.

select lumber—in softwoods a general term for lumber of good appearance and finishing qualities.

shiplapped lumber—lumber that is edge dressed to make a lapped joint.

shop lumber—see *factory and shop lumber*.

stress-graded lumber—lumber of any thickness and width that is graded for its mechanical properties.

surfaced lumber—see *dressed lumber*.

timbers—lumber 5 or more inches in least dimension.

worked lumber—lumber which, in addition to being dressed, has been matched, shiplapped, or patterned.

yard lumber—lumber generally intended for ordinary construction and general building purposes, without further manufacture, but where design properties are not required. Terminology becoming obsolete. **D 9, D07**

lumber, n—the product of the saw and planing wood mill, not further manufactured than by sawing, resawing, planing, crosscutting to length, and matching.

matched lumber—**lumber** that is shaped to make a close-tongued and grooved joint at its edges or ends

plank, n—a broad board usually more than 1 in. thick, laid with its wide dimension horizontal, and used as a bearing surface.

resawn lumber—rough or surfaced **lumber** that has been divided into two or more thicknesses by sawing.

rough lumber—undressed **lumber** as it comes from the saw.

shiplapped lumber—**lumber** that is shaped at its edges to make a close-rabbeted, or lapped joint.

surfaced lumber—**lumber** that is dressed on one or more faces. **D 996, D10**

lumber, n—a sawn piece of wood smaller than 100 mm (4 in.) in its least dimension. **E 631, E06**

lumen, n—*in vegetable fibers*, the central canal of the fiber. **D 123, D13**

lumen, n—*in vegetable fibers*, the central canal of the fiber. **D 7139, D13**

lumen—luminous flux emitted within one steradian by a point source having a spatially uniform luminous intensity of one candela. SI unit of luminous flux. **E 1316, E07**

lumen, lm, n—luminous flux emitted within one steradian by a point source having a spatially uniform luminous intensity of 1 candela. SI unit of luminous flux. **E 284, E12**

luminance—the ratio of the luminous intensity of a surface in a given direction to a unit of projected area. Measured in candela per square metre. **E 1316, E07**

luminance factor, Y, n—ratio of the luminance of a specimen to that of a perfect diffuser, when illuminated and viewed under specified geometric conditions. **E 284, E12**

luminance, L, L_v, n—luminous flux in a beam, emanating from a surface, or falling on a surface, in a given direction, per unit of projected area of the surface as viewed from that direction, per unit solid angle. **E 284, E12**

luminescence—the emission of radiant energy during a transition from an excited electronic state of an atom, molecule, or ion to a lower electronic state. **E 131, E13**

luminescence, n—emission of light ascribable to nonthermal excitation. (See also **electroluminescence, chemical luminescence, and photoluminescence**.) **E 284, E12**

luminometer number, n—a measure of the flame temperature in a wick lamp burning the candidate material as fuel at a specified flame radiation level in the green-yellow band of the visible spectrum. **D 4175, D02**

luminosity—a measure of emitted light intensity. **E 1316, E07**

luminosity function, n—see **spectral luminous efficiency function**. **E 284, E12**

luminous, adj—*for color determination*, indicates that the radiant flux is evaluated by weighting according to the luminous efficiency function of the CIE 1931 standard observer. **D 2946, C17**

luminous, adj—weighted according to the spectral luminous efficiency function V_{λ} of the CIE. **E 284, E12**

luminous efficacy, K_M , n

luminous efficacy, K_M , n —quotient of total luminous flux divided by total radiant flux; lumens per watt. $K_M = 683 \text{ lm/W}$. **E 284, E12**

luminous flux, ϕ , ϕ_v —the time rate of flow of light energy; luminous power. **E 284, E12**

luminous intensity, I , I_v , n —the light flux per unit solid angle. **E 284, E12**

luminous (photometric)—referring to a radiometric quantity, indicates the weighted average of the spectral radiometric quantity, with the photopic spectral luminous efficiency function given in Annex A1 of Practice E 971 being the weighting function. **E 772, E44**

luminous reflectance, n —ratio of luminous flux reflected by a specimen to that incident on it. **D 2946, C17**

luminous transmittance, n —the ratio of the luminous flux transmitted by a body to the flux incident upon it. **D 883, D20**

lump—in porcelain enamels, a rounded projection in the enamel surface, usually a defect. **C 286, B08**

lump—See **slub, slug**. **D 3990, D13**

lump—a raised area on the surface having the appearance of being solid. **F 109, C21**

lusec—a unit of flow rate equal to $0.133 \text{ mPa}\cdot\text{m}^3/\text{s}$. **E 1316, E07**

luster—an iridescent decorative surface appearance. **C 286, B08**

luster, n —in buttons, the degree of brilliance exhibited in pearlized or pearl buttons. **D 123, D13**

luster—in the pulp and paper industry, synonymous with “gloss” or “sheen.” (see also **gloss**) **D 1695, D01**

luster, n —in buttons, the degree of brilliance exhibited in pearlized or pearl buttons. **D 5497, D13**

luster, n —the appearance characteristic of a surface that reflects more in some directions than it does in other directions, but not of such high gloss as to form clear mirror images. **E 284, E12**

lustres—(1) dilute solutions of metallic salts that, when applied and fired to glass, produce an iridescent effect on the surface.

(2) solutions of metallic resins that, when applied and fired to glass, produce an opaque, mother-of-pearl iridescent effect.

C 162, C14

lux, lx, n —illuminance corresponding to a luminous flux density of one lumen per square metre. SI unit of illuminance. **E 284, E12**

LVPS—see **low-voltage power supply**. **F 1457, F05**

lysimeter—a device to measure the quantity or rate of water movement through a block of soil, usually undisturbed or in-situ; or to collect such percolated water for analyses. **D 653, D18**

lysis, n —the disintegration or destruction of whole bacterial cells. **F 1494, F23**

lysogen—a bacterial strain that has a phage stably maintained. In the case of lambda, the phage is integrated into the host genome. The integrated phage is called a prophage. **E 1705, E48**

M

- M**, *n*—the number of standard deviations, mutually concurred by the supplier and purchaser, to be used for calculations of statistical conformance to such items as minimums, maximums, specification ranges, and process capability indices. **A 644**, A04
- MA**—Commonwealth of Massachusetts. **E 631**, E06
- MacAdam color difference**, *n*—nonspecific term for color difference calculated by using one of several equations and methods based on MacAdam's color-difference-perceptibility ellipses or ellipsoids. **E 284**, E12
- macadam, dry-bound and water bound**, *n*—a pavement layer containing essentially one-size coarse aggregate choked in place with an application of screenings or sand; water is applied to the choke material for water-bound macadam; multiple layers must be used. **D 8**, D04
- MacAdam limits**, *n*—see **optimal colors**. **E 284**, E12
- maceral**, *n*—an organic substance in coal that is distinguished and classified on the basis of its optical microscopic properties.
- exinite*—Deprecated term. Use preferred term **liptinite**; sometimes has also been used as a synonym for sporinite.
- liptinite*, *n*—macerals that exhibit lower reflectance than other organic substances in a coal, appearing black to dark gray and that fluoresce under blue to ultraviolet light in coals ranked high volatile bituminous and lower.
- alginate*, *n*—a liptinite maceral that is generally spherical or ovoid, frequently having a crenulated border and somewhat irregular reflectance and sometimes occurring in clusters reflecting an origin from *Botryococcus* algae.
- cutinite*, *n*—a liptinite maceral in the form of a sheet reflecting its origin from leaf- or twig-covering plant cuticle, frequently exhibiting reticulation in planar section and a serrated edge in cross section.
- resinite*, *n*—a liptinite maceral occurring as rounded, ovoid, or rod-like bodies assuming the shape of an enclosing cell lumen or as irregular shapes filling cracks in the coal.
- sporinite*, *n*—a liptinite maceral exhibiting various lenticular, oval, or round forms that reflect the cross-sectioning of a flattened, hollow, ovoid body; sometimes exhibits rod-like projections that are small relative to the size of the total body.
- inertinite*, *n*—macerals that exhibit higher reflectance than other organic substances in the coal.
- fusinite*, *n*—an inertinite maceral distinguished principally by the preservation of some feature(s) of the plant cell wall structure, and with a particle size greater than 50 μm except when it occurs as a fragment within the binder matrix; see also **semifusinite**.
- inertodetrinite*, *n*—an inertinite maceral occurring as individual, angular, clastic fragments incorporated within the matrix of other macerals (commonly vitrinite) or minerals, and in the size range from 2 to 50 μm .
- macrinite*, *n*—an inertinite maceral, generally nonangular, exhibiting no relict plant cell wall structure and larger than 10 μm .
- micrinite*, *n*—an inertinite maceral, generally nonangular, exhibiting no relict plant cell wall structure, smaller than 10 μm and most commonly occurring as particles around 1- to 5- μm diameter.
- sclerotinite*, *n*—an inertinite maceral occurring as round or ovoid bodies, frequently containing voids, reflecting an origin from fungal sclerotia; also occurs (especially in lower rank coals) as interlaced, stringy materials derived from fungal hyphae.
- semifusinite*, *n*—an inertinite maceral with morphology like fusinite sometimes with less distinct evidence of cellular structure, but with reflectance ranging from slightly greater than that of associated vitrinite to some value intermediate to that of the brightest fusinite. The particle size is also greater than 50 μm except when it occurs as a fragment within the binder matrix.
- vitrinite*, *n*—the predominant maceral in most coals of intermediate reflectance occurring as substantial volumes of more or less uniformly reflecting material or as a matrix enclosing particles of other macerals and mineral matter or as particles or bands intermixed with other maceral fragments.
- macrinite*—See *macrinite* under **maceral**. **D 121**, D05
- macerated paper**—See **cushioning material**. **D 996**, D10
- machinability**, *n*—a measure of the ease with which a material can be shaped with the aid of cutting or abrasive tools. **C 709**, D02
- machinability**, *n*—a measure of the ease with which a material can be shaped with the aid of cutting or abrasive tools. **D 4175**, D02
- machine bite**—a depressed cut at the end of a piece of lumber made by the machine knives in dressing; sometimes called snipe. **D 9**, D07
- machine buffs**—that cut of the hide from which a buffing of approximately $\frac{1}{64}$ in. (0.4 mm) (1 oz) in thickness has been removed from the grain. This should leave a portion of the grain on approximately the entire hide. **D 1517**, D31
- machine burn**—a darkening or charring of the wood caused by frictional heat generated by machine knives or rolls. **D 9**, D07
- machine direction**, *n*—the direction parallel to the paper-bound edge of the gypsum board. **C 11**, C11
- machine direction**, *n*—the direction of a paper or paperboard corresponding or parallel to the direction of flow of the stock along the paper machine; sometimes referred to as MD or along machine direction. (See **cross direction**.) **D 1968**, D06
- machine direction**, *n*—the direction in the plane of the fabric parallel to the direction of manufacture. **D 4439**, D35
- machine direction**, *n*—the direction in which a product moves through the manufacturing process. **F 141**, F06
- machine direction, MD**, *n*—the direction in the plane of the fabric parallel to the direction of manufacture. **D 123**, D13
- machined specimen**—test specimen machined from a full-size fastener to specific dimensions to standardize test results; often specified when a full-size fastener cannot be reasonably or practically tested. **F 1789**, F16
- machine gauged**—a process by which stone material is removed to a specified thickness, incidentally resulting in a finish.
- NOTE—The resulting coarsely ground surface can be produced by a number of methods. **C 119**, C18
- machine gouge**—a groove below the regular surface of cut made by machine knives in dressing lumber. **D 9**, D07
- machine language**—a language designed for use by a machine, without translation. **F 149**, F05
- machine offset**—an abrupt dressing variation in the edge surface of lumber, occurring usually near the end of the piece without reducing the width or without changing the plane of the wide surface. **D 9**, D07
- machine process capability study**—study conducted to provide a level of confidence in the ability of a machine/process to meet engineering specification requirements. **F 1789**, F16
- machine quality**—term applied to nails manufactured with closer tolerances than usual and selected for close adherence to specification and freedom from foreign matter. **F 547**, F16
- machine-readable**, *n*—that characteristic of printed information that permits direct transfer of information from a printed surface to a data-processing system without operator intervention. **F 1294**, F05
- machine run**—the product of sawing, dressing, or patterning lumber without further grading. **D 9**, D07

machine stitch, n

machine stitch, n—*in home sewing*, the resulting arrangement of sewing threads in a repeating unit formed by a sewing machine.

D 123, D13

machine stitch, n—*in home sewing*, the resulting arrangement of sewing threads in a repeating unit formed by a sewing machine.

D 5646, D13

machining damage, (MD), n—*as used in fractography*, a surface-distributed flaw that is a microcrack(s), chip(s), striation(s), or scratch(es), or a combination of these, created during the machining process.

NOTE—Machining may result in the formation of surface or subsurface damage, or both.

C 1145, C28

macrocell corrosion—corrosion of a metal embedded in porous media (for example, concrete or soil) caused by concentration or galvanic cells which exist on a scale at least as large as the smallest major dimension of the corroding item (for example, the diameter of a bar or pipe).

G 15, G01

macroetch—controlled etching of the surface of a metallic specimen, intended to reveal a structure which is visible at low magnifications (not usually greater than 10 times).

E 7, E04

macro-etch test—immersion of a prepared fastener specimen into a hot acid or aggressive media followed by examination of the etched surface. The examination is done with the unaided eye or at magnification not exceeding 10×.

F 1789, F16

macrograph—a graphic reproduction of an object, slightly reduced in size, unmagnified, or magnified ten diameters or less (photomacrograph).

E 7, E04

macrograph—photographic reproduction of any object that has not been magnified more than ten times.

F 1789, F16

macromolecular material, n—See **polymer** the preferred term.

D 1566, D11

macropore—interaggregate cavities that service as the principal avenues for the infiltration and drainage of water and for aeration.

D 653, D18

macropore—a pore with widths exceeding 50 nanometres (500 angstrom units).

D 2652, D28

macroporosity—large intergranular porosity with large pore throats, including soil cracks, moldic porosity, animal burrows and other significant void space.

D 653, D18

macro-scale polygons—closed, multi-sided, roughly equidimensional, patterned ground features, commonly resulting from cracking of the ground due to thermal contraction.

D 7099, D18

macroscopic—visible either with the naked eye or under low magnification (as great as about ten diameters).

F 1789, F16

macrostrain, n—the mean strain over any finite gage length of measurement large in comparison with interatomic distances.

E 6, E28

macrostructure—structure of metal as revealed by macroscopic examination.

F 1789, F16

magazine—mechanism for storing and feeding fasteners.

F 592, F16

magma, n—molten rock within the earth or within other planets.

E 957, E44

magnesia—the chemical compound magnesium oxide (MgO).

C 51, C07

magnesia—magnesium oxide (MgO), calcined or hard burned as periclase loosely applied also to the hydrate Mg(OH)₂, and made synthetically from seawater or brine, or (impure) from magnesite.

C 242, C21

magnesia brick, n—a refractory brick, which may be burned or unburned, manufactured predominantly or entirely of either seawater magnesia, dead-burned magnesite, fused magnesia, or combinations of these materials.

C 71, C08

magnesia-carbon brick, n—a refractory brick manufactured predominantly of a mixture of refractory-grade magnesia and 5 to 30 weight percent carbonaceous material, with resin, tar, pitch, or a combination of these materials as the bonding agent; the refractory-grade magnesia may be either sea-water magnesia, dead-burned magnesite, fused magnesia, or a combination of these

materials; and the carbonaceous material may be either flake or vein graphite, carbon black, or petroleum or metallurgical coke, or a combination of these materials.

C 71, C08

magnesia-chrome brick, n—a refractory brick, which may be burned or unburned, manufactured predominantly of a mixture of refractory-grade magnesia and refractory-grade chrome ore in which the refractory-grade magnesia predominates by weight; the refractory-grade magnesia may be either seawater magnesia, dead-burned magnesite, fused magnesia, or a combination of these materials.

C 71, C08

magnesia-doloma refractory, n—a refractory, which may be burned or unburned, manufactured predominantly of a mixture of refractory-grade magnesia and refractory-grade doloma in which the refractory-grade magnesia predominates by weight.

C 71, C08

magnesia, fused, n—a refractory material consisting predominantly of crystalline magnesium oxide which has solidified from a fused or molten state.

C 71, C08

magnesian—indicates the presence of 5 to 35 % magnesium carbonate (MgCO₃) in the limestone from which the material was formed.

C 51, C07

magnesian limestone—see **limestone**.

C 51, C07

magnesia, refractory, n—a dead-burned refractory material consisting predominantly of crystalline magnesium oxide.

C 71, C08

magnesia, refractory-grade, n—a dead-burned or fused refractory material consisting predominantly of crystalline magnesium oxide; the three principal types are magnesia, sea water; magnesite, dead-burned; and magnesia, fused.

C 71, C08

magnesia, sea water, n—a deadburned refractory-grade magnesia which has been derived from the treatment of sea water or other brines.

C 71, C08

magnesia-spinel brick, n—a refractory brick whose predominant component is sintered or fused magnesia and whose lesser component is sintered, fused, or in situ formed magnesium aluminate spinel (MgO · Al₂O₃).

C 71, C08

magnesite, dead-burned, n—the granular product obtained by burning (firing) magnesite or other substances convertible to magnesia, upon heating above 1450°C long enough to form dense, weather-stable granules suitable for use as a refractory or in refractory products.

C 71, C08

magnesite, grain, n—dead-burned magnesia in granular form of size suitable for refractory purposes.

C 71, C08

magnesite, seawater, n—dead-burned magnesia made by a chemical process using seawater or other saline solutions.

C 71, C08

magnet—a body that produces a magnetic field external to itself.

NOTE—By convention, the north-seeking pole of a magnet is marked with an *N*, +, or is colored red.

NOTE—Natural magnets consist of certain ores such as magnetite (loadstone); artificial (permanent) magnets are made of magnetically hard materials; electromagnetics have cores made of magnetically soft materials which are energized by a current carrying winding.

A 340, A06

magnetic alignment—See **alignment**.

E 7, E04

magnetic brush development—development in which the toner is carried by means of a brush-like array of magnetic particles held erect under the influence of a magnetic field.

F 335, F05

magnetic circuit—a region at whose surface the magnetic induction is tangential.

NOTE—A practical magnetic circuit is the region containing the flux of practical interest, such as the core of a transformer. It may consist of ferromagnetic material with or without air gaps or other feebly magnetic materials such as porcelain, brass, and so forth.

A 340, A06

magnetic constant (permeability of space), Γ_m —the dimensional scalar factor that relates the mechanical force between two currents to their intensities and geometrical configurations. That is:

$$dF = \Gamma_m I_1 I_2 dl_1 \times (dl_2 \times r_1) / nr^2$$

where:

- Γ_m = magnetic constant when the element of force, dF , of a current element $I_1 dl_1$ on another current element $I_2 dl_2$ is at a distance r ,
 r_1 = unit vector in the direction from dl_1 to dl_2 , and
 n = dimensionless factor. The symbol n is unity in unrationalized systems and 4π in rationalized systems.

NOTE—The numerical values of Γ_m depend upon the system of units used. In the cgs-emu system of units, $\Gamma_m = 1$, in the SI system, $\Gamma_m = 4\pi \times 10^{-7}$ H/m.

NOTE—The magnetic constant expresses the ratio of magnetic induction to the corresponding magnetizing force at any point in a vacuum and therefore is sometimes called the permeability of space, μ_v .

NOTE—The magnetic constant times the relative permeability is equal to the absolute permeability.

$$\mu_{\text{abs}} = \Gamma_m \mu_r$$

A 340, A06

magnetic excursion range, ΔB , ΔH —the excursion ranges equaling the algebraic differences between the upper and lower values of B , and between the upper and lower values of H , in a hysteresis or flux-current loop.

A 340, A06

magnetic field—the volume within and surrounding either a magnetized part or a current-carrying conductor wherein a magnetic force is exerted.

E 1316, E07

magnetic field indicator—a pocket meter that is used to locate or determine the relative intensity of leakage field emanating from a part.

E 1316, E07

magnetic field meter—an instrument designed to measure the flux density of magnetic fields.

E 1316, E07

magnetic field of induction—the magnetic flux field induced in a region such that a conductor carrying a current in the region would be subjected to a mechanical force, and an electromotive force would be induced in an elementary loop rotated with respect to the field in such a manner as to change the flux linkage. A 340, A06

magnetic field strength—the measured intensity of a magnetic field at a point, expressed in oersteds or amperes per metre.

E 1316, E07

magnetic field strength, ac—the value of one of three dynamic magnetic field strength parameters in common use. They are:

- (a) H_L —an assumed peak value computed in terms of peak magnetizing current (considered to be sinusoidal).
 (b) H_z —an assumed peak value computed in terms of measured rms exciting current (considered to be sinusoidal).
 (c) H_p —computed in terms of a measured peak value of exciting current, and thus equal to the value H'_{max} .

A 340, A06

magnetic field strength, biasing, H_b —the algebraic mean value of the magnetic field strength in a magnetic material that is subjected simultaneously to a constant magnetizing field and a periodically varying magnetizing field.

NOTE—The biasing magnetizing field and the biased magnetic induction are corresponding coordinates of a single point on the B - H plane but not necessarily on the normal induction curve.

NOTE—The biasing magnetic field strength, H_b , is equal to the applied constant magnetizing field only when the applied periodically varying magnetizing field is symmetrical.

A 340, A06

magnetic field strength, H —the magnetic vector quantity at a point in a magnetic field which measures the ability of electric currents or magnetized bodies to produce magnetic induction at the given point.

NOTE—The magnetic field strength, H , may be calculated from the current and the geometry of certain magnetizing circuits. For example, in the center of a uniformly wound long solenoid.

$$H = C (NI/l)$$

where:

- H = magnetic field strength,
 C = constant whose value depends on the system of units,
 N = number of turns,
 I = current, and
 l = axial length of the coil.

If I is expressed in amperes and l is expressed in centimetres, then $C = 4\pi/10$ to obtain H in the cgs-emu system of units, the oersted.

If I is expressed in amperes and l is expressed in metres, then $C = 1$ to obtain H in the SI units, ampere-turn per metre.

NOTE—The magnetic field strength, H , at a point in air may be calculated from the measured value of induction at the point by dividing this value by the magnetic constant Γ_m .

A 340, A06

magnetic field strength, incremental, H_Δ —a value equal to one half the algebraic difference of the maximum and minimum values of the magnetic field strength during a cycle in a magnetic material that is subjected simultaneously to a biasing magnetic field strength and a symmetrical periodically varying magnetic field strength.

Twice the incremental magnetic field strength is indicated by the symbol ΔH .

Thus:

$$H_\Delta = \Delta H/2$$

A 340, A06

magnetic field strength, maximum—(a) H_m —the maximum value of H in a dc hysteresis loop.

(b) H_{max} —the maximum value of H in an ac flux-current loop.

A 340, A06

magnetic flux, ϕ —the product of the magnetic induction, B , and the area of a surface (or cross section), A , when the magnetic induction B is uniformly distributed and normal to the plane of the surface.

$$\phi = BA$$

where:

- ϕ = magnetic flux,
 B = magnetic induction, and
 A = area of the surface.

NOTE—If the magnetic induction is not uniformly distributed over the surface, the flux, ϕ , is the surface integral of the normal component of B over the area.

$$\phi = \iint_s B \cdot dA$$

NOTE—Magnetic flux is a scalar and has no direction. A 340, A06

magnetic flux density, B —that magnetic vector quantity which at any point in a magnetic field is measured either by the mechanical force experienced by an element of electric current at the point, or by the electromotive force induced in an elementary loop during any change in flux linkages with the loop at the point.

NOTE—If the total flux, ϕ is uniformly distributed and normal to a surface or cross section, then the magnetic induction is:

$$B = \phi/A$$

where:

- B = magnetic induction,
 ϕ = total flux, and
 A = area.

NOTE— B_{in} is the instantaneous value of the magnetic induction and B_m is the maximum value of the magnetic induction. A 340, A06

magnetic history

magnetic history—magnetic condition of a ferromagnetic part under test based on previous exposures to magnetic fields. (E 566)

E 1316, E07

magnetic hysteresis—in a magnetic material, as iron, a lagging in the values of resulting magnetization due to a changing magnetic force. (See also **hysteresis**.)

E 1316, E07

magnetician—one skilled in the theory and practice of magnetics.

A 340, A06

magnetic induction, B —an alternate term for **magnetic flux density**.

A 340, A06

magnetic ink character recognition, MICR—a recognition technology that utilizes ink capable of being magnetized and sensed. A practical application is E-13B, which is used primarily within the North American financial industry. E-13B consists of 14 characters printed to high specifications using ink with iron oxide pigments, or other inks utilizing ingredients capable of being magnetized.

F 149, F05

magnetic lamination steel—a flat-rolled, low-carbon (usually below 0.06 %) steel containing 0.0 to 1.0 % silicon and up to 0.4 % aluminum and having similar core loss in all directions.

A 340, A06

magnetic leakage flux—the excursion of magnetic lines of force from the surface of a test specimen.

E 1316, E07

magnetic lens—a device for focussing an electron beam by means of a magnetic field.

E 7, E04

magnetic line of force—an imaginary line in a magnetic field which at every point has the direction of magnetic induction at that point.

NOTE—Extended lines of force must always form nonintersecting closed loops.

A 340, A06

magnetic moment, m —a measure of the magnetic field strength, H , produced at points in space by a plane current loop or a magnetized body.

NOTE—The magnetic moment of a plane current loop is a vector, the magnitude of which is the product of the area of the loop and the current; the direction of the vector is normal to the plane of the loop in that direction around which the current has a clockwise rotation when viewed along the vector.

NOTE—The magnetic moment of a magnetized body is the volume integral of the magnetization, M .

NOTE—In the cgs-emu system of units, magnetic moment is usually defined as the pole strength multiplied by the distance between poles. This is sometimes called the magnetic dipole moment.

A 340, A06

magnetic ohm—the unit of reluctance sometimes used in the cgs-emu system of units. One magnetic ohm equals one gilbert/maxwell or $4\pi/10^9$ ampere-turns/weber.

A 340, A06

magnetic particle examination—a nondestructive test method utilizing magnetic leakage fields and suitable indicating materials to disclose surface and near-surface discontinuity indications.

E 1316, E07

magnetic particle examination flaw indications—the accumulation of ferromagnetic particles along the areas of flaws or discontinuities due to the distortion of the magnetic lines of force in those areas.

E 1316, E07

magnetic particle field indicator—an instrument, typically a bi-metal (for example, carbon steel and copper) octagonal disk, containing artificial flaws used to verify the adequacy or direction, or both, of the magnetizing field.

E 1316, E07

magnetic particle inspection method—a method for detecting magnetic discontinuities or inhomogeneities on or near the surface in suitably magnetized materials that uses finely divided magnetic particles that tend to congregate in regions of magnetic nonuniformity associated with the magnetic discontinuities or inhomogeneities.

NOTE—Magnetic particle inspection is an accepted method for the detection of defects.

A 340, A06

magnetic particles—finely divided ferromagnetic material capable of being individually magnetized and attracted to distortion in a magnetic field.

E 1316, E07

magnetic permeability—degree which a material becomes magnetically attractive.

F 1789, F16

magnetic polarization, J —in the cgs-emu system of units, the intrinsic induction divided by 4π is sometimes called magnetic polarization or magnetic dipole moment per unit volume.

A 340, A06

magnetic pole—the magnetic poles of a magnet are those portions of the magnet toward which or from which the external magnetic induction appears to converge or diverge, respectively.

NOTE—In the hypothetical case of a uniformly magnetized body of constant cross-sectional area, the poles would be located at its ends.

NOTE—By convention, the north-seeking pole is marked with an N , or +, or is colored red.

A 340, A06

magnetic pole—one of two or more areas of flux leakage on a part.

E 1316, E07

magnetic pole strength, p —the magnetic moment divided by the distance between the poles.

$$p = m/l$$

where:

p = pole strength,

m = magnetic moment, and

l = distance between the poles.

A 340, A06

magnetic printer—a printer in which magnetic signals are recorded onto a magnetic belt or drum. A magnetic toner is attracted to the drum and transferred to paper where it is fused to the sheet.

F 149, F05

magnetic rating (MR), n —an empirical value reflecting the effect of the magnetic particles, such as magnetic iron compounds, in asbestos material as measured by a magnetic effect analyzer.

D 2946, C17

magnetic saturation—that degree of magnetization where a further increase in magnetizing force produces no significant increase in magnetic flux density (permeability) in a specimen.

E 1316, E07

magnetic shielding—in electron microscopy, shielding for the purpose of preventing extraneous magnetic fields from affecting the electron beam in the microscope.

E 7, E04

magnetics (magnetism)—that branch of science which deals with the laws of magnetic phenomena and their application to practice.

A 340, A06

magnetic storage medium—a storage medium that uses magnetic properties (magnetic dipoles) to store digital data (for example, a moving drum, disk, or tape or a static core or film).

E 1316, E07

magnetic transformation—an intensive property change from a ferromagnetic to a paramagnetic state, or the reverse, which occurs in certain solid materials under applied pressure and temperature, or both. (See also **Curie point**.)

E 7, E04

magnetic transformation—intensive property change from a ferromagnetic to a paramagnetic state, or the reverse, which occurs in certain solid materials under applied pressure and temperature, or both. (See also **Curie temperature**), (E 7, E04).

E 1142, E37

magnetic writing—a form of nonrelevant indication sometimes caused when the surface of a magnetized part comes in contact with another piece of ferromagnetic material.

E 1316, E07

magnetization, circular—see **field, circular**.

E 1316, E07

magnetization, longitudinal—see **field, longitudinal**.

E 1316, E07

magnetization, M —the component of the total magnetizing force that produces the intrinsic induction in a magnetic material.

$$M = (B - \Gamma_m H) / \Gamma_m \mu_r = B_s / \mu_{abs}$$

where:

M = magnetization,

H = applied magnetizing force,

Γ_m = magnetic constant,

B = total magnetic induction,
 μ_r = relative permeability,
 μ_{abs} = absolute permeability, and
 B_i = intrinsic induction.

NOTE—The magnetization can be interpreted as the volume density of magnetic moment. **A 340, A06**

magnetizing current—the flow of either alternating or direct current used to induce magnetism into the part being inspected. **E 1316, E07**

magnetizing current, ac, I_m —See **current, ac magnetizing**. **A 340, A06**

magnetizing force—the magnetizing field applied to a ferromagnetic material to induce magnetization. **E 1316, E07**

magnetizing force, H —an alternate term for **magnetic field strength**. **A 340, A06**

magnetodynamic—the magnetic condition when the values of magnetic field strength and induction vary, usually periodically and repetitively, between two extreme limits. **A 340, A06**

magnetomotive force, \mathcal{F} —the line integral of the magnetizing field around any flux loop in space.

$$\mathcal{F} = \int H \cdot dl$$

where:

\mathcal{F} = magnetomotive force,
 H = magnetic field strength, and
 dl = unit length along the loop.

NOTE—The magnetomotive force is proportional to the net current linked with any closed loop of flux or closed path.

$$\mathcal{F} = CNI$$

where:

\mathcal{F} = magnetomotive force,
 N = number of turns linked with the loop,
 I = current in amperes, and
 C = constant whose value depends on the system of units. In the cgs-emu system of units, $C = 4\pi/10$. In the SI system, $C = 1$.

A 340, A06

magnetostatic—the magnetic condition when the values of magnetic field strength and induction are considered to remain invariant with time during the period of measurement. This is often referred to as a dc (direct current) condition. **A 340, A06**

magnetostriction—the change in dimensions of a body resulting from magnetization. **A 340, A06**

magnetostrictive cavitation test device, n —a vibratory cavitation test device driven by a magnetostrictive transducer. **G 40, G02**

magnet, permanent—see **permanent magnet**. **E 1316, E07**

magnetron—a type of microwave energy generator usually used in microwave cooking equipment. **F 1827, F26**

magnet wire—a metal electrical conductor, covered with electrical insulation, for use in the assembly of electrical inductive apparatus such as coils for motors, transformers, generators, relays, magnets, and so forth. **D 1711, D09**

magnification—a ratio of the size of an image to its corresponding object. This is usually determined by linear measurement. **E 7, E04**

magnification factor, n —the constant multiplier applied to the nominal dimensions of a bar code symbol to obtain the actual dimensions at which it must be produced. **F 1294, F05**

magnifying lens—stem glass which, due to its configuration, results in a magnification of the mercury column. **E 344, E20**

magnitude estimation, n —process of assigning values to the intensities of an attribute in such a way that the ratios between pairs of assigned values are the same as between the magnitudes of the perceptions to which they correspond. **E 253, E18**

mailing tube—See **tube**. **D 996, D10**

main components, n —in textiles, those sections of a consumer product which constitute the largest continuous homogeneous areas of the product that are typical of the product. **D 123, D13**

main effect, average effect, n —a term describing a measure for the comparison of the responses at each level (version) of a factor averaged over all levels (versions) of other factors in the experiment. **E 456, E11**

main effect, average effect, n —a term describing a measure for the comparison of the responses at each level (version) of a factor averaged over all levels (versions) of other factors in the experiment. **E 456, E11**

NOTE—The term *main effect* may describe the parameter in an assumed model or the estimate of this parameter. **E 1325, E11**

maintain, vt—to monitor the usage of test methods and to take remedial steps when necessary. **D 123, D13**

maintain, v—to keep in working order, or to preserve from decline or failure. **E 631, E06**

maintain—See **building modification**. **E 631, E06**

maintainability (entretenabilité)—capability of a system or facility to be maintained to a specified level of **reliability**, at a specified measure of cost or economy. **E 631, E06**

maintainability (entretenabilité)—capability of a system or facility to be maintained to a specified level of **reliability**, at a specified measure of cost or economy. **E 1480, E06**

maintenance, n —work performed to keep facilities in good condition. **E 1605, E06**

maintenance—(1) the act of maintaining by keeping in an existing state and preserving from failure or decline. (2) Person, place, or thing that maintains. (3) The upkeep of property or equipment. **E 2135, E53**

maintenance and repair cost—the total of labor, material, and other related costs incurred in conducting corrective and preventative maintenance and repair on a building, or on its systems and components, or on both. **E 631, E06**

maintenance and repair cost, n —the total of labor, material, and other related costs incurred in conducting corrective and preventative maintenance and repair on a building, or on its systems and components, or on both. **E 833, E06**

maintenance mix, n —a mixture of bituminous material and mineral aggregate applied at ambient temperature for use in patching holes, depressions, and distress areas in existing pavements. **D 8, D04**

maintenance therapy, n —therapy of chronically ill patients that is aimed at keeping the pathology at its present level and preventing exacerbation. **F 2312, F04**

majolica—formerly an earthenware with an opaque luster glaze and overglaze colored decorations, but currently designating any decorated earthenware having an opaque glaze. **C 242, C21**

major defect, n —a defect other than critical, that judgment and experience indicate is likely to materially reduce the usability of a product for its intended purpose. **D 123, D13**

major defect, n —a defect other than critical, that judgment and experience indicate is likely to materially reduce the usability of a product for its intended purpose. **D 4850, D13**

major imperfection, n —in fabric grading, a deviation in a roll of fabric that judgment and experience indicate is likely to have an adverse affect upon subsequent processing of the fabric. **D 123, D13**

major imperfection, n —in fabric grading, a deviation in a roll of fabric that judgment and experience indicate is likely to have an adverse affect on subsequent use or processing of the fabric. **D 6799, D13**

major modification—any change in either the structural or operational characteristics of the ride or device which will alter its performance from that specified in the manufacturer's design criteria. **F 747, F24**

major package defect—a defect that is likely to result in failure or

major package defect

- reduce significantly the usability of the package for its intended use. **F 17, F02**
- major package defect*—See Terminology F 17. **F 1327, F02**
- major principal plane*—see **principal plane**. **D 653, D18**
- major principal stress*—see **stress**. **D 653, D18**
- major tile facial dimensions**—the overall length or width of the tile, including the lugs on opposite sides. **C 242, C21**
- major tile thickness**—the thickness of tile, including any maximum protuberances or ridges on the back. **C 242, C21**
- makeup air*—the supply of outside air, tempered or untempered, to a building in a controlled manner for the replacement of air exhausted through the hood, or the supply of outside air, untempered, into the hood to reduce the amount of tempered air exhausted from the building. **F 1827, F26**
- male end of pipe (spigot, tongue, modified tongue)**—that portion of the end of the pipe, regardless of its shape or dimensions, which is overlapped by a portion of the end of the adjoining pipe. **C 822, C13**
- maleic resin*—under **resin, synthetic**, see *maleic resin*. **D 16, D01**
- male member**—the component that is inserted through the female member and secured to the female member at the box lock junction. **F 921, F04**
- malleable, ferritic, n**—a ferrous alloy that is cast as white iron but which is converted by an appropriate heat treatment to a microstructure of temper carbon embedded in a ferritic matrix essentially free of pearlite and carbide. **A 644, A04**
- malleable iron, n**—a cast iron of such composition that it solidifies as white iron, which upon proper heat treatment is converted to a metallic matrix with nodules of temper carbon. **A 644, A04**
- malleableize, vt**—to convert white iron into malleable iron through an appropriate graphitizing heat treatment. **A 644, A04**
- malleable, pearlitic, n**—a ferrous alloy that is cast as white iron but which is converted by an appropriate heat treatment to a microstructure of temper carbon embedded in a matrix containing a controlled quantity, form, and distribution of pearlite or tempered martensite. **A 644, A04**
- mA (milliamperes)**—a unit of current equal to 0.001 amperes, used to express the tube current of an X-ray tube. **E 1316, E07**
- mandrel**—a form used as a cathode in electroforming; a mold or matrix. **B 374, B08**
- mandrel**—a form, fixture, or male mold used as the base for production of a part in processes such as lay-up or filament winding. **D 3878, D30**
- mandrel**—a form, fixture, or male mold used in the production of a part by lay-up or filament winding. **E 631, E06**
- mandrel**—a form, fixture, or male mold used in the production of a part by lay-up or filament winding. **E 1749, E06**
- mandrel (in bend testing), n**—the tool used to control the strain on the concave side of a bend in a wrap-around bend test and also to apply the bending force in a semi-guided or guided bend test. **E 6, E28**
- manganese greensand**—a manganese dioxide coated greensand used as a filter medium for removal of manganese and iron. See **greensand**. **D 6161, D19**
- manhole**—a precast concrete structure for vertical access to a pipeline or other closed structure. **C 822, C13**
- manhole base**—a concrete slab foundation and the bottom manhole riser section or a bottom manhole riser section with a connected concrete slab. **C 822, C13**
- manhole base section**—precast concrete slab foundation and the bottom manhole riser section, or the bottom riser section with precast monolithic or integral slab. A monolithic base section is cast as a single unit. An integral base section is made into a single unit by interconnecting precast manhole components such as a riser section and base slab. **C 822, C13**
- manhole reducer section**—a concrete section used as a transition between different diameter manhole riser sections. **C 822, C13**
- manhole riser section**—a concrete section used to construct a manhole exclusive of the base, reducers, and top section. **C 822, C13**
- manhole top**—the concrete slab top or conical top used to reduce the manhole riser diameter to that of the desired access hole. **C 822, C13**
- manifest*—see **hazardous-waste manifest**. **E 631, E06**
- manifest**—a document specifying, in detail, the items carried on a transportation conveyance for a specific destination. **E 2135, E53**
- manifold*—see **grout header**. **D 653, D18**
- manifold**—an enlarged pipe with connections available to the individual feed, brine, air and product ports. **D 6161, D19**
- manifold**—to make many or several copies. **F 221, F05**
- manifolding performance**—the intensity and sharpness of the image as a function of the number of carbon copies produced in one typing or writing. **F 221, F05**
- manifold paper, n**—a lightweight paper used primarily for copies by interleaving with carbon paper. **D 1968, D06**
- manipulation resistant lock**—a combination lock designed so as to resist manipulation. **F 471, F12**
- man-made fiber, n**—a class name for various genera of filament, tow or staple produced from fiber forming substances which are chemically synthesized or modified. (Syn. **manufactured fiber**) **D 123, D13**
- mannan**—strictly, a polysaccharide composed entirely of mannose units, but used conventionally to distinguish the hexosan wood hemicelluloses from the pentosans (xylan). (see also **galactoglucomannan** and **glucomannan**) **D 1695, D01**
- mannogalactan*—see **galactomannan**. **D 1695, D01**
- manufacture, n**—all operations of receipt of materials, production, packaging, repackaging, labeling, relabeling, quality control, release, storage, and distribution of APIs or drug products and related controls. **E 2363, E55**
- manufacture, v**—“any or all steps in the recovery, screening, testing, processing, storage, labeling, packaging or distribution of any human cellular or tissue-based product.” **F 2312, F04**
- manufactured building*—a structure wholly or substantially made in a manufacturing plant for installation or assembly at the building site. **E 631, E06**
- manufactured building*—See **building**. **E 631, E06**
- manufactured carbon, n**—a bonded granular carbon body whose matrix has been subjected to a temperature typically between 900 and 2400°C. **C 709, D02**
- manufactured carbon, n**—a bonded granular carbon body whose matrix has been subjected to a temperature typically between 900 and 2400°C. **D 4175, D02**
- manufactured fiber, n**—a class name for various genera of filament, tow, or staple produced from fiber forming substance which may be (1) polymers synthesized from chemical compound, (2) modified or transformed natural polymers, or (3) glass. (See **man-made fiber**) **D 123, D13**
- manufactured graphite, n**—a bonded granular carbon body whose matrix has been subjected to a temperature typically in excess of 2400°C and whose matrix is thermally stable below that temperature. **C 709, D02**
- manufactured graphite, n**—a bonded granular carbon body whose matrix has been subjected to a temperature typically in excess of 2400°C and whose matrix is thermally stable below that temperature. **D 4175, D02**
- manufactured home*—a **manufactured building** intended to be used as a **dwelling**. **E 631, E06**
- manufactured home*—See **building**. **E 631, E06**
- manufactured masonry unit, n**—a manmade noncombustible building product intended to be laid by hand and joined by mortar, grout, or other methods of joining. **C 1232, C15**

manufactured sand, *n*—fine aggregate produced by crushing rock, gravel, iron blast-furnace slag, or hydraulic-cement concrete.

C 125, C09

manufactured staple fiber, *n*—fiber of spinnable length manufactured directly or by cutting filaments.

D 123, D13

manufactured unit, *n*—a quantity of finished adhesive or finished adhesive component, processed at one time. (Compare **batch**.)

D 907, D14

manufacturer, *n*—*as related to corrugated metal pipe*, the organization that produces the metal sheet from which pipe is made.

A 902, A05

manufacturer, *n*—the organization responsible for the conversion of materials into products meeting the requirements of a product specification.

A 941, A01

manufacturer—the group, corporation, partnership, or individual that manufactures or supplies a product.

C 822, C13

manufacturer, *n*—the party that manufactures, fabricates, or produces materials or products.

C 1154, C17

manufacturer, *n*—*for pipe laying*, the party that manufactures, fabricates, or produces materials or products.

D 2946, C17

manufacturer, *n*—any person, including any repacker or relabeler, or both, who manufactures, fabricates, assemblies, or reprocesses a finished device. (See “Good Manufacturing Practices,” Part 807 Code of Federal Regulations 6.)

E 344, E20

manufacturer, *n*—*of a tire*, the name of a company or wholly owned subsidiary making the tire.

F 538, F09

manufacturer—*see fastener manufacturer*.

F 1789, F16

manufacturer’s joint—*See container*.

D 996, D10

manufacturer’s leather—*see factory sole leather*.

D 1517, D31

manufacturer’s seam—joint produced by corrugated box manufacturer during container fabrication.

F 592, F16

manufacturing imperfections—includes all defects or blemishes that are produced in manufacturing, such as chipped grain, loosened grain, raised grain, torn grain, skips in dressing, hit and miss, variation in sawing, miscut lumber, machine burn, machine gouge, mismatching, and insufficient tongue or groove.

D 9, D07

manufacturing lot, *n*—(1) in the case of continuous manufacturing processes, a *lot* is a specifically identified amount produced in a unit of time or quantity in a manner that assumes its having uniform characteristics and quality within specified limits. (2) In the case of batch processes, a *lot* means a batch or specifically identified portion of a batch assumed to have uniform characteristics and quality within specified limits.

E 344, E20

manufacturing lot—in the case of continuous manufacturing process, a *lot* is a specific identified amount produced in a unit of time or quantity in a manner that assures its having uniform character and quality within specified limits. In the case of batch process, a *lot* means a batch or specific identified portion of a batch having uniform character and quality within specified limits.

E 344, E20

manufacturing process, *n*—a set of activities or operations performed to deliver a desired output.

E 2363, E55

manuscript, *n*—*see handprinting*.

E 2195, E30

map cracking, *n*—a series of interconnected cracks that extend only into the upper portion of the slab.

E 867, E17

map cracking, *n*—a series of interconnected cracks that extend only into the upper portion of the slab.

E 1778, E17

mar—mutilation of polish film repairable only by recoating.

D 2825, D21

mar, *n*—a mark made on the flooring surface by the deposition of material from friction or rubbing of traffic bodies against the surface.

F 141, F06

maraging, *n*—a precipitation hardening treatment applied to a special group of **alloy steels** to precipitate one or more intermetallic compounds in a matrix of essentially carbon-free martensite.

A 941, A01

marble (I calcite, II dolomite)—carbonate rock that has acquired a distinctive crystalline texture by recrystallization, most commonly

by heat and pressure during metamorphism, and is composed principally of the carbonate minerals calcite and dolomite, singly or in combination.

C 119, C18

marbleized finish—a surface appearance, obtained by coloring and graining, that resembles variegated marble.

C 286, B08

marcelling—a process whereby either a uniform helix or a series of waves put in a wire to facilitate tensioning the wire when installed to support the top or bottom or both, of the chain link fence fabric (that is, marcelled tension wire). See **tension wire** and Specification A 824.

F 552, F14

marching modulus curve, *n*—a type of vulcanization during which the increasing modulus does not reach a maximum value.

D 1566, D11

margin—the distance between any boundary of the printing area and the nearest parallel paper edge.

F 149, F05

marginal cost (benefit)—*See incremental cost (benefit)*.

E 631, E06

marginal cost (benefit)—*See incremental cost (benefit)*.

E 833, E06

marine—relating to the ocean.

F 1600, F20

marine board, *n*—an insulation board of $750 \pm 100 \text{ kg/m}^3$ density that meets the noncombustibility criteria of 46 CFR 164.009.

E 176, E05

marine cryopeg—a layer or body of unfrozen ground, in which the temperature is perennially below 0°C , which forms part of coastal or sub-sea permafrost.

D 7099, D18

markers—the electronically generated time pulses or other indicators that are used on the instrument display to measure distance or time.

E 1316, E07

market package, *n*—a service-oriented perspective to the National ITS Architecture, including subsystems (with applicable equipment packages) and architecture flows.

E 867, E17

marking, *n*—*in packaging*, the application of numbers, letters, **labels**, **tags**, symbols or colors to provide identification and to expedite handling during shipment and storage. (Compare **code**.)

D 996, D10

marking, *n*—the removal of printed ink from the web to idler rolls, turn bars, or nose cone on a printing press.

D 6488, D01

marking, marker head—*See lettered head, numeral head*.

F 547, F16

marking nail—*See dating nail, marking head, numeral head*.

F 547, F16

marking position—the area designated to mark information on a mark read form. Also called a **responseposition**.

F 149, F05

mark of conformity, (for certification)—protected mark, applied or issued under the rules of a certification system, indicating that adequate confidence is provided that the relevant product, process or service is in conformity with a specific standard or other normative document, (ISO Guide 2).

E 1187, E36

markoff—an indentation or imprinting of the skin surface due to any cause (such as foreign matter between mating parts, improper tooling, mismatch of detail parts, etc.).

E 631, E06

markoff—an indentation or imprinting of the skin surface due to any cause (such as foreign matter between mating parts, improper tooling, mismatch of detail parts, etc.).

E 1749, E06

mark reading—machine reading, by optical means, of marks (usually vertical or horizontal bars) that have been manually entered.

F 149, F05

mark scanning—the automatic optical sensing of marks usually recorded manually on a data medium.

F 149, F05

mark sensing—machine reading of marks (usually pencil strokes) on a punched card, by using the conductive properties of the mark itself.

F 149, F05

marl—calcareous clay, usually containing from 35 to 65 % calcium carbonate (CaCO_3).

D 653, D18

mar resistance, *n*—(1) ability of a coating to resist visual damage caused by light abrasion, impact, or pressure. (2) resistance of the surface of the coating to permanent deformation resulting from the application of a dynamic mechanical force.

D 16, D01

marsh—a wetland characterized by grassy surface mats which are

marsh

frequently interspersed with open water or by a closed canopy of grasses, sedges, or other herbaceous plants. **D 653, D18**

martempering, n—quenching an austenitized steel object in a medium at a temperature in the upper part of, or slightly above, the **martensiterange**, holding it in the medium until its temperature is substantially uniform throughout, and then cooling it in air through the **martensite range**. **A 941, A01**

martensite—metastable phase resulting from the diffusionless athermal decomposition of austenite below a certain temperature known as the M_s temperature (martensite start temperature). It is produced during quenching when the cooling rate of a steel, in the austenitic condition, is such that the pearlite and bainite, or both, transformation is suppressed. The composition of the martensite is identical with that of the austenite from which it transformed. Hence, martensite is a super-saturated solid solution of carbon in alpha iron (ferrite) having a body-centered tetragonal lattice. It is a magnetic plate-like constituent formed by a diffusionless shear type of transformation. These plates may appear needle-like or veriform in cross-section. **E 7, E04**

martensite, n—the lowest temperature phase in Ni-Ti shape memory alloys. **F 2005, F04**

martensite finish temperature (M_f), n—the temperature at which the transformation from austenite to martensite is completed on cooling in a single-stage transformation or the temperature at which the transformation from R-phase to martensite is completed on cooling in a two-stage transformation. **F 2005, F04**

martensite peak temperature (M_p), n—the temperature of the exothermic peak position on the DSC curve upon cooling for the austenite to martensite transformation or the R-phase to martensite transformation. **F 2005, F04**

martensite range, n—the temperature interval between M_s and M_f . **A 941, A01**

martensite start temperature (M_s), n—the temperature at which the transformation from austenite to martensite begins on cooling in a single-stage transformation or the temperature at which the transformation from R-phase to martensite begins on cooling in a two-stage transformation. **F 2005, F04**

martensitic—a plate-like constituent having a similar appearance and mechanisms of formation to that of martensite. **E 7, E04**

martensitic alloys—iron-chromium alloys with 12% to 17% chromium and sufficient carbon to permit strengthening by conventional heat treatment. **F 1789, F16**

marver—(1) a flat plate on which a hand gather of glass is rolled, shaped, and cooled.

(2) also the process of doing same. **C 162, C14**

marsh—the mixture of sugars, nutrients, and water that is capable of being fermented by microorganisms such as yeast in ethanol fermentation. **E 1705, E48**

masked area, n—a portion of the exposed specimen which is protected from light exposure by masking. (See also **control**.) **G 113, G03**

masking—various materials applied to specific areas of parts to prevent coating from being deposited. **B 374, B08**

masking, n—the phenomenon where one quality within a mixture obscures one or several other qualities present. **E 253, E18**

masking—in leak testing, the covering of a section of a test object so as to prevent tracer gas from entering leaks that may exist in the covered section. **E 1316, E07**

masking power—the ability of a fired glaze to mask visually the body on which it is applied. **C 242, C21**

masonry, n—the type of construction made up of masonry units laid with mortar, grout, or other methods of joining. **C 1232, C15**

masonry, n—construction, usually set in mortar, of natural building stone or manufactured units such as brick, concrete block, adobe, glass block, tile, manufactured stone, or gypsum block. **E 631, E06**

masonry cement, n—a hydraulic cement for use in mortars for masonry construction, containing one or more of the following

materials: portland cement, portland blast furnace slag cement, portland-pozzolan cement, natural cement, slag cement, or hydraulic lime; and in addition usually containing one or more materials such as hydrated lime, limestone, chalk, calcareous shell, talc, slag, or clay as prepared for this purpose. **C 11, C11**

masonry cement, n—a hydraulic cement manufactured for use in mortars for masonry construction or in plasters, or both, which contains a plasticizing material and, possibly, other performance-enhancing addition(s). **C 219, C01**

masonry nail—plain, electro-zinc-plated or galvanized, hardened-steel, knurled (longitudinally or nearly longitudinally threaded or fluted), $\frac{1}{2}$ to 4 by 0.148 or up to 0.250-in. nails with flat or checkered $\frac{5}{16}$ to $\frac{9}{16}$ -in. head and medium diamond point. **F 547, F16**

masons hydrated lime—hydrated lime suitable for use for masonry purposes. **C 51, C07**

masons quicklime—quicklime suitable (after slaking to a lime putty) for use for masonry purposes. **C 51, C07**

mass, n—the quantity of matter in a body. (See also **weight**.) **D 123, D13**

mass, n—the quantity of matter in a body. (See also **weight**.) **D 4849, D13**

mass:

analyzer—a device for dispersing ions as a function of their mass-to-charge ratio.

resolution—the ratio $M/\Delta M$ where ΔM is the full width at half-maximum peak height for the ion peak of mass M .

resolving power—the peak-to-valley ratio between adjacent, equal-sized peaks, separated by one mass unit.

spectrum—a plot of the measured ion signal as a function of mass-to-charge ratio. **E 673, E42**

mass-absorption coefficient—See **absorption coefficient**. **E 7, E04**

mass, active, m_1 —the effective value of mass, which may be used with values of ℓ_1 , and A' to evaluate a magnetic core as though it has an equivalent uniform flux path having the same induction at all points. **A 340, A06**

mass attenuation coefficient—a measure of the fractional decrease in radiation beam intensity per unit of surface density $\text{cm}^2\text{-gm}^{-1}$. **E 1316, E07**

mass burning rate, n—mass loss per unit time by materials burning under specified conditions. **E 176, E05**

mass color, n—the color, when viewed by reflected light, of a pigment-vehicle mixture of such thickness as to obscure completely the background. Sometimes called over-tone or mass-tone. **D 16, D01**

mass concentration—See **concentration**. **D 1356, D22**

mass concentration—the mass of a specified component or phase, per unit mass or unit volume of total. **E 1605, E06**

mass concentration, n—in multi-component or multi-phase mixtures, the mass of a specified component or phase per unit mass or unit volume of the total. (See also **particle concentration**.) **G 40, G02**

mass concentration—which see. **G 40, G02**

mass energy-absorption coefficient, μ_{en}/ρ —of a material for uncharged ionizing particles, the product of the mass energy transfer coefficient, μ_{tr}/ρ , and $(1-g)$, where g is the fraction of the energy of secondary charged particles that is lost to bremsstrahlung in the material (ICRU).

$$(\mu_{en}/\rho) = (\mu_{tr}/\rho)(1 - g)$$

Unit: $\text{m}^2 \cdot \text{kg}^{-1}$

E 170, E10

mass energy-transfer coefficient (μ_{tr}/ρ)—of a material for uncharged ionizing particles, the quotient of dE_{tr}/EN by ρdl , where E is the energy of each particle (excluding rest energy), N is the number of particles, and dE_{tr}/EN is the fraction of incident particle energy that is transferred to kinetic energy of charged particles by interactions in transversing a distance dl in the material of density ρ (ICRU).

$$(\mu_{tr}/\rho) = 1/\rho EN \cdot dE_{tr}/dl$$

Unit: $\text{m}^2 \cdot \text{kg}^{-1}$

E 170, E10

mass-fiber—asbestos that is randomly oriented in situ. D 2946, C17**massive-agglomerate cryostructure**—the cryostructure of frozen silt or loam in which ice veins form an irregular three-dimensional network. D 7099, D18**massive cryostructure**—the cryostructure of frozen ground in which all of the mineral particles are bonded together with ice. D 7099, D18**massive ice**—a comprehensive term used to describe large masses (at least 10 to 100 cm) of underground ice, including ice wedges, pingo ice, buried ice and dominantly horizontal ice beds. Massive ice beds typically have an ice content of at least 250 % (on an ice-to-dry-soil weight basis). If the ice content is less than 250 %, the beds are better termed "massive icy beds." Massive ice beds have a minimum thickness of 0.3 m. Some massive ice beds are more than 40 m thick and several kilometres in horizontal extent. Ice beds less than 0.3 m thick are better termed ice lenses. D 7099, D18**massive-porous cryostructure**—the cryostructure of frozen sand and gravel in which all of the mineral particles and bonder together with ice, but in which larger pore spaces are not completely filled with ice. D 7099, D18**mass loading**—lead concentration in units of mass per unit area. E 1605, E06**mass loss concentration, n**—the mass loss of a test specimen per unit exposure chamber volume in $\text{g} \cdot \text{m}^{-3}$. E 176, E05**mass median size, n**—a measurement of particle size for samples of particulate matter, consisting of that diameter such that the mass of all larger particles is equal to the mass of all smaller particles. D 1356, D22**mass number**—the whole number nearest to the atomic mass expressed in either atomic mass units or as (chemical) atomic weight. E 1316, E07**mass optical density, n**—the ratio of the optical density of smoke and the mass loss of the test specimen, multiplied by the volume of the test chamber and divided by the length of the light path. E 176, E05**mass scattering coefficient**—that part of the mass absorption coefficient due to scattering. E 7, E04**mass spectrometer leak detector**—a mass spectrometer adjusted to respond only to the tracer gas. E 1316, E07**mass spectrometer (M.S.)**—an instrument that is capable of separating ionized molecules of different mass to charge ratio and measuring the respective ion currents. The mass spectrometer may be used as a vacuum gage that relates an output which is proportioned to the partial pressure of a specified gas, as a leak detector sensitive to a particular tracer gas, or as an analytical instrument to determine the percentage composition of a gas mixture. Various types are distinguished by the method of separating the ions. The principal types are as follows:(a) *Dempster (M.S.)*—The ions are first accelerated by an electric field through a slit, and are then deflected by a magnetic field through 180° so as to pass through a second slit.(b) *Bainbridge-Jordan (M.S.)*—The ions are separated by means of a radial electrostatic field and a magnetic field deflecting the ions through 60° so arranged that the dispersion of ions in the electric field is exactly compensated by the dispersion in the magnetic field for a given velocity difference.(c) *Bleakney (M.S.)*—The ions are separated by crossed electric and magnetic fields. Also called cross fields (M.S.).(d) *Nier (M.S.)*—A modification of the Dempster (M.S.) in which the magnetic field deflects the ions.(e) *Time of Flight (M.S.)*—The gas is ionized by a pulse-modulated electron beam and each group of ions is accelerated toward the ion collector. Ions of different mass to charge ratios traverse their paths in different times.(f) *Radio-Frequency (M.S.)*—The ions are accelerated into a radio-frequency analyzer in which ions of a selected mass to

charge are accelerated through openings in a series of spaced plates alternately attached across a radio-frequency oscillator. The ions emerge into an electrostatic field which permits only the ions accelerated in the analyzer to reach the collector.

(g) *Omegatron (M.S.)*—The ions are accelerated by the cyclotron principle. E 1316, E07**mass spectrum**—a record, graph, table, and so forth, that shows the relative number of ions of various mass that are produced when a given substance is processed in a mass spectrometer. E 1316, E07**mass strength, n**—a measure of the tendency for carbon black pellets to pack together and to influence flow in a bulk handling system. D 3053, D24**mass-tone**—see **mass color**. D 16, D01**masstone, n**—in paint technology, a pigment-vehicle mixture containing a single colorant only. E 284, E12**mass, total, m**—the actual mass of a magnetic core. A 340, A06**mass transfer coefficient (MTC)**—mass (or volume) transfer through a membrane based on driving force. D 6161, D19**mass transfer zone (adsorption zone)**—the region in which the concentration of the adsorbate of interest in the fluid decreases from influent concentration to the lowest detectable concentration. D 2652, D28**mass unit weight**—see **unit weight**. D 653, D18**mass wasting**—downslope movement of soil or rock, on or near the ground surface, due to gravity. D 7099, D18**master**—an intermediate, temporary, and usually expendable image vehicle for use on duplicators. F 335, F05**master alloy**—an alloy rich in one or more desired addition elements that is added to a melt to raise the percentage of a desired constituent. B 374, B08**master-alloy powder, n**—a powder with high alloy concentration, designed to be diluted when mixed with a base powder to produce the desired composition. B 243, B09**masterbatch, n**—a homogeneous mixture of rubber and one or more materials in known proportions for use as a raw material in the preparation of the final compounds. D 1566, D11**master composite sample, n**—for *asbestos*, not less than two and not more than ten composite samples so combined and reduced as to form a test sample that represents a lot that consists of more than 200 bags but not more than 2000 bags. D 2946, C17**MasterFormat**—a standard sequence of numbers and titles for organizing information about construction requirements, products, and activities (source 1995 edition of MasterFormat, published by CSI). E 631, E06**MasterFormat, n**—a standard sequence of numbers and titles for organizing information about construction requirements, products, and activities (source 1995 edition of MasterFormat, published by CSI). E 833, E06**master set, n**—a selected group of witness tires, each with different test response characteristics to provide a range of values for the measured property or properties. F 538, F09**mastic, n**—a material of relatively viscous consistency that dries or cures to form a protective finish, suitable for application to thermal insulation in thickness greater than 30 mils (0.76 mm) per coat. C 168, C16**mastic, n**—see **mastic adhesive**. D 907, D14**mastic**—See **flashing cement and asphalt mastic**. D 1079, D08**mastic adhesive, n**—a gap-filling adhesive applied as a paste or putty-like material. (Also called *mastic*.) D 907, D14**mastication, n**—a breakdown or softening of raw rubber, or a mix by the combined action of mechanical work (shear) and atmospheric oxygen, sometimes accelerated by the use of a peptizer and frequently at elevated temperatures. D 1566, D11**mat**—a glass-fiber product of felt-like nature. C 162, C14**mat, n**—a fibrous material consisting of randomly oriented chopped or swirled filaments loosely held together with a binder. D 883, D20

mat—a random arrangement of fine fibers uniformly distributed to form a thin, highly porous, felt-like material. **E 631, E06**

mat—a random arrangement of fine fibers uniformly distributed to form a thin, highly porous, felt-like material. **E 1749, E06**

Matadero hides—Argentinian cattlehides corresponding roughly to city butcher or small packer hides in the United States. **D 1517, D31**

match, n—see color match. **E 284, E12**

match, v—to provide, by selection, formulation, adjustment, or other means, a trial color that is indistinguishable from, or within specified tolerances of, a specified standard color under specified conditions. **E 284, E12**

matched lumber—See **lumber**. **D 996, D10**

matched pairs, n—a set of positive and negative thermoelements chosen so that a thermocouple fabricated from these thermoelements will match a specified temperature-electromotive force relationship to within a specified tolerance, at the time of first use. **E 344, E20**

matched test sieve, n—a test sieve that reproduces the results of a master test sieve within defined limits for a designated material. **E 1638, E29**

matching—Under **lumber** see *matched lumber*. **D 9, D07**

matching—*in plywood*, the arrangement of strips of veneer to obtain a particular repetitive pattern.

book matching—turning alternative adjacent strips of veneer of a flitch over.

mismatching—making sheets of face veneer from specially selected dissimilar (in color or grain or both) strips of veneer.

reversed matching—turning alternate adjacent strips of veneer of a flitch end for end; also called “swing matching.”

slip matching—laying adjacent strips of veneer tight side up without turning; also called “slide matching.” **D 1038, D07**

matching, n—the process of equating or relating stimuli, usually to determine the similarity between standard and unknown or between unknowns. **E 253, E18**

mated mechanical transfer—a system requiring a CB donor sheet, usually a colored or black pigmented layer which may be bound or covered by a protective material and a CF receptor sheet on which an image is produced on application of pressure. **F 549, F05**

mated transfer paper—a transfer paper requiring two different coatings to come into contact to develop an image. **F 549, F05**

material, n—*in homesewing*, a planar structure such as textile fabric, plastic film, or leather **D 123, D13**

material, n—a quantity of carbon black with unique composition and characteristics. **D 3053, D24**

material, n—*in home sewing*, a planar structure such as textile fabric, plastic film, or leather. **D 4965, D13**

material, n—single substance, or uniformly dispersed mixture, for example metal, stone, timber, concrete, mineral fiber, or polymer. **E 176, E05**

material—moveable property that may be consumed or expended. **E 2135, E53**

material, n—a general term used to denote raw materials (starting materials, reagents, solvents), process aids, intermediates, APIs, and packaging and labeling materials. **E 2363, E55**

material form—the contour, arrangement, and structure of an unconsolidated composite material, especially with regard to the geometry and nature of the reinforcement. Factors considered part of the material form include, but are not limited to: reinforcement diameter, reinforcement length (for discontinuous reinforcements), tow size or count, fabric areal weight, fabric style, reinforcement content, and ply thickness. **D 3878, D30**

material, generic, n—is one for which a nationally recognized Standard Specification exists. **E 176, E05**

material lap—longitudinal surface discontinuity extending into rod, bar, or wire, caused by doubling over of metal during hot rolling. **F 1789, F16**

material proprietary, n—is one whose fire performance characteristics are determined in consideration of a formulation or process of production that is proprietary. **E 176, E05**

material requirements list—a type of bill of material used in material requirements planning systems. **E 2135, E53**

material review—evaluation by a team of fastener experts to determine the fasteners’s fitness for general use, fitness for intended use, or fitness for specified use. **F 1789, F16**

material safety data sheet (MSDS)—written or printed material concerning a hazardous substance which is prepared by chemical manufacturers, importers, and employers for hazardous chemicals pursuant to OSHA’s Hazard Communication Standard, 29 CFR 1910.1200. **D 5681, D34**

material specification—proprietary or consensus standards document which defines the material, acceptable chemical limits, and other requirements used in fastener manufacturing. **F 1789, F16**

material test report—written document or electronic record, signed by an authorized party, attesting that the raw material is in accordance with specified requirements, including the actual results of all required chemical analyses, tests, and examinations. **F 1789, F16**

material tests—the quality and property tests of component materials. **C 822, C13**

material transfer—a general term to describe the carry-over of material from one electrical contact to another.

NOTE—When the discussion becomes specific, the term “gain” or “loss” is used with respect to a particular contact (for d-c application, anode or cathode; for a-c application, stationary contact or movable contact). For example, anode gain, anode loss, stationary contact gain. **B 542, B02**

material transfer, bridge—material transfer that occurs without the presence of a gaseous electric discharge. The filament of molten contact material that connects the two separating contacts does not rupture in the middle; thus there is a gain of material on one contact and a loss of material from the other. **B 542, B02**

material transfer, cathode—movement of contact metal from the cathode by means of a cathode arc. **B 542, B02**

material transfer, needle—material transfer that results in a buildup with a smaller diameter and a relatively great length. **B 542, B02**

material transfer, negative—see **material transfer**. **B 542, B02**

material transfer, positive—see **material transfer**. **B 542, B02**

maternity wear, n—clothing worn during pregnancy. **F 1494, F23**

mat finish—smooth dull finish applied to leather for shoe uppers, handbags, belts, etc. **D 1517, D31**

mat finish (matte finish)—a dull finish. **B 374, B08**

mat-formed particleboard—a particleboard in which the coated particles are formed first into a mat having substantially the same length and width as the finished board before being flat-platen pressed. **D 1554, D07**

mat glaze—See *mat glaze* under **glaze**. **C 242, C21**

mathematical/analytical (M/A) technique—a technique of obtaining probability functions for economic measures of project worth without the repeated trials of simulation. **E 631, E06**

mathematical/analytical (M/A) technique, n—a technique of obtaining probability functions for economic measures of project worth without the repeated trials of simulation. **E 833, E06**

mathematical model—the representation of a physical system by mathematical expressions from which the behavior of the system can be deduced with known accuracy. (ISRM) **D 653, D18**

mat reinforcement—see **quadrant mat**. **C 822, C13**

matric potential—the energy required to extract water from a soil against the capillary and adsorptive forces of the soil matrix. **D 653, D18**

matric suction—for isothermal soil systems, matric suction is the

pressure difference across a membrane separating soil solution, in-place, from the same bulk (see **soil-water pressure**).

D 653, D18

matrix—See **mandrel**.

B 374, B08

matrix, *adj*—a descriptive term for a textile fiber in which one or more polymeric fibrous material(s) is dispersed in another.

D 123, D13

matrix—*in grouting*, a material in which particles are embedded, that is, the cement paste in which the fine aggregate particles of a grout are embedded.

D 653, D18

matrix, *n*—the part of an adhesive which surrounds or engulfs embedded filler or reinforcing particles and filaments.

D 907, D14

matrix, *n*—substance in which the analyte or property exists.

D 1129, D19

matrix, *n*—the continuous constituent of a composite material, which surrounds or engulfs embedded filler or reinforcement.

D 3878, D30

matrix, *adj*—a descriptive term for a textile fiber in which one or more polymeric fibrous material(s) is dispersed in another.

D 4466, D13

matrix—the continuous phase.

E 7, E04

matrix, *n*—*in methods of chemical analysis*, all components of a material except the analyte.

E 135, E01

matrix—the essentially homogenous phase in a composite material in which reinforcements such as fibers, filaments, particles, etc., are embedded.

E 631, E06

matrix—the type of material such as dust, paint, or soil, in which lead in a sample is contained.

E 1605, E06

matrix—the essentially homogeneous phase in a composite material in which reinforcements such as fibers, filaments, particles, etc., are embedded.

E 1749, E06

matrix array, *n*—a set of rows and columns of transductive elements able to convert the quantity of light received to a relatively-sized modulated electrical signal. Distinguished from a linear array. (See **photodiode array (matrix)**.)

F 1294, F05

matrix content—the amount of matrix present in a composite expressed either as percent by weight or percent by volume. For polymer matrix composites this is resin content.

D 3878, D30

matrix effect—a change in an instrument reading of an analyte level caused by materials in the matrix other than the analyte.

E 1605, E06

matrix effects:

Auger—any change of an Auger spectrum (for example, shape or signal strength) due to the physical environment (for example, amorphous/crystalline, thin layer/thick layer, or rough/smooth surface) of the emitting element and not due to chemical bonding or changes in concentration.

SIMS—any change in the secondary ion yields which are caused by changes in the chemical composition or structure of a particular specimen.

AES—see **Auger**.

E 673, E42

matrix metal, *n*—the continuous phase of a polyphase alloy or mechanical mixture; the physically continuous metallic constituent in which separate particles of another constituent are embedded.

B 243, B09

matrix spike—an aliquot of the sample spiked with known levels of the target analytes.

D 5681, D34

matrix symbols, *n*—an arrangement of regular polygon shaped cells where the center-to-center distance of adjacent elements is uniform and the arrangement of cells represents data or symbology functions, or both.

F 1294, F05

matte, *n*—lacking luster or gloss. Synonymous with "flat" in paint terminology.

E 284, E12

matte glaze—a glaze which does not exhibit specular reflection.

C 242, C21

matting, *n*—*for pile yarn floor covering*, loss of tuft definition due to entanglement

D 123, D13

matting, *n*—*for pile yarn floor coverings*, loss of tuft definition due to entanglement.

D 5684, D13

mattress, *n*—a mattress is a ticking (outermost layer of fabric or related material) filled with a resilient material, used alone or in combination with other products, intended or promoted for sleeping upon.

E 176, E05

mattress blade—special clinching blade for fastening sisal pads in bedding plants, permitting stapling inside edging wire.

F 592, F16

maturation (latex), *n*—controlled storage of compounded latex before processing, which allows stabilization and escape of air bubbles, optimizes dispersion of ingredients, and allows partial pre-vulcanization of rubber particles.

D 1566, D11

mature fibers, *n*—(cotton fibers treated with sodium hydroxide solution)—fibers that have swollen into unconvoluted and almost rod-like shapes, where total wall width is equal to or greater than the lumen width.

D 123, D13

mature fibers, *n*—(cotton fibers observed under polarized light)—fibers that appear yellow, yellow green, or green and are yellow or light yellow upon rotation to the subtractive position (through 90°) and show little or no parallel extinction on removal of the selenite plate. (Compare **immature fibers**.)

D 123, D13

mature fibers, *n*—*cotton fibers treated with sodium hydroxide solution*—fibers that have swollen into unconvoluted and almost rod-like shapes, where total wall width is equal to or greater than the lumen width.

D 7139, D13

mature fibers, *n*—*cotton fibers observed under polarized light*—fibers that appear yellow, yellow green, or green and are yellow or light yellow upon rotation to the subtractive position (through 90°) and show little or no parallel extinction on removal of the selenite plate. (Compare **immature fibers**.)

D 7139, D13

maturing range—the time-temperature range within which a ceramic body, glaze, or other composition may be fired to yield specified properties.

C 242, C21

maturing temperature—the temperature at which porcelain enamel must be held for a selected time to achieve the desired properties.

C 286, B08

maturing temperature, *n*—the temperature, as a function of time and bonding condition, that produces desired characteristics in bonded components.

D 907, D14

maturity, *n*—the extent of the development of a property of a cementitious mixture.

C 125, C09

maturity function, *n*—a mathematical expression which uses the measured temperature history of a cementitious mixture during the curing period to calculate an index that is indicative of the maturity at the end of that period.

C 125, C09

maturity index, *n*—an indicator of maturity which is calculated from the temperature history of the cementitious mixture by using a maturity function.

C 125, C09

maturity index, *n*—a relative indication of cotton fiber maturity.

D 123, D13

maturity index, *n*—a relative indication of cotton fiber maturity.

D 7139, D13

maximum allowable particle size, *n*—the largest lineal dimension of a sample's individual particles accepted for a given sample mass.

D 5681, D34

maximum amplitude (L , LT^{-1} , LT^{-2})—deviation from mean or zero point.

D 653, D18

maximum bend moment—the greatest moment applied to a needle during a bend test.

F 1840, F04

maximum curve—in a phase diagram, a univariant line, tracing the meetings of a pair of bivariate surfaces at intermediate composition and coinciding with their highest temperature at each pressure level, or their highest pressure at each temperature level; congruent transformation occurs everywhere along a maximum curve.

E 7, E04

maximum density (maximum unit weight)—see **unit weight**.

D 653, D18

maximum draft—maximum vertical dimension of the boom below the water line.

F 818, F20

maximum dynamic load

maximum dynamic load—sum of all instantaneous dynamic loads including those due to acceleration, wave forces, and so forth.

F 818, F20

maximum elongation, El_{max} , n —the elongation at the time of fracture, including both elastic and plastic deformation of the tensile specimen.

E 6, E28

maximum erosion rate, n —in cavitation and liquid impingement erosion, the maximum instantaneous erosion rate in a test that exhibits such a maximum followed by decreasing erosion rates. (See also **erosion rate-time pattern**.)

G 40, G02

maximum force, P_{max} [F]—in fatigue, the highest algebraic value of applied force in a cycle. By convention, tensile forces are positive and compressive forces are negative.

E 1823, E08

maximum hardness—hardness specified in fastener standards above which the fastener is considered nonconforming to the standard.

F 1789, F16

maximum heating temperature, n —the maximum temperature, as recommended by the manufacturer, to which a hot-applied sealant or filler for pavement cracks or joints can be heated while conforming to all specification requirements and result in appropriate application characteristics.

D 5535, D04

maximum image area, n —the portion on a page which can be printed. (See **percent coverage** and **image area**.)

F 1457, F05

maximum inflation pressure, n —for inflatable restraints, the maximum internal cushion pressure occurring after breakout pressure.

D 123, D13

maximum inflation pressure, n —for inflatable restraints, the maximum internal cushion pressure occurring after breakout pressure.

D 6799, D13

maximum joint width, n —the widest opening of an installed joint system.

E 176, E05

maximum life expectancy, LE-1000, n —for paper, a paper is expected to be usable for 1000 years.

D 1968, D06

maximum life expectancy paper, LE-1000, n —for paper, a paper expected to be usable for 1000 years when stored under prescribed conditions.

D 1968, D06

maximum load rating [M], n —of a passenger tire the load rating at the maximum permissible cold inflation pressure for that tire.

F 538, F09

maximum (non-statistical), n —the highest acceptable actual test result; any valid individual test result above the maximum is cause for rejection of the component or material lot being tested.

$$\text{All } x_i \leq \text{Maximum} = USL$$

A 644, A04

maximum operating distance from outlet, n —the maximum operating distance of the vacuum cleaner from the supply outlet is the straight line measured distance from the front of the nozzle to the face of the cord input plug or to the face of the wall outlet (see Discussion) in the case of a central vacuum cleaning system, with the maximum straight line extension from the front of the cleaning system nozzle in the operating position parallel to and touching the floor.

F 395, F11

maximum page length, n —the maximum number of lines of text or graphic equivalent which a printer can output onto a sheet of paper; this value can be set by either the printer or the computer, or both.

F 1457, F05

maximum permissible errors, n —of a thermometer or thermometric system, extreme values permitted by regulation or specification of the difference between the indication of a thermometer or thermometric system and the true value of temperature.

E 344, E20

maximum plunger travel, [L], n —in tire testing, the relative displacement of tread surface by a plunger, measured from the point of initial contact of the plunger with the tread surface to the point of maximum force at rupture or at the bottom-out point.

F 538, F09

maximum point—that composition and temperature, or pressure, at which a heterogeneous equilibrium occurs at its highest temperature, or pressure, when this does not coincide with one of the composition limits of the equilibrium, that is, when it occurs at an

intermediate composition; the equilibrium becomes congruent (univariant) at the maximum point.

E 7, E04

maximum pore diameter, n —in gas diffusion, the diameter of a capillary of circular cross section which is equivalent (with respect to surface tension effects) to the largest pore of the diffuser under consideration.

D 4175, D02

maximum power, n —of a photovoltaic device, the electrical output when operated at a point where the product of current and voltage is maximum.

E 1328, E44

maximum principal tensile stress (MPTS)—a maximum calculated tensile stress based on strain gage measurements.

E 631, E06

maximum print position, n —the rightmost point at which the printer can mark the paper.

F 1457, F05

maximum rate period, n —in cavitation and liquid impingement erosion, a stage following the acceleration period, during which the erosion rate remains constant (or nearly so) at its maximum value. (See also **erosion rate-time pattern**.)

G 40, G02

maximum self-registering clinical thermometer, n —clinical thermometer designed to retain the indication of its maximum measured temperature until reset.

E 344, E20

maximum size (of aggregate), n —in specifications for, or description of aggregate, the smallest sieve opening through which the entire amount of aggregate is required to pass.

C 125, C09

maximum size (of aggregate), n —in specifications for, or descriptions of aggregate, the smallest sieve opening through which the entire amount of aggregate is required to pass.

D 8, D04

maximum sound level, $L_{AFmax}[nd]$, (dB) n —Ten times the common logarithm of the square of the ratio of the largest frequency-weighted and exponential-time-weighted (or other wise time-averaged) sound pressure during the measurement period to the square of the reference-sound-pressure of 20 micro pascals. The subscripts designate the frequency weighting (A or C), and time the weighting or averaging (F for fast, S for slow, I for impulse, or a number with proper units to indicate time interval).

C 634, E33

maximum (statistical), n —the highest acceptable statistical test result; for compliance, the sample mean (\bar{x}) plus M standard deviations(s), where M is a matter of agreement between the supplier and purchaser, must be less than, or equal to, the upper specification limit.

$$\bar{x} + M \times s \leq \text{Maximum} = USL$$

A 644, A04

maximum stress-intensity factor, K_{max} [FL^{-3/2}]—in fatigue, the maximum value of the stress-intensity factor in a cycle. This value corresponds to P_{max} .

E 1823, E08

maximum sublimation point—in a PT phase diagram, the highest pressure and temperature at which a solid species of intermediate composition may exist in equilibrium with vapor of identical composition.

E 7, E04

maximum transit rate—the maximum speed at which the sampler can be lowered and raised in the sampling vertical and still have the sample collected isokinetically.

D 4410, D19

maximum use pressure, n —the greatest pressure to which a material can be subjected as a result of a reasonably foreseeable malfunction, operator error or process disturbance.

G 126, G04

maximum use temperature, n —the greatest temperature to which a material can be subjected as a result of a reasonably foreseeable malfunction, operator error, or process disturbance.

G 126, G04

maxwell, ϕ —the unit of magnetic flux in the cgs-emu system of units. One maxwell equals 10^{-8} weber. See **magnetic flux**.

NOTE—

$$e = -N d\phi/dt \times 10^{-8}$$

where:

e = induced instantaneous emf in volts,

$d\phi/dt$ = time rate of change of flux in maxwells per second, and

N = number of turns surrounding the flux, assuming each turn is linked with all the flux.

A 340, A06

MCL—maximum contaminant level.

D 6161, D19

McQuaid-Ehn grain size—the austenitic grain size developed in steels by carburizing at 1700°F (927°C) followed by slow cooling.

See Test Methods E 112. E 7, E04

MCS, n —see **multiple chemical sensitivity**.

E 2114, E06

MD—State of Maryland.

E 631, E06

MD—State of Maryland.

E 1605, E06

MDSA—see **message data storage area**.

F 1457, F05

mealiness, n —an uneven or grainy solid or halftone dot caused by improperly ground ink or the presence of foreign matter.

D 6488, D01

mean—arithmetical average of a set of numbers.

D 1517, D31

mean annual ground surface temperature—the mean annual temperature of the surface of the ground.

D 7099, D18

mean annual ground temperature—the mean annual temperature of the ground at a particular depth.

D 7099, D18

mean coefficient of thermal expansion, α (mm/mm·°C or in./in.·°C)—from temperature T_1 to temperature $TT_1 < T_2$:

$$\alpha = \frac{0.01P}{T_2 - T_1}$$

where P = percent linear thermal expansion, as defined below.

C 242, C21

mean crossings—in *fatigue loading*, the number of times that the force-time history crosses the mean force level with a positive slope or a negative slope, or both, as specified during a given period.

E 1823, E08

mean depth of erosion, n —in *cavitation and impingement erosion*, the average thickness of material eroded from a specified surface area, usually calculated by dividing the measured mass loss by the density of the material to obtain the volume loss and dividing that by the area of the specified surface. (Also known as *mean depth of penetration* or *MDP*. Since that might be taken to denote the average value of the depths of individual pits, it is a less preferred term.)

G 40, G02

mean depth of penetration, n —See **mean depth of erosion**.

G 40, G02

mean deviation unevenness, U %, n —in *textiles*, the average of the absolute values of the deviations of the linear densities of the integrated lengths between which unevenness is measured and expressed as a percentage of the average linear density for the total length within which unevenness is measured. (See also **unevenness, coefficient of variation unevenness**.)

D 123, D13

mean deviation unevenness, U %, n —in *textiles*, the average of the absolute values of the deviations of the linear densities of the integrated lengths between which unevenness is measured and expressed as a percentage of the average linear density for the total length within which unevenness is measured. (See also **unevenness, coefficient of variation unevenness**.)

D 4849, D13

mean diameter, arithmetic—See **arithmetic mean diameter** under **diameter**.

C 242, C21

mean diameters—the family of diameters, \bar{D}_{pq} , such that:

$$\bar{D}_{pq}^{(p-q)} = (\sum_i D_i^p) / (\sum_i D_i^q)$$

where:

p and q = dissimilar positive integers. (The value of q may also be “zero.”)

E 1620, E29

mean droplet diameter (\bar{D}_{pq})—is represented by the following:

$$\bar{D}_{pq}^{(p-q)} = \frac{\sum D_i^p}{\sum D_i^q}$$

where:

D_i = the diameter of the i^{th} particle,

$\sum D_i^o$ = the total number of drops in the sample. Thus:

\bar{D}_{10} = length mean diameter,

\bar{D}_{20} = area mean diameter,

\bar{D}_{30} = volume mean diameter,

\bar{D}_{31} = volume/length mean diameter (mean evaporative diameter),

\bar{D}_{32} = SAUTER mean diameter, and

\bar{D}_{43} = DeBROUKERE or HERDAN mean diameter.

E 1102, E35

mean escape depth—the average depth normal to the surface from which the specified particles or radiations escape as defined by:

$$\int_0^\infty z\phi(z,\theta)dz / \int_0^\infty \phi(z,\theta)dz$$

where $\phi(z,\theta)$ = the emission depth distribution function for depth z from the surface into the material and for direction of emission θ with respect to the surface normal.

E 673, E42

mean force, P_m (or S_m or ϵ_m) [F or FL²]—in *fatigue loading*, the algebraic average of the maximum and minimum forces in constant amplitude loading, or of individual cycles in spectrum loading,

$$P_m = \frac{P_{\max} + P_{\min}}{2}$$

or the integral average of the instantaneous force values of a spectrum loading history.

E 1823, E08

mean free path—See **electron, inelastic mean free path**. E 673, E42

mean free path—the average distance that a molecule travels between successive collisions with other molecules. E 1316, E07

mean ionic activity coefficient—for a salt that is composed of two monovalent ions, the geometric mean of the individual ionic activity coefficients. (The geometric mean is obtained, in this case, by multiplying the two individual ionic activity coefficients and then taking the square root.) It is important because, unlike individual ionic activity coefficients, it can be measured by a variety of techniques, such as freezing point depression and vapor pressure, as well as by paired sensing electrodes. D 4127, D19

mean length, n —in *testing of cotton fibers*, the average length of all the fibers in the test specimen based on mass-length data.

D 123, D13

mean length, n —in *testing of cotton fibers*, the average length of all the fibers in the test specimen based on mass-length data.

D 7139, D13

mean modulus—the ratio of mean stress to mean strain. (ISO)

D 4092, D20

mean panel rating (MPR), n —the average value, for each quality section of highway pavement, of ride quality ratings assigned by a ride rating panel.

E 867, E17

mean particle diameter—the weighted average particle size, in SI units, of a granular adsorbent computed by a standard procedure.

D 2652, D28

mean profile depth (MPD), n —the average of all of the mean segment depths of all segments of the profile.

E 867, E17

mean roughness index (MRI), n —the average of the international roughness index (IRI) values for the right and left wheel tracks.

E 867, E17

mean segment depth, n —the average value of the profile depth of the two halves of a segment having a given baselength. E 867, E17

mean specific heat, n —the quantity of heat required to change the temperature of a unit mass of a substance one degree, measured as

mean specific heat, *n*

the average quantity over the temperature range specified. (It is distinguished from true specific heat by being an average rather than a point value.) (In SI units: J/kg•K) (In inch-pound units: Btu/lb•F) **C 168, C16**

mean square, *n*—in analysis of variance, a contraction of the expression “mean of the squared deviations from the appropriate average(s)” where the divisor of each sum of squares is the appropriate degrees of freedom. **D 123, D13**

mean square, *n*—in analysis of variance, a contraction of the expression “mean of the squared deviations from the appropriate average(s)” where the divisor of each sum of squares is the appropriate degrees of freedom. **D 4175, D02**

mean strain—the average value of strain during a single complete hysteresis loop of cyclic deformation. (ISO) **D 4092, D20**

mean stress—the average value of the stress during a single complete hysteresis loop of cyclic deformation. (ISO) **D 4092, D20**

mean temperature, *n*—in thermal transmittance of textiles only, the average of the hot plate temperature and the temperature of the calm, cool air that prevailed during the test. **D 123, D13**

mean texture depth (MTD), *n*—the mean depth of the pavement surface macrotexture determined by the volumetric technique of Test Method E 965. **E 867, E17**

mean value—arithmetic average of data values; calculated as the algebraic sum of the data values divided by the number of data values. **E 631, E06**

mean (value)—the arithmetic mean, unless stated to be the geometric mean. **E 1605, E06**

mean-variance criterion—a technique for evaluating the relative risk and return when choosing among competing projects that dictates that the project value with the higher mean (that is, expected value of project worth) and lower standard deviation be chosen. **E 631, E06**

mean-variance criterion, *n*—a technique for evaluating the relative risk and return when choosing among competing projects that dictates that the project value with the higher mean (that is, expected value of project worth) and lower standard deviation be chosen. **E 833, E06**

mean velocity in hydraulics, *n*—the average velocity throughout a channel cross section. Defined as the discharge divided by the cross-sectional area of flow usually expressed in meters per second (m/s) or feet per second (ft/s). **D 653, D18**

mean (\bar{x}), *n*—the sum of the individual data points (x 's) divided by the number of data points (n).

$$\bar{x} = \frac{\sum x_i}{n}$$

A 644, A04

measured energy input rate—peak rate at which the equipment consumes energy, measured during a period when the equipment is operating at full input. **F 1827, F26**

measured heat release of specimen, *n*—the observed heat release under the variable flux field imposed on the specimen and measured. **E 176, E05**

measured inflation pressure, *n*—gauge pressure of a tire measured at a given time under ambient temperature and barometric pressure. **F 538, F09**

measured sediment load—that part of the total sediment discharge that can be measured with available suspended-sediment samplers; does not include bed-load discharge and suspended sediment discharge very near the bed. **D 4410, D19**

measurement, *n*—set of operations having the object of determining a numeric value or non-numeric characteristic. **D 1129, D19**

measurement, *n*—act of quantifying a property or dimension. **meeting rail**—See **windows and doors**. **E 631, E06**

measurement, *n*—act of quantifying a property or dimension. **E 1605, E06**

measurement accuracy—the numerical or percentage deviation of a measured value (or a value computed from one or more measure-

ments) from its true value or from some absolute or standardized value. This deviation may depend upon the procedures used and is caused chiefly by systematic errors in the calibrations of the equipment used, which errors, if known, may be removed from the measured data to enhance the accuracy of the measured or computed value. **A 340, A06**

measurement area—the surface area that is examined for conformance to one or more specified requirements. **B 374, B08**

measurement interval, *n*—the distance travelled, in kilometres (miles), between two successive groove (void) depth measurements. **F 538, F09**

measurement plan, *n*—a document formally describing the specific steps to be taken during a measurement, including any unique requirements. **C 634, E33**

measurement process, *n*—the method and procedure of obtaining and measuring samples or their subsamples to produce sample data. **D 5681, D34**

measurement quality assurance plan—a documented program for the measurement process that ensures, on a continuing basis, that the overall uncertainty meets the requirements of the specific application. This plan requires traceability to, and consistency with, nationally or internationally recognized standards. **E 170, E10**

measurement quality objective, *n*—the precision, accuracy, and detection requirements for measurement data, based on the intended use of that data. **D 1129, D19**

measurement quality objectives (MQOs)—quantitative statements of the acceptable level of selectivity, sensitivity, bias, and precision for measurements of the analyte of interest in the matrix of concern. **D 5681, D34**

measurement set, *n*—the set of acoustical measurements and related data obtained at a single measurement location during a specified time interval. **C 634, E33**

measurement system—all elements of the analytical process including laboratory subsampling, sample preparation and cleanup, and analyte detection and quantitation, including the analysts. **D 5681, D34**

measurement system—the specific combinations of instrumentation, operator, and procedure used to make a particular measurement. **E 170, E10**

measurement time, *n*—that time required from the time of patient contact to display of temperature to within the stated accuracy. **E 344, E20**

measurement time, *n*—the period required from the time of patient contact to the time when the thermometer may be removed or read to within the stated accuracy of the thermometer. **E 344, E20**

measurement traceability, *n*—property of the result of a measurement or the value of a standard whereby it can be related to stated references, usually national or international standards, through an unbroken chain of comparisons all having stated uncertainties.

NOTE—The concept is often expressed by the adjective *traceable*.

NOTE—The unbroken chain of comparisons is called a *traceability-chain*. **D 1129, D19**

measurement traceability—the ability to demonstrate by means of an unbroken chain of comparisons that a measurement is in agreement within acceptable limits of uncertainty with comparable nationally or internationally recognized standards. **E 170, E10**

measurement uncertainty—an estimate of potential inaccuracies in a measured or derived quantity based on explicit evaluation and combination of all sources of errors. Note - Quantitative uncertainty estimates are typically given in the form of variances (or standard deviations) and covariances (or correlations) derived from statistical procedures combining random, systematic, and calculational (modeling) uncertainties. **E 7, E04**

measurement value, *n*—the numerical result of quantifying a particular property or dimension. (See **observation**). **D 123, D13**

measuring junction—the junction of a thermocouple placed at a location where an unknown temperature is to be measured or

- where an established temperature is to be maintained. When the measuring junction is at a higher temperature than the reference junction it is commonly called the hot junction. **E 7, E04**
- measuring junction, *n***—that junction of a thermocouple which is subjected to the temperature to be measured. **E 344, E20**
- mechanical adhesion, *n***—see *mechanical adhesion* under **adhesion**. **D 907, D14**
- mechanical alignment*—See **alignment**. **E 7, E04**
- mechanical analysis*—see **grain-size analysis**. **D 653, D18**
- mechanical analysis**—a determination of the particle-size distribution of a sample by mechanical separation. **D 4410, D19**
- mechanical bonds, *n***—the attachment created when plaster penetrates, into or through, the substrate, or envelops irregularities in the surface of the substrate. **C 11, C11**
- mechanical break-up unit (MBU), *n***—a design structure found in the insert that forces product to flow in a swirling method for producing specific spray characteristics. **D 6655, D10**
- mechanical cell, *n***—a type of flotation cell that uses mechanical agitation of a pulp by means of an immersed impeller (rotor) and stator stirring mechanism. Aeration to the cell can be from an external pressurized air source or self-induced air. **D 121, D05**
- mechanical cleaner*—see **cleaner, mechanical**. **F 412, F17**
- mechanical cleaning**—process for removing dirt, scale, or other deposits from surfaces through the use of mechanical means such as abrasive blasting. **B 374, B08**
- mechanical connection**—a joining of two or more elements by means of mechanical fasteners, such as screws, bolts, or rivets but not by welding or adhesive bonding. **E 631, E06**
- mechanical deposition**—coating process in which particles of the plating metal are impacted against the fastener surface such that cold welding of the plating metal to the fastener surface is accomplished. **F 1789, F16**
- mechanical disk scanner**—a rotating scanning disk that breaks light reflection during the optical reading operation into a series of light points that are directed through the slit of a fixed aperture and onto the surface of a photomultiplier tube. **F 149, F05**
- mechanical dispersion, *n***—a mixture produced by the application of mechanical shearing forces to a multi-phase system, one component of which is water, so as to distribute one or more of the materials uniformly throughout the mass of the water with the water existing as a continuous phase. **D 4175, D02**
- mechanical dispersion, *n***—a low energy aqueous medium produced by continuous stirring of the test solution and containing both dissolved and undissolved components of the test material. **D 4175, D02**
- mechanical dispersion, *n***—a low energy aqueous medium produced by continuous stirring of the test solution and containing both dissolved and undissolved components of the test material. **D 6384, D02**
- mechanical durability**—resistance of the carbon paper or ribbon to cutting after repeated use. **F 221, F05**
- mechanical fastener, *n***—a corrosion-resistant component used to attach the insulation board to the substrate or framing member. **E 2110, E06**
- mechanical fastener**—mechanical device that holds or joins two or more components in definite positions with respect to each other and is often described as a bolt, nut, rivet, screw, washer, or special formed part. **F 1789, F16**
- mechanical freezers**—freezers that operate by a refrigeration system in which cooling is provided by mechanical means such as a compressor. **E 1705, E48**
- mechanical hygrometer*—See **hygrometer**. **D 1356, D22**
- mechanical hysteresis, *n***—the energy absorbed in a complete cycle of loading and unloading. **E 6, E28**
- mechanical joint*—see **joint, mechanical**. **F 412, F17**
- mechanical leather**—a collective term for many types of leather used in connection with textile and other machinery. **D 1517, D31**
- mechanical loss factor**—see **tangent delta**. **E 1142, E37**
- mechanically alloyed powder, *n***—a composite powder produced by mechanically incorporating other constituents which are generally insoluble within the deformable particles of the matrix metal. **B 243, B09**
- mechanically deformed**—nails with rolthreaded or formed shanks to improve holding power.
- roll-threaded*—with helical, annular, or longitudinal deformations rolled on fastener shank.
- formed*—with barbed, angular, serrated, longitudinally or helically fluted, longitudinally or helically roll-grooved or twisted deformations formed on wire from which nail is made. **F 547, F16**
- mechanically foamed plastic, *n***—a cellular plastic in which the cells are formed by the physical incorporation of gases. **D 883, D20**
- mechanically plated, peen-coated, peen-galvanized**—covered with coat of zinc through peen-coating, that is, by tumbling in a container holding powdered zinc and numerous glass beads. **F 547, F16**
- mechanical plating**—the application of a metallic layer by impacting spherical objects (for example glass beads) against the work surface in the presence of powdered coating metal and appropriate chemicals. **B 374, B08**
- mechanical polishing, *n***—of *metallic coatings*, the loosening and detachment of superficial, small particles of coating metal during processing or testing, due to mechanical abrasion. **A 902, A05**
- mechanical properties, *n***—those properties of a material that are associated with elastic and inelastic reaction when force is applied, or that involve the relationship between stress and strain. **E 6, E28**
- mechanical properties**—fastener characteristics which relate to its reaction to applied loads; these properties may be those of the basic raw material or result from the manufacturing process. **F 1789, F16**
- mechanical properties of frozen ground**—these include the static and dynamic properties relating to the strength and deformability of frozen geological materials: the compressive and shearing strengths, with and without confinement; the static and dynamic Young' Modulus and Poisson's ratio; the velocities of compressional and shear waves; seismic velocities. **D 7099, D18**
- mechanical property**—any property of wood that relates to its ability to support load or resist deflection. **D 9, D07**
- mechanical pulp, *n***—fibrous material obtained by treating wood or other plant material with a predominantly mechanical process, such as stone groundwood (SGW), pressurized groundwood (PGW), refiner mechanical pulp (RMP), and thermomechanical pulp (TMP). (See **chemical pulp** and **semichemical pulp**.) **D 1968, D06**
- mechanical pump dispenser, *n***—a small, finger- or hand-actuated, mechanical device used to dispense (spray, stream, or flow) product from a container that may be, generally, held in one's hand. **D 6655, D10**
- mechanical refrigeration**—a refrigeration system in which cooling is provided by mechanical means such as a compressor. **E 1705, E48**
- mechanical stage**—a device provided for adjusting the position of a specimen, usually by translation in two directions at right angles to each other. **E 7, E04**
- mechanical strength**—the failure strength of a material under given loading conditions. **D 7099, D18**
- mechanical testing**—determination of mechanical properties. **B 374, B08**
- mechanical testing, *n***—the determination of mechanical properties. **E 6, E28**
- mechanical transfer papers**—papers that produce a visible image by the transfer of a coating to another sheet which may or may not be specially treated. **F 221, F05**
- mechanical transfer papers**—papers that produce a visible image by the transfer of a coating to another sheet which may or may not be specially treated. (F 221) **F 549, F05**

mechanical twins—See **twin bands**.

E 7, E04

med fiber, *n*—a medullated animal fiber in which the diameter of the medulla is less than 60 % of the diameter of the fiber. **D 123**, D13

med fiber, *n*—a medullated animal fiber in which the diameter of the medulla is less than 60 % of the diameter of the fiber. **D 4845**, D13

medial—toward the inside or center. (Opposite: lateral) **F 869**, F08

median, *n*—for a series of observations, after arranging them in order of magnitude, the value that falls in the middle when the number of observations is odd or the arithmetic mean of the two middle observations when the number of observations is even. **D 123**, D13

median crack—damage produced in glass by the static or translational contact of a hard, sharp object on the surface. (See also **cleavage crack**.) **C 162**, C14

median diameter—See **median diameter** under **diameter**. **C 242**, C21

median diameter—the grain diameter such that half of the sediment by mass is composed of particles of larger size and half by mass is composed of particles of smaller size; commonly denoted by the symbol "D₅₀". **D 4410**, D19

median droplet diameter ($D_{x,f}$)—For cumulative distributions, $D_{x,f}$ where *x* is *V*, *A*, *L*, or *N*, are diameters such that the fraction (*f*) of the total of volume, surface area, length of diameter, or number of drops respectively, is in drops of smaller diameter.

Thus:

$D_{V,5}$ = volume median diameter,

$D_{A,5}$ = area median diameter,

$D_{L,5}$ = length median diameter, and

$D_{N,5}$ = number median diameter.

Also, $D_{V,1}$ and $D_{V,9}$ = diameter of drop such that 10 % and 90 % respectively, of the liquid volume is in drops of smaller diameter.

E 1102, E35

median fatigue life—the middle value of the observed fatigue lives, arranged in order of magnitude, of the individual specimens in a group tested under essentially identical conditions. If the sample size is even, it is the average of the two middlemost values.

E 1823, E08

median fatigue strength at *N* cycles [FL^{-2}]—an estimate of the stress level at which 50 % of the population would survive *N* cycles.

E 1823, E08

median force, *n*—in tensile testing, that force level that is exceeded by half the recorded peaks and which in turn exceeds the other half of the recorded peaks, in a specified distance of cross-head travel.

D 123, D13

median force, *n*—in tensile testing, that force level that is exceeded by half the recorded peaks and which in turn exceeds the other half of the recorded peaks, in a specified distance of cross-head travel.

D 4850, D13

median particle size, *n*—the particle size at which half the distribution (by mass, volume, number, etc.) is larger than and half smaller than the stated size.

E 1638, E29

medical direction—physician responsibility for the development, implementation, and evaluation of the clinical aspects of an EMS system.

F 1177, F30

medical protocol—preestablished physician authorized procedures or guidelines for medical care of a specified clinical situation, based on patient presentation (also known as standing orders).

F 1177, F30

medical removal (of workers)—temporary removal of workers from a job site due to elevated blood-lead levels as defined in HUD interim guidelines. Compare **administrative removal**. **E 631**, E06

medical removal (of workers)—temporary removal of workers from a job site due to elevated blood-lead levels as defined in HUD interim guidelines. Compare **administrative removal**.

E 1605, E06

medical transportation services—the moving of patients from one location to another. Specific services include any or all of the following: emergency and non-emergency medical response and transportation; scheduled and non-scheduled interfacility transfers,

medical standbys, long-distance medical transfers, air medical response and transport (helicopter and fixed wing aircraft); and stretcher and wheelchair transport services. **F 1177**, F30

medical transportation system—a sub-system of the emergency medical services system consisting of an organization or collection of medical transport services which provide transportation, treatment, and observation of patients for a specific geographic area.

F 1177, F30

medium—the material that supports the growth and reproduction of microorganisms.

F 1600, F20

medium barb, *n*—barbs having an average length of $0.4 \pm 5\%$.

F 1379, F14

medium buffs—see **upholstery leather**. Formerly often referred to as "special machine buffs."

D 1517, D31

medium crown—staple crown usually larger than $\frac{5}{16}$ in. (8 mm) and up to and including $\frac{11}{16}$ in. (17 mm) in width.

F 592, F16

medium-density fiberboard (MDF)—a composite panel product composed primarily of cellulosic fibers in which the primary source of physical integrity is provided through addition of a bonding system cured under heat and pressure. Additives may be introduced during the manufacturing process to improve certain properties. MDF density at the time of manufacturing, is typically between 500 kg/m^3 (31 lb/ft^3) and 1000 kg/m^3 (62 lb/ft^3), based on a reported moisture content at the time of weight and volume measurements.

D 1554, D07

medium-density particleboard—a particleboard as previously defined with a density between $640 - 800 \text{ kg/m}^3$ ($40 - 50 \text{ lb/ft}^3$) based on a reported moisture content at the time of weight and volume measurements.

D 1554, D07

medium density polyethylene plastics (MDPE), *n*—those branched polyethylene plastics, having a standard density of 0.926 to 0.940 g/cm^3 . (D20)

F 412, F17

medium density polyethylene plastics, (MDPE) *n*—those branched polyethylene plastics, *q. v.*, having a standard density of 0.926 to 0.940 g/cm^3 .

D 883, D20

medium grain—See **grain**.

D 9, D07

medium-hard drawn wire—as applied to copper wire, having tensile strength less than the minimum for hard-drawn wire, but greater than the maximum for soft wire.

B 354, B01

medium-high carbon—See **steel grades**.

F 547, F16

medium life expectancy, LE-50, *n*—for paper, a paper is expected to be usable for 50 years.

D 1968, D06

medium life expectancy paper, LE-50, *n*—for paper, a paper expected to be usable for 50 years when stored under prescribed conditions.

D 1968, D06

medium-low carbon—See **steel grades**.

F 547, F16

medium (plural, media), *n*—a nutrient system for the cultivation of cells or organisms, and especially bacteria.

F 1494, F23

medium point—point with 28° to 35° included angle for 0.040 to 0.065-in. wire diameter; 32° to 38° included angle for 0.072 to 0.225-in. wire diameter; 37° to 44° included angle for 0.250 to 0.325-in. wire diameter.

F 547, F16

medium sprays—distribution of droplets with $400 \mu\text{m} < D_{V,5} \leq 1200 \mu\text{m}$.

E 1102, E35

medium volatile bituminous coal—See **medium volatile bituminous coal** under **rank**.

D 121, D05

medium weight concrete masonry unit—unit whose oven-dry density is at least 105 lb/ft^3 (1680 kg/m^3) and less than 125 lb/ft^3 (2000 kg/m^3).

C 1209, C15

medulla, *n*—in mammalian hair fibers, the more or less continuous cellular marrow inside the cortical layer in most medium and coarse fibers.

D 123, D13

medulla, *n*—in mammalian hair fibers, the more or less continuous cellular marrow inside the cortical layer in most medium and coarse fibers.

D 4845, D13

medullated fiber, *n*—an animal fiber that in its original state includes a medulla.

D 123, D13

medullated fiber, *n*—an animal fiber that in its original state includes a medulla. **D 4845, D13**

megohm—unit of measurement of water purity by electrical resistance; One million ohms; reciprocal of conductivity. See **microsiemens, ohm**. **D 6161, D19**

melamine plastic, *n*—plastic based on resins made by the condensation or melamine and aldehydes. **F 1251, F04**

melamine plastics, *n*—plastics based on resins made by the condensation of melamine and aldehydes. **D 883, D20**

melamine resin—under **resin, synthetic** see **melamine resin**. **D 16, D01**

melt, *n*—the total molten metal produced in a single heat. **A 644, A04**

melt, *n*—all the metal that, while molten, was held at the same time in the same holding vessel. **B 899, B02**

melt—a specific quantity of glass made at one time. **C 162, C14**

melt—to change a solid into a liquid by the application of heat; or the liquid resulting from such action. **C 242, C21**

melter—(1) a melting unit constructed of refractory materials, with a glass level maintained essentially constant by feeding batch to replace glass continuously withdrawn. Also known as a tank, continuous furnace, and glass melting furnace.

(2) {archaic} person in charge of the melting furnace during the early stages of filling and melting of batch. **C 162, C14**

melter, *n*—a piece of equipment designed specifically to melt and heat hot-applied sealant and filler accurately and controllably. **D 5535, D04**

melter-applicator, *n*—a piece of equipment designed specifically to melt, heat accurately and controllably, and apply hot-applied sealants and fillers to pavement cracks or joints uniformly. **D 5535, D04**

melter tender—{archaic} person who regulates the temperature of a melting furnace in order that the glass will have the proper viscosity for casting. **C 162, C14**

melt index—the flow rate of PE material when measured in accordance with Test Method D 1238. **F 412, F17**

melting—the thermal process by which the charge is completely converted into molten glass free from undissolved batch. **C 162, C14**

melting, *n*—the liquefaction of material under the influence of heat. **D 123, D13**

melting—thermal process by which a material changes from a crystalline to a liquid form. **E 1142, E37**

melting—a response evidenced by softening of the material, resulting in a nonreversible change. **F 1494, F23**

melting area—the area of a melter under fire. Usually the area up to the bridgewall or floater. **C 162, C14**

melting furnace—the complete unit of a glass melting assembly, including the melter, regenerators or recuperators, flues, refiners, forehearth, channels, throats, etc. **C 162, C14**

melting point—in a phase diagram, the temperature at which the liquidus and solidus coincide at an invariant point. **E 7, E04**

melting point, *n*—fixed point of a single component system in which liquid and solid phases are in equilibrium at a specified pressure, usually 101 325 Pa, and the system is gaining heat slowly. (Compare **freezing point**.) **E 344, E20**

melting point—in a phase diagram, the temperature at which the liquidus and solidus coincide at an invariant point, (E 7, E04). **E 1142, E37**

melting point (cooling curve) of petroleum wax, *n*—temperature at which melted petroleum wax first shows a minimum rate of temperature change when allowed to cool under prescribed conditions. **D 4175, D02**

melting point, final—the temperature at which the last crystal disappears into the melt. **E 1547, E15**

melting point, initial—the temperature at which positive evidence of liquefaction is observed. **E 1547, E15**

melting pressure—at a stated temperature, the pressure at which the

solid phases of an element, or congruently melting compound, may coexist at equilibrium with liquid of the same composition.

E 7, E04

melting temperature—an arbitrarily defined reference point used for comparison purposes at which the glass viscosity is 10 Pa-s.

C 162, C14

melting temperature—at a stated pressure, the temperature at which a solid phase of an element, or congruently melting compound, may coexist at equilibrium with liquid of the same composition.

E 7, E04

melting temperature—at a given pressure, the temperature at which a crystalline solid undergoes a phase transition to the isotopic state when heat is added.

E 1142, E37

melt pressure, *n*—the pressure applied to the plastic material in front of the screw driving the injection molding process on a reciprocating screw machine that is calculated based on the hydraulic force acting axially on the screw.

D 883, D20

melt temperature, *n*—the temperature of the molten plastic.

D 883, D20

member—a group of wires stranded together for combination with other stranded groups into a multiple-membered conductor.

B 354, B01

membrane—a flexible or semiflexible roof covering or waterproofing, whose primary function is the exclusion of water.

D 1079, D08

membrane—a thin space of material covering a structure of separating solutions and permitting selection transport of a chemical species between the two solutions.

D 4127, D19

membrane—engineered thin semipermeable film which serves as a barrier permitting the passage of materials only up to a certain size, shape, or electro-chemical character. Membranes are used as the separation agent in reverse osmosis, electro-dialysis, ultrafiltration, nanofiltration, and microfiltration, as disc filters in laboratories, and as pleated filter cartridges, particularly for microfiltration.

D 6161, D19

membrane—any thin sheet or layer.

E 7, E04

membrane—continuous portion of a boom that serves as a barrier to the movement of a substance.

F 818, F20

membrane area—the area available in contact with the feed water.

D 6161, D19

membrane color, *n*—a visual rating of particulates on a filter membrane against ASTM Color Standards.

D 4175, D02

membrane compaction—compression of membrane structure due to a pressure difference across its thickness. See **compaction**.

D 6161, D19

membrane conditioning (pretreatment)—process carried out on a membrane after completion of its preparation and prior to its use in a separation application such as thermal annealing.

D 6161, D19

membrane configuration—the design and shape of a given membrane element (cartridge) such as tubular, spiral wound or hollow fiber.

D 6161, D19

membrane distillation—distillation process in which the fluid and gas phases are separated by a porous membrane.

D 6161, D19

membrane element—a bundle of spiral membrane envelopes or hollow fiber membranes bound together as a discrete entity.

D 6161, D19

membrane filter, *n*—a thin, nonfibrous filtration medium for fluids, with mean pore size larger than 0.01 μm in diameter, with which particles larger than the rated pore size are retained at or near the delivery surface.

D 1129, D19

membrane filter, *n*—a porous article of closely controlled pore size through which a liquid is passed to separate matter in suspension.

D 4175, D02

membrane filter, *n*—a thin medium of closely controlled pore size through which a liquid is passed and on which particulate matter in suspension is retained.

D 4175, D02

membrane filter

membrane filter—geometrically regular porous matrix; removes particles above pore size rating by physical size exclusion.

D 6161, D19

membrane layer—a flexible dynamic layer which carries one or both switch poles the deflection of which is used to short both poles together. The membrane layer is a required component of a membrane switch.

F 2112, F01

membrane module—manifold assembly containing one or more membranes to separate the streams of feed, permeate and retentate (brine).

D 6161, D19

membrane partition (distribution) coefficient—parameter equal to the equilibrium concentration of a component in a membrane divided by the corresponding equilibrium concentration of the component in the external phase in contact with the membrane surface.

D 6161, D19

membrane physical ageing—change in the transport properties of a membrane over a period of time due to physical chemical structural alterations.

D 6161, D19

membrane post-treatment—process carried out on a membrane after its essential structure has been formed but prior to its exposure to an actual feed stream.

D 6161, D19

membrane pressing, *n*—a process in which an adherend is brought in intimate contact with a substrate to form an assembly by application of overpressure to a flexible film.

D 907, D14

membrane reactor—device for simultaneously carrying out a reaction and membrane-based separation in the same physical enclosure.

D 6161, D19

membrane salt passage— SP_m is the concentration of a compound in the permeate related to its average concentration on the feed/concentrate side. (See **B-value**.)

D 6161, D19

membrane softening—use of crossflow membrane to substantially reduce hardness ions in water. See **nanofiltration**.

D 6161, D19

membrane switch—a momentary switching device in which at least one contact is on, or made of, a flexible substrate.

F 2112, F01

membrane switch flex tail—flexible portion of a membrane switch used for input/output connection.

F 2112, F01

memory color, *n*—color of an object that, according to the judgment of the observer, would match the color of another object previously seen by that observer.

E 284, E12

MEMS—microelectromechanical systems.

E 2444, E08

meniscus—See **onion**.

C 162, C14

MEPS—See **rigid cellular polystyrene thermal insulation board**.

E 631, E06

mercerization—the process of subjecting a vegetable fiber to the action of a fairly concentrated aqueous solution of a strong base so as to produce great swelling with resultant changes in fine structure, dimensions, morphology, and mechanical properties.

D 1695, D01

merchant pig iron, *n*—pig iron produced for commercial sale to foundries.

A 644, A04

merino, *adj*—from pure-bred merino sheep.

D 123, D13

merino, *adj*—from pure-bred merino sheep.

D 4845, D13

mesh, *n*—the square opening of a sieve.

D 8, D04

mesh, *n*—in *coatedglass yarn fabrics*, the number of warp yarns or ends per linear 25.4 mm (1 in.) followed by the number of filling yarns or picks per linear 25.4 mm (1 in.).

D 123, D13

mesh—the square opening of a sieve.

D 1079, D08

mesh, *n*—in *coatedglass yarn fabrics*, the number of warp yarns or ends per linear 25 mm (1 in.) followed by the number of filling yarns or picks per linear 25 mm (1 in.).

D 7018, D13

mesh, *n*—in *a piece of woven wire cloth*, the nominal number of apertures or fraction thereof per in.

E 1638, E29

mesh—in *chain link fabric*, the clear distance between parallel wires forming a diamond.

F 552, F14

mesh—an alignment of opposing teeth. The teeth may be in-line or angled.

F 1638, F04

mesh-lapping—process of overlapping one piece of mesh onto another that has been applied to a surface previously.

E 631, E06

mesic peat—see **hemic peat**.

D 653, D18

mesomorphous cellulose—those portions of cellulose in which the segments of the individual molecules have some regularity of arrangement, but not enough to permit strict lattice order to give a distinct X-ray diffraction pattern.

D 1695, D01

mesophile—an organism with an optimum growth temperature range of 20 to 45°C.

F 1600, F20

mesopic, *adj*—pertaining to vision at intermediate levels of illumination, at which both retinal cones and retinal rods are stimulated.

E 284, E12

mesopore—a pore of width between 2 and 50 nanometres (20 and 500 angstrom units).

D 2652, D28

message data storage area, *n*—a RAM in the receiving device where the incoming signal is stored until it is ready to be taken into the device's working memory.

F 1457, F05

messenger wire—a metallic supporting member either solid or stranded which may also perform the function of a conductor.

B 354, B01

meta-anthracite—See **meta-anthracite** under **rank**.

D 121, D05

metabolic pathway—the sequence of biochemical reactions that allows conversion for carbon or energy assimilation.

F 1600, F20

metabolite, *n*—a chemical substance produced by any of the many complex chemical and physical processes involved in the maintenance of life.

D 4175, D02

metadata, *n*—loosely has been defined as data about data but is more tightly defined as the detailed description of instance data, including the format and characteristics of instance data where instance data is defined by Tannenbaum as "that which is input into a receiving tool, application, database, or simple processing engine."

E 867, E17

metal—slang for molten glass in a melter.

C 162, C14

metal blister—bloating of the metal sheet.

C 286, B08

metal cast button, *n*—a button produced by the casting of molten metals and metal alloys into single cavity or multiple cavity molds.

D 123, D13

metal cast button, *n*—a button produced by the casting of molten metals and metal alloys into single-cavity or multiple-cavity molds.

D 5497, D13

metal connector plate—finished (coated or galvanized) steel or bare stainless-steel plate of specified thickness with or without integral multiple plate projections (teeth) or nail holes, or a combination of both, with projections partially sheared from solid sheet during its fabrication and projecting from the plate in a single direction or both directions perpendicular to the plate surface area; plate of specified thickness to which appropriate tolerances apply. Metal connector plates are manufactured from coiled strips of structural quality sheet metal, produced in various lengths and widths, and designed to connect wood members so as to transmit forces from one wood member (or section) to another one or more wood members (or section). Other common terms include *plate, metal plate, metal-plate connector, nail plate, truss plate*, but the preferable term is **metal connector plate**.

E 631, E06

metal connector plate with integral teeth—metal connector plate with integral multiple projections (teeth) partially sheared from solid sheet during its fabrication and projecting from the plate in a single direction or in both directions perpendicular to the plate surface area. See **metal connector plate**.

E 631, E06

metal distribution ratio—the ratio of the thickness of metal upon two specified areas of a cathode. See **throwing power**.

B 374, B08

metal dusting—accelerated deterioration of metals in carbonaceous gases at elevated temperatures to form a dust-like corrosion product.

G 15, G01

metal filter, *n*—a metal structure having controlled interconnected porosity produced to meet filtration or permeability requirements.

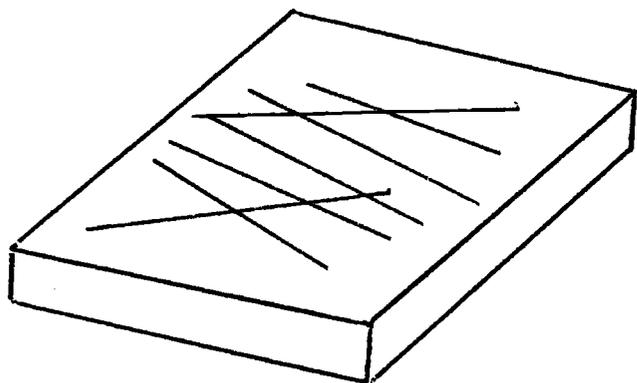
B 243, B09

metal flashing—See **flashing**: frequently used as through-wall, cap-, or counter-flashing.

D 1079, D08

metal injection molding (MIM), *n*—a process in which a mixture of

- metal powders and a binder system is forced under pressure into a mold. See also **powder injection molding**. **B 243, B09**
- metal-lath nail, hook-head metal-lath nail**—bright, blued or galvanized, regular-stock-steel, 1/8 by 0.106-in. nail with thin flat 7/16 or 1/2-in. hook head and medium diamond point. (See **self-furring nail**.) **F 547, F16**
- metallic**—a manufactured fiber composed of metal, plastic-coated metal, metal-coated plastic, or a core completely covered by metal. **D 123, D13**
- metallic**, *adj*—pertaining to the appearance of a gonioparent material containing metal flakes. **E 284, E12**
- metallic resinates**, *n*—rosin in which part or all of the rosin acids have been chemically reacted with those metals that give soaps or salts which are water insoluble. **D 804, D01**
- metallic yield**, *n*—the mass percentage of a ferrous waste stream that is generally recoverable as metal or alloy. **D 5681, D34**
- metallic yield**—the weight percent of the municipal ferrous scrap that is generally recoverable as metal or alloy. **D 5681, D34**
- metal-like**, *adj*—pertaining to the appearance of a bare metal. **E 284, E12**
- metal line**—the line on the refractory of a melting furnace which marks the boundary between the glass and the atmosphere above it. **C 162, C14**
- metallizing**—(1) the application of a metal layer to the surface of non-conducting or non-metallic materials.
(2) the application of metallic coatings by nonelectrolytic procedures such as spraying of molten or heat-softened metal or deposition from the vapor phase. **B 374, B08**
- metallizing**—See **thermal spraying**. **G 15, G01**
- metallography**—that branch of science which relates to the constitution and structure, and their relation to the properties, of metals and alloys. **E 7, E04**
- metallography**—study of the structure of fastener metals using optical or electronic microscopes that produce a magnified image of the material structure of the fastener. **F 1789, F16**
- metallurgical-coke-base carbon refractory**, *n*—see **carbon refractory, metallurgical-coke-base**. **C 71, C08**
- metal marking resistance**, *n*—the ability of a coating to withstand streaking or marking when a metal object is rubbed against or dragged across the surface of the coating. **D 16, D01**
- metal marks**—lines on the surface of a ceramic body or glaze caused by drawing a hard metal, such as a knife, across the surface.



F 109, C21

- metal (or metallic) coating**—generally denotes all metal coatings obtained by any method applied to a basis material. **B 374, B08**
- metal powder**, *n*—particles of elemental metals or alloys, normally less than 1000 μm (1 mm) in size. **B 243, B09**

- metal shadowing**—See **shadowing**. **E 7, E04**
- metal sheathed cable stripper**, *n*—a tool used to remove a selected portion of the metal sheath from an end of sheathed thermocouple material. **E 344, E20**
- metal spraying**—application of a metallic coating by projecting molten or heat-softened metal from a source (gun) onto the workpiece. **B 374, B08**
- metal substrate**—see **base metal**. **C 286, B08**
- metameric**, *adj*—(1) pertaining to spectrally different objects or color stimuli that have the same tristimulus values.
(2) pertaining to objects, having different spectrophotometric curves, that match when illuminated by at least one specific spectral composition and observed by a specific observer. (See also **parameric**.) **E 284, E12**
- metamerism**, *n*—property of two specimens that match under a specified illuminator and to a specified observer and whose spectral reflectances or transmittances differ in the visible wavelengths. See also **illuminant metamerism, observer metamerism, paramerism**. **E 284, E12**
- metamerism indices**, *n*—see **special indices of metamerism, indices of metamerism potential**. **E 284, E12**
- metamers**, *n*—(1) spectrally different objects or color stimuli that have the same tristimulus values.
(2) specimens differing in spectral reflectance but having colors that match in light of one spectral composition, when viewed by one observer, but may not match in light of other spectral compositions, or when viewed by another observer. See also **paramers**. **E 284, E12**
- metastable**—a state of apparent equilibrium which has a higher free energy than has the true equilibrium state; usually applied to a phase existing outside its temperature and pressure span of equilibrium existence, by reason of a greatly delayed transformation. **E 7, E04**
- metatectic equilibrium**—See **peritectoid equilibrium**. **E 7, E04**
- meta-xylene**—1,3-dimethylbenzene (C_8H_{10}) mol weight 106.16; clear, colorless, flammable liquid; freezing point, -47.87°C ; boiling point, 139.3°C . **D 4790, D16**
- meteorological precipitation**—See **precipitation**. **D 1356, D22**
- metering pump**—a mechanical arrangement that permits pumping of the various components of a grout system in any desired proportions or in fixed proportions. (*Syn.* proportioning pump, variable proportion pump.) **D 653, D18**
- metering valve**—a valve that delivers a definite limited amount of aerosol formulation each time the valve mechanism is operated. **D 3064, D10**
- meter leather**—a specialty leather made from sheepskins, treated to make it impermeable and used for the measuring bags of gas meters. **D 1517, D31**
- methanogenic bacteria**—microorganisms capable of producing methane. **E 1705, E48**
- methanol**, *n*—methyl alcohol, the chemical compound CH_3OH . **D 4175, D02**
- methanol (methyl alcohol, wood alcohol)**—an alcohol, CH_3OH , formed by catalytically combining carbon monoxide (CO) with hydrogen (H_2) in a 1:2 ratio, under high temperature and pressure. Commercially, it is often manufactured by steam reforming natural gas. It is also formed in the destructive distillation of wood. **E 1705, E48**
- method**, *n*—instructions used to produce a numerical result, which are detailed in a document referred to as “the method.” **E 135, E01**
- method bias**—See **bias**. **D 1356, D22**
- method blank**—a digestate that reflects the maximum treatment given any one sample within a sample batch except that only the sampling medium (such as a blank wipe) is initially placed into the digestion vessel. (The same reagents and processing conditions that are applied to field samples within a batch are also applied to the method blanks.) Analysis results from method blanks provide information on the level of potential contamination resulting from

method blank

the laboratory and sampling medium sources that are experienced by samples processed within the batch. **E 631, E06**

method blank—a sample, devoid of analyte, that is analyzed to determine its contribution to the total blank (background) reading. **E 631, E06**

method detection limit, *n*—the minimum concentration of an analyte that can be reported with a 99 % confidence that the value is above zero, based on a standard deviation of greater than seven replicate measurements of the analyte in the matrix of concern at a concentration near the low standard. **D 1356, D22**

method of least squares, *n*—a technique of estimation of a parameter which minimizes $\sum e^2$, where *e* is the difference between the observed value and the predicted value derived from the assumed model. **E 456, E11**

method of least squares, *n*—a technique of estimation of a parameter which minimizes $\sum e^2$, where *e* is the difference between the observed value and the predicted value derived from the assumed model. **E 1325, E11**

method of standard additions—the addition of a series of known amounts of the analytes of interest to more than one aliquot of the sample as a means of correcting for interferences. **D 5681, D34**

methoxyl group—the monovalent group $-\text{OCH}_3$, characteristic of methyl alcohol and its esters or ethers. **D 1695, D01**

methylcellulose—any of several methyl ethers of cellulose. Commercially, the water-soluble ether (degree of substitution approximately 1.5 to 2.0). **D 1695, D01**

methylene blue active substances (MBAS)—compounds that react with methylene blue, a cationic dye, causing it to transfer from an aqueous solution to an immiscible organic liquid upon equilibration under conditions such as those described in Test Method D 2330. The reactive compounds are principally surfactants of the sulfonate type $(\text{RSO}_3)^-\text{Na}^+$, the sulfate ester type $(\text{ROSO}_3)^-\text{Na}^+$, and sulfated nonionics $(\text{RE}_n\text{OSO}_3)^-\text{Na}^+$. Soaps are not included among the surfactants reactive to MBAS. **D 459, D12**

methylethylcellulose—a cellulose ether containing both methyl and ethyl groups. **D 1695, D01**

methylglucuronoxylan—the main hemicellulose of hardwood pulps; a polysaccharide containing xylose and 4-O-methylglucuronic acid groups. In the wood it is partially acetylated. **D 1695, D01**

methyl tertiary-butyl ether (MTBE), *n*—the chemical compound $(\text{CH}_3)_3\text{COCH}_2[\text{C}_5\text{H}_{12}\text{O}]$. **D 4175, D02**

metric count, *n*—an indirect yarn numbering system for sliver roving, and yarn, equal to the number of kilometers per kilogram (1000m/kg). **D 123, D13**

metric count, *n*—an indirect yarn numbering system for sliver roving, and yarn, equal to the number of kilometers per kilogram (1000 m/kg). **D 4849, D13**

metric sabin, $[\text{L}^2]$ —the unit of measure of sound absorption in the metre-kilogram-second system of units. **C 634, E33**

MeV (mega or million electron volts)—a unit of energy equal to one million electron volts, used to express the energy of X-rays, gamma rays, electrons, and neutrons. **E 1316, E07**

MFFT, *n*—abbreviation of minimum film forming temperature. **D 16, D01**

M_f*, *M_s—See **transformation temperature**. **A 941, A01**

MGD (MGPD)—millions of gallons per day. **D 6161, D19**

Mho—a measure of water purity by conductance, reciprocal of ohms. See **ohm**. **D 6161, D19**

mica splittings, *n*—trimmed or untrimmed mica split to thickness under 0.003 mm produced from block, thins, and splitting block. **D 1711, D09**

MICR—(1) An abbreviation commonly applied to the character set (E-13B) contained in ANSI X3.2-76 and X9.13-83.

(2) See **magnetic ink character recognition**. **F 149, F05**

micrinite—See **micrinite** under **maceral**. **D 121, D05**

microaerophilic bacteria—aerobic bacteria that require 2-10 % oxygen in order to grow. See **bacteria (microaerophiles)**. **D 6161, D19**

microalloyed steel, *n*—a low-alloy steel that conforms to a specification that requires the presence of one or more carbide-, nitride-, or carbonitride-forming elements, generally in individual concentrations less than 0.15 mass percent, to enhance strength. **A 941, A01**

microbe—bacteria and other organisms that require the aid of a microscope to be seen. **D 6161, D19**

microbes—microscopic organisms, including algae, bacteria, fungi, protozoa, and viruses. **F 1600, F20**

microbial activity test, *n*—any analytical procedure designed to measure the rate or results of one or more microorganism processes. **D 4175, D02**

microbial contamination—See **Terminology F 17**. **F 1327, F02**

microbial corrosion—corrosion that is affected by the action of microorganisms in the environment. **G 15, G01**

microbial degradation, *n*—(Synonym—**biodegradation**.) **D 4175, D02**

microbial degradation, *n*—synonym for **biodegradation**. **D 6384, D02**

microbially induced corrosion (MIC), *n*—corrosion that is enhanced by the action of microorganisms in the local environment. **D 4175, D02**

microbiological aerosol, *n*—an airborne particle partially or exclusively composed of microorganisms including bacteria and fungi. **D 5681, D34**

microbiological contamination (of packaged products)—the entry of viable microorganisms into a finished package due to lack of or loss of package integrity. **F 17, F02**

microbiologically influenced corrosion (MIC)—corrosion inhibited or accelerated by the presence or activity, or both, of microorganisms. **G 15, G01**

microbiological package integrity—the physical condition of a finished package, including, but not limited to, the security of package seals, which ensures the maintenance of the package contents in a commercially sterile condition. **F 17, F02**

microcharacter—See **micro penetration tester**. **E 7, E04**

microclimate, *n*—uniform localized climate conditions within a given area. **E 2114, E06**

microclimatology, *n*—the science that deals with the climate of restricted areas and investigates their phenomena and causes. **D 1356, D22**

microcrack—a crack too small to be seen with the unaided eye (see **crack, fracture, seam**). **C 119, C18**

microcrystalline cellulose—a commercial name for cellulose that has been hydrolyzed to the limiting DP and that consists essentially of microcrystals. **D 1695, D01**

microcrystalline limestone—a limestone that consists largely or wholly of crystals that are so small as to be recognizable only under magnification. If it is capable of taking a polish, it is classified commercially as a marble. **C 119, C18**

microcut—the scratch made by a microcharacter test. **E 7, E04**

microelectromechanical systems, MEMS—in general, this term is used to describe micron-scale structures, sensors, and actuators and/or the technologies used for their manufacture (such as, silicon process technologies). **E 2444, E08**

microfiber batting, *n*—a textile filling material containing fibers, such as polyester or olefin, which have a diameter of less than 10 μm . **D 123, D13**

microfiber batting, *n*—a textile filling material containing fibers, such as polyester or olefin, which have a diameter of less than 10 μm . **D 7022, D13**

microfiltration (MF)—pressure driven membrane based separation process designed to remove particles and dissolved macromolecules in the approximate range of 0.05 to 2 μm . **D 6161, D19**

micro focus X-ray tube—an X-ray tube having an effective focal spot size not greater than 100 μm . **E 1316, E07**

microgram, μg , *n*—one millionth of a gram. **E 631, E06**

micrograph—a graphic reproduction of an object as seen through the

- microscope or equivalent optical instrument, at magnifications greater than ten diameters. (**photomicrograph**). E 7, E04
- microhardness**, *n*—hardness measured with an instrument having a smaller indenter and applying a lower force than the standard instrument, permitting measurements on smaller specimens or thinner sheets that are not amenable to measurement by normal instruments. D 1566, D11
- microinch**—one millionth of an inch, 0.000001 in. = 0.001 mil. B 374, B08
- microindent**—See **indentation**. E 7, E04
- micrometeorology**, *n*—the study of the meteorological characteristics of a local site that is usually small and often is confined to a shallow layer of air next to the ground. D 1356, D22
- micrometer eyepiece**—an eyepiece that has a scale permanently positioned in its focal plane, thus, in effect, superimposing the scale on the image of the field being observed. E 7, E04
- micrometer** (μm)—one millionth of a meter, 0.001 mm. B 374, B08
- micrometre**—a unit of length equal to one millionth of a metre. E 1316, E07
- micron**—obsolete (see **micrometer**). B 374, B08
- micron**—a term for micrometre. E 1316, E07
- micron** (μ), *n*—0.001 mm, also known as a micrometre; measurement of cell diameter. F 2312, F04
- micronaire reading**, *n*—a relative measurement of fiber fineness derived from the porous plug air-flow method. D 123, D13
- micronaire reading**, *n*—a relative measurement of fiber fineness derived from the porous plug air-flow method. D 7139, D13
- micron (micrometre)**—a metric unit of measurement equivalent to 10^{-6} metres, 10^{-4} centimetres. Symbol is μm . D 6161, D19
- micron of mercury**—a unit of pressure equal to that exerted by a column of mercury standing one micrometre high. E 1316, E07
- microorganism**—see **microbe**. D 6161, D19
- microorganism**, *n*—bacteria, fungi, yeast, mold, viruses, and other infectious agents. However, it should be noted that not all microorganisms are infectious or pathogenic. F 2312, F04
- micro penetration hardness**—the hardness number obtained by use of a low load tester whose indentation is usually measured with a high power microscope. E 7, E04
- micro penetration tester**—a testing machine capable of applying low loads, usually in the range from 1 g to 5 kg to form an indentation or a scratch or both, as a basis for measuring hardness. Typical names associated with commercial testers are Bergsman, Eberbach, Knoop, Microcharacter, Tukon, Vickers, etc. E 7, E04
- microphotograph**—a microscopically small photograph. E 7, E04
- microphotometer**, *n*—an instrument for measuring the relative transmittance of small areas on a photographic emulsion such as spectral lines and X-ray diffraction patterns. E 135, E01
- micropore**—intraaggregate capillaries responsible for the retention of water and solutes. D 653, D18
- micropore**—a pore with width not exceeding 2 nanometres (20 angstrom units). D 2652, D28
- microporosity**—intragranular porosity and microscopic intergranular porosity with submicroscopic pore throats. D 653, D18
- microporosity**—extremely fine porosity in castings. E 7, E04
- microporous insulation**, *n*—material in the form of compacted powder or fibers with an average interconnecting pore size comparable to or below the mean free path of air molecules at standard atmospheric pressure. Microporous insulation may contain opacifiers to reduce the amount of radiant heat transmitted. C 168, C16
- microprocessor**, *n*—a central processing chip within the electronic controller section of the apparatus. D 121, D05
- microprocessor unit/image generator**, *n*—a set of components on the printer PWB which convert coded data (ASCII) into video data. F 1457, F05
- micro-scale polygon**—closed, multi-sided, roughly equidimensional, pattern ground usually caused by desiccation cracking of fine-grained soils. The polygons are less than 2 m in diameter. D 7099, D18
- microscope**—an instrument capable of producing a magnified image of a small object. E 7, E04
- microscopy**—the science of the interpretive use, and applications of microscopes. E 175, E41
- microseism**—seismic pulses of short duration and low amplitude, often occurring previous to failure of a material or structure. (ISRM) D 653, D18
- micro separometer rating (MSEP)**, *n*—a numerical value indicating the ease of separating emulsified water from a sample by coalescence. D 4175, D02
- microsiemens**—unit of measurement of water purity by electrical conductivity; one micromho; reciprocal of resistivity. See **megohm**, **ohm**. D 6161, D19
- microstrain**, *n*—the strain over a gage length comparable to interatomic distances. E 6, E28
- microstructure**—the structure of a suitably prepared specimen as revealed by a microscope. E 7, E04
- microstructure**—structure of a given metal revealed by microscopic observation of an etched surface. F 1789, F16
- microtexture**, *n*—in *glossy surface coatings*, small undulations or roughness that introduce perceptible local distortion in images of objects reflected by a surface. E 284, E12
- microtexture**, *n*—in *surface coatings*, undulations that introduce perceptible local distortion in images of objects reflected by a surface. E 284, E12
- microthrowing power**—the ability of a plating solution or a specified set of plating conditions to deposit metal in pores or scratches. B 374, B08
- microtunneling**—trenchless installation of pipe by jacking the pipe behind a remotely controlled, steerable, laser guided, microtunnel boring machine that provides continuous support to the excavated face under various geotechnical conditions including the presence of groundwater. C 896, C04
- microwave extraction cell**—a polytetrafluoroethylene cell used for evaluating microwave active materials. Refer to Test Method F 1349 for schematics of cell construction. F 1479, F02
- microwave only food package**—a container used to heat foods only in a microwave oven. F 1479, F02
- microwave oven**—equipment that uses ultrahigh frequency electromagnetic radiation in the bands of 915 ± 25 and 2450 ± 50 MHz to prepare food. F 1827, F26
- microwave radiation emission**—the microwave energy to which persons might be exposed during operation or servicing of microwave cooking equipment. F 1827, F26
- microwave susceptor**—packaging material that, when placed in a microwave field, is designed to interact with the field and provide substantial heat to the package contents. F 1479, F02
- micrurgy**—the use of a micromanipulator in combination with a microscope. E 175, E41
- middle rail**—See **intermediate rail**. F 552, F14
- midget impinger**—See **impinger**. D 1356, D22
- mid-infrared**—pertaining to the infrared region of the electromagnetic spectrum with wavelength range from approximately 2.5 to 25 μm (wavenumber range 4000 to 400 cm^{-1}). E 131, E13
- mid-neck girth**, *n*—in *body measurements*, the circumference of the neck approximately 25 mm (1 in.) above the neck base (See neck base girth.). D 123, D13
- mid-neck girth**, *n*—the horizontal circumference of the neck, taken approximately 25 mm (1 inch) above the neck base level. D 5219, D13
- mid rail**, *n*—a rail located between top rail and bottom rail or between top rail and floor if there is no bottom rail.
- mid rail**—See **railing systems**. E 631, E06
- mid rail**, *n*—a rail located between top rail and bottom rail or between top rail and floor if there is no bottom rail. E 1481, E06

midsole

midsole—a sole of leather or other material placed between the outsole and the insole. **F 869, F08**

mid-thigh girth, *n*—in *body measurements*, the circumference of the upper leg between the hip and the knee. **D 123, D13**

mid-thigh girth, *n*—the maximum horizontal circumference of the upper leg, taken midway between the hip girth level and the midpoint (or crease) of the knee. **D 5219, D13**

migration, *n*—the movement of contaminant(s) away from a source through permeable subsurface media (such as the movement of a groundwater plume of contamination) or the movement of contaminant(s) by a combination of surficial and subsurface processes. **D 5681, D34**

migration, *n*—ink spreading over a long period of time. See also **feathering**. **F 1857, F05**

migration development—premature color development on the CF side of a CFB sheet caused by free CB oil-dye penetrating through the sheet until it reacts with the CF receptor coating. **F 549, F05**

mil—a unit of length equal to $\frac{1}{1000}$ of an inch [0.0254 mm]. **B 354, B01**

mil—one thousandth of an inch, 0.001 in. = 25.4 μm . **B 374, B08**

mildew (fungus) resistance, *n*—the ability of a coating to resist fungus growth that can cause discoloration and ultimate decomposition of a coating's binding medium. **D 16, D01**

mildewstat, *n*—a chemical agent that inhibits the growth of mildew. **D 16, D01**

milk glass—a translucent or opaque white glass. **C 162, C14**

miliness—a condition of pronounced cloudiness in glass. **C 162, C14**

milking, *n*—a white colored buildup on the non-image areas of the offset blanket that usually occurs when the paper coating or paper filler (in the case of uncoated paper) softens due to inadequate water resistance. **D 6488, D01**

milk of lime—a suspension of hydrated lime (or slaked quicklime) in water in such proportions as to resemble milk in appearance. **C 51, C07**

mill, *n*—a machine used for rubber mastication, mixing, or sheeting, having two counter-rotating rolls with adjustable longitudinal axis separation that usually rotate at different speeds. **D 1566, D11**

mill addition—any of the materials added to the ball mill charge of a frit. **C 286, B08**

mill broke, *n*—any paper generated in a paper mill prior to the completion of a specific paper manufacturing process which is unsuitable for subsequent applications but can be reused in the paper manufacturer process. **D 1968, D06**

mill certification—producing mill certificate or proof of conformance with specified minimum allowable stresses for heat identification number of metal coil(s) from which metal connector plates were fabricated. **E 631, E06**

milled asbestos—all grades of asbestos that are recovered as a result of mechanical comminution and screen classification or air classification of asbestos ore. **D 2946, C17**

Miller-Bravais indices—indices used for the hexagonal system which involve the use of a fourth axis a_3 , coplanar with and at 120° to a_1 and a_2 . **E 7, E04**

Miller indices (for lattice planes)—the reciprocals of the fractional intercepts which a plane makes on the three axes. The symbols are (*hkl*). **E 7, E04**

mill finish, *adj*—having a nonuniform finish which may vary from piece to piece and within a piece, and which may not be entirely free of stains or oil. See also **mill finishsheet**. **B 881, B07**

mill grain, *n*—in *rubber*, grain which is imparted to rubber sheeting while being mixed or conditioned in a rubber mill and which is parallel to the direction the rubber moves in the mill. **D 123, D13**

mill grain, *n*—in *rubber*, grain which is imparted to rubber sheeting while being mixed or conditioned in a rubber mill and which is parallel to the direction the rubber moves in the mill. **D 6477, D13**

milliamperes (mA)—the technical term is **tube current** and is defined as the current passing between the cathode and anode

during the operation of an x-ray tube, measured in milliamperes (mA) and usually taken as a measure of x-ray intensity. **E 1316, E07**

milliequivalent per litre (meq/L)—a weight-volume measurement obtained by dividing the concentration expressed in milligrams per litre by the equivalent weight of the substance or ion. If specific gravity is unity meq/L is the same as epm. **D 6161, D19**

milligram per litre (mg/L)—a weight-volume measurement which expresses the concentration of a solute in milligrams per litre of solution. When specific gravity is unity mg/L = ppm. When specific gravity is not unity, mg/L divided by specific gravity of solution equals ppm. **D 6161, D19**

millimetre of mercury—a unit of pressure corresponding to a column of mercury exactly 1 mm high under standard acceleration of gravity. Sometimes called torr. **E 1316, E07**

millimicron (μm)—a unit of length used in measuring light waves. The peak spectral response of a scanner is expressed in μm . **F 149, F05**

milling, *n*—the mechanical treatment of metal powder, or metal powder mixtures, as in a ball mill, to alter the size or shape of the individual particles or to coat one component of the mixture with another. **B 243, B09**

milling—a process by which asbestos ore is treated mechanically to produce grades of asbestos with specified properties. **D 2946, C17**

milling, *n*—in waste derived fuels, reduction in particle size by shearing, cutting, grinding to a suitable particle size for analysis and characterization. **D 5681, D34**

milling—a reduction in particle size of refuse-derived fuel by shearing, cutting, or grinding to a suitable particle size for analysis and characterization (see **sample reduction**). **E 856, D34**

mill-mixed plaster (ready-mixed plaster), *n*—material formulated and dry-blended by the manufacturer, requiring only the addition of and mixing with water. **C 11, C11**

millrun—the total yield of lumber from a mill or a group of logs without regard to grades. **D 9, D07**

mill scale—the heavy oxide layer that forms during hot fabrication or heat treatment of metals. **B 374, B08**

mill tailings, *n*—finely ground mine waste (commonly passing a 150- μm (100 mesh screen) resulting from the mill processing of ore. **D 5681, D34**

millwork—generally building materials made of finished wood and manufactured in millwork plants and planing mills often assembled for installation upon delivery to the job site. Includes such items as inside and outside doors, window and door frames, molding, and interior trim. **D 9, D07**

mill wrinkle—See **crease**. **D 3990, D13**

MIM—see **metal injectionmolding**. **B 243, B09**

mineral fiber, *n*—insulation composed principally of fibers manufactured from rock, slag, or glass, with or without binders. **C 168, C16**

mineral fiber felt—a felt with rock wool as the principal component. **D 1079, D08**

mineral fiber insulation, *n*—insulation composed principally of fibers manufactured from rock, slag, or glass processed from molten state into fibrous form to comprise flexible batts or blankets, rigid or semi-rigid blocks and boards, or loose fill insulations, with or without binder. **E 176, E05**

mineral granules—opaque, natural, or synthetically colored aggregate commonly used to surface cap sheets, granule-surfaced sheets, and roofing shingles. **D 1079, D08**

mineral insulating oil, *n*—an oil of mineral origin, refined from petroleum crude oil, possessing electrical insulating properties. **D 2864, D27**

mineralization—the microbial-mediated breakdown of organic materials into inorganic materials. **F 1600, F20**

mineralized coal—See **mineralized coal** under **coal**. **D 121, D05**

mineralizer—a processing additive that promotes either the recrystallization or the partial fusion or sintering of certain mineral or

ceramic materials, often facilitating the desired conversion at a lower temperature. **C 242, C21**

mineral matter, n —in coal, historically considered to be the non-organic fraction composed of physically discrete particles of minerals, such as clays, quartz, pyrite, etc., and all elements other than carbon, hydrogen, oxygen, nitrogen and sulfur in the organic fraction. **D 121, D05**

mineral parting, n —discrete layer of mineral or mineral-rich sediment interbedded within lower mineral matter content coal. **D 121, D05**

mineral rubber, n —a compounding material (not a rubber) prepared from petroleum asphalt and used as a tackifier, softener, or extender. **D 1566, D11**

mineral stabilizer—a fine, water-insoluble inorganic material, used in admixture with solid or semisolid bituminous materials. **D 1079, D08**

mineral streak—an olive to greenish-black or brown discoloration of undetermined cause; commonly associated with bird pecks and other injuries. Occurs in streaks usually containing accumulations of mineral matter. **D 9, D07**

mineral-surfaced roofing—built-up roofing whose top ply consists of a granule-surfaced sheet. **D 1079, D08**

mineral-surfaced sheet—a felt that is coated on one or both sides with asphalt and surfaced with mineral granules. **D 1079, D08**

mineral tanned—leathers which have been tanned with chemical compounds of mineral origin without the use of vegetable tanning materials, notably the salts of chromium, aluminum, and zirconium. **D 1517, D31**

mineral wool, n —A synthetic vitreous fiber insulation made by melting predominantly igneous rock, and or furnace slag, and other inorganic materials, and then physically forming the melt into fibers. **C 168, C16**

minerogenic palsa—a palsa in which the core extends below the peat into the underlying material. **D 7099, D18**

mine subsidence, n —the downward displacement of the natural land surface in response to the removal of underlying supporting material by mining. **E 2201, E50**

miniature unmanned air vehicle, mini-UAV, n —UAV with a maximum gross takeoff weight of 55 lbs or less. **F 2395, F38**

minifocus X-ray tube—an X-ray tube having an effective focal spot size between 100 and 400 μm . **E 1316, E07**

minimal purge sampling—the collection of ground water that is representative of the formation by purging only the volume of water contained by the sampling equipment (that is, tubing, pump bladder). **D 5681, D34**

minimum acceptable rate of return—the minimum percentage return required for an investment to be economically acceptable. **E 631, E06**

minimum acceptable rate of return, n —the minimum percentage return required for an investment to be economically acceptable. **E 833, E06**

minimum application temperature, n —the minimum temperature, as recommended by the manufacturer, to which a hot-applied sealant or filler for pavement cracks or joints must be heated while conforming to all specification requirements and result in appropriate application characteristics. **D 5535, D04**

minimum autoignition temperature (MAIT), n —the minimum temperature at which a dust cloud will self ignite under the specified conditions of test. **E 1445, E27**

minimum average roll value (MARV), n —for geosynthetics, a manufacturing quality control tool used to allow manufacturers to establish published values such that the user/purchaser will have a 97.7% confidence that the property in question will meet published values. For normally distributed data, "MARV" is calculated as the typical value minus two (2) standard deviations from documented quality control test results for a defined population from one specific test method associated with one specific property. **D 4439, D35**

minimum curve—in a phase diagram, a univariant line tracing the

meeting of a pair of bivariate surfaces at intermediate composition and coinciding with their lowest temperature at each pressure level, or their lowest pressure at each temperature level; congruent transformation occurs everywhere along a minimum curve. **E 7, E04**

minimum detectable leakage rate—the magnitude of the smallest leakage rate that can be unambiguously detected by a given leak detector in the presence of conditions existing at time of test. **E 1316, E07**

minimum detectable mass permeated, n —the smallest mass of permeant that is detectable with the complete permeation test system. **F 1494, F23**

minimum detectable permeation rate, n —the lowest rate of permeation that is measurable with the complete permeation test system. **F 1494, F23**

minimum detectable temperature difference (MDTD)—a measure of the compound ability of an infrared imaging system and an observer to detect a target of unknown location at one temperature against a large uniform background at another temperature when displayed on a monitor for a limited time.

NOTE—For a given target size, the MDTD is the minimum temperature difference between the target and its background at which the observer can detect the target. The standard target is a circle whose size is given by its angular subtense, and both target and background are isothermal blackbodies. **E 1316, E07**

minimum detection limit—See analyzer. **D 1356, D22**

minimum determinability, n —the lowest value that can be determined within the stated precision of a method expressed quantitatively in the same dimension that is used for reporting results of the test. **D 1129, D19**

minimum edge contrast, E_{Cmin}, n —the smallest edge contrast in a scan reflectance profile. **F 1294, F05**

minimum force, $P_{min} [F]$ —in fatigue, the lowest algebraic value of applied force in a cycle. By convention, tensile forces are positive and compressive forces are negative. **E 1823, E08**

minimum hardness—hardness value of a fastener below which it is not in conformance with the specification. **F 1789, F16**

minimum ignition energy, n —electrical energy discharged from a capacitor, which is just sufficient to effect ignition of the most ignitable mixture of a given fuel-mixture under specific test conditions. **E 1445, E27**

minimum immersion length, n —the depth that a thermometer should be immersed, in a uniform temperature environment, such that further immersion does not produce a change in indicated temperature greater than the specified tolerance. **E 344, E20**

minimum joint width, n —the narrowest opening of an installed joint system. **E 176, E05**

minimum local thickness—lowest local thickness value on the significant surface of a single article. **F 1789, F16**

minimum (non-statistical), n —the lowest acceptable actual test result; any valid individual test result below the minimum is cause for rejection of the component or material lot being tested.

$\text{All } x_i \geq \text{Minimum} = LSL$

A 644, A04

minimum point—that composition and temperature, or pressure, at which a heterogeneous equilibrium occurs at its lowest temperature, or pressure, when this does not coincide with one of the composition limits of the equilibrium, that is, when it occurs at an intermediate composition; the equilibrium becomes congruent (univariant) at the minimum point. **E 7, E04**

minimum process capability index, C_{pk}, n —smaller of the upper process capability index and the lower process capability index. **E 456, E11**

minimum process performance index, P_{pk}, n —smaller of the upper process performance index and the lower process performance index. **E 456, E11**

minimum reflectance, R_{min} , n

minimum reflectance, R_{min} , n —the smallest reflectance value in a scan reflectance profile. **F 1294, F05**

minimum reflectivity difference, n —the difference between the smallest minimum space reflectance value and the largest maximum bar reflectance value as measured across the entire symbol. According to the equation:

$$MAD = \text{Min}(A_s \text{ min}) - \text{Max}(A_b \text{ max})$$

where:

A_s = Minimum Space Reflectance, and

A_b = Maximum Bar Reflectance.

F 1294, F05

minimum required pressure—one of a series of established pressure values for a plastic piping component (multilayer pipe, fitting, valve, and so forth) obtained by categorizing the long-term hydrostatic pressure strength in accordance with ISO 9080.

F 412, F17

minimum required strength—one of a series of established stress values for a plastic compound obtained by categorizing the long-term hydrostatic strength determined by hydrostatic testing in accordance with ISO 9080.

F 412, F17

minimum resolvable temperature difference (MRTD)—a measure of the ability of an infrared imaging system and the human observer to recognize periodic bar targets on a display. The MRTD is the minimum temperature difference between a standard periodic test pattern (7:1 aspect ratio, 4 bars) and its blackbody background at which an observer can resolve the pattern as a four-bar pattern.

E 1316, E07

minimum spacing—minimum anchor spacing measured centerline to centerline, at which base material will not be damaged when multiple anchors are set.

E 2265, E06

minimum standard deviation, S_M , n —the standard deviation of results on a test material obtained under conditions of minimum variability

E 135, E01

minimum (statistical), n —the lowest acceptable statistical test result; for compliance, the sample mean (\bar{x}) minus M standard deviation(s), where M is a matter of agreement between the supplier and purchaser, must be greater than, or equal to, the lower specification limit (LSL).

$$\bar{x} - M \times s \geq \text{Minimum} = LSL$$

A 644, A04

minimum stress-intensity factor coefficient, Y_m^* —the minimum value of the stress intensity factor coefficient, Y^* .

E 1823, E08

minimum stress-intensity factor, K_{min} [$FL^{-3/2}$]—in fatigue, the minimum value of the stress-intensity factor in a cycle. This value corresponds to P_{min} when $R > 0$ and is taken to be zero when $R \leq 0$.

E 1823, E08

minimum test value, n —for geosynthetics, the lowest sample value from documented manufacturing quality control test results for a defined population from one test method associated with one specific property.

D 4439, D35

minimum thickness, n —of steel sheet, an ordering designation which indicates that the applicable tolerance for thickness is all plus from the ordered thickness.

A 902, A05

minor defect, n —a defect that is not likely to materially reduce the usability of the product from its intended purpose, or is a departure from established standards having little bearing on the effective use of operation of a product.

D 123, D13

minor defect, n —a defect that is not likely to materially reduce the usability of the product from its intended purpose, or is a departure from established standards having little bearing on the effective use of operation of a product.

D 4850, D13

minor imperfection, n —in fabric grading, a deviation in a roll of fabric that judgment and experience indicate is likely to have no bearing on subsequent processing of the fabric.

D 123, D13

minor imperfection, n —in fabric grading, a deviation in a roll of fabric that judgment and experience indicate is likely to have no bearing on subsequent use or processing of the fabric.

D 6799, D13

minor modification—any change that does not alter the structural or operational characteristics of the ride or device nor change its performance from that specified in the manufacturer's design criteria.

F 747, F24

minor package defect—a defect that does not significantly reduce the usability of the package for its intended purpose, or that is a departure from established standards having little or no bearing on the effective use of the package.

F 17, F02

minor package defect—See Terminology F 17.

F 1327, F02

minor principal plane—see **principal plane**.

D 653, D18

minor principal stress—see **stress**.

D 653, D18

minor tile facial dimension—the length or width of the tile exclusive of the lugs.

C 242, C21

minor tile thickness—the thickness of tile that does not include maximum protuberances or ridges.

C 242, C21

minus, n —the sieve designating the upper limit or maximum size shall be the sieve of the series with the largest opening upon which is cumulatively retained a total of less than or equal to 1 % of the sample.

D 5681, D34

minus sieve, n —the portion of a powder sample which passes through a standard sieve of specified number. (See **plus sieve**.)

B 243, B09

mirror assembly, n —a mirror, marked and aligned with the viewing rakes, used as an aid in quickly identifying and tracking the flame front progress.

E 176, E05

mirror, first or front surface—an optical mirror on which the reflecting surface is applied to the front surface of the mirror instead of to the back, that is, to the first surface of incidence.

E 175, E41

mirror illuminator—a thin, half-round opaque mirror interposed in a microscope for the purpose of directing an intense oblique beam of light to the object. The light incident on the object passes through one half the aperture of the objective and the light reflected from the object passes through the other half aperture of the objective.

E 7, E04

mirror line, n —a line, part of a pattern piece, that divides two symmetrical parts.

D 6963, D13

miscibility gap—a region of multi-phase equilibrium; commonly applied to the specific case in which an otherwise continuous series of liquid, or solid, solutions is broken, over a limited temperature range, by the intrusion of a two phase field that terminates at a critical point. See **binodal curve**.

E 7, E04

misclip—See **scalloped selvage**.

D 3990, D13

misdraw—See **wrong draw**.

D 3990, D13

mismatch—an uneven fit in worked lumber when adjoining pieces do not meet tightly at all points of contact or when the surfaces of adjoining pieces are not in the same plane.

D 9, D07

mispick, n —in woven fabrics, a pick not properly interlaced which causes a break in the weave pattern. (See **double pick**.)

D 123, D13

mispick, n —in woven fabrics, a pick not properly interlaced which causes a break in the weave pattern. (*Syn.* wrong pick) (See also **double pick**)

D 3990, D13

misprint, n —in printed fabric, colors or patterns, or both, either missed, or partially missed, or incorrectly positioned relative to each other.

D 123, D13

misprint, n —in printed fabric, colors or patterns, or both, either missed, or partially missed, or incorrectly positioned relative to each other.

D 3990, D13

misread, n —a disparity between the data encoded in a symbol and the data output from a code reader. Also known as bad read or mis-scan. Such errors will not be detected by test routines in the decode algorithm. (See also, **non-read**.)

F 1294, F05

misregister, n —in printed fabric, colors or patterns not correctly positioned. (Compare **misprint**.)

D 123, D13

misregister, n —in printed fabric, colors or patterns not correctly positioned. (Compare **misprint**.)

D 3990, D13

missing coating, n —for coated inflatable restraint fabrics, portions of

the coated layer containing exposed base fabric or scrape marks in the coated layer. **D 6799, D13**

missing data, n—one or more fields in a data record that has no valid values due to a variety of reasons such as improper functioning of the data collection device, failed communications, or shortcomings in subsequent processing programs. **E 867, E17**

missing dots, n—a noticeable area void of halftones or an area of the cylinder that has cells that have not transferred ink to the paper. It can be caused by a worn cylinder or rough paper surface, or both. (Also referred to as *skipped dots*). **D 6488, D01**

missing end—See **end out**. **D 3990, D13**

missing pick—See **broken pick**. **D 3990, D13**

missing yarn, n—for *inflatable restraint fabrics*, a yarn discontinuity resulting in a change in weave pattern. **D 6799, D13**

miss-knit, n—*inknitted fabrics*, a deviation from the designated knitting pattern. **D 123, D13**

miss-knit, n—*inknitted fabrics*, a deviation from the designated knitting pattern. **D 3990, D13**

mist—a finely structured fracture marking giving a matte or roughened appearance to a surface; having continuous degrees of coarseness. Mist is variously known as fine hackle, frosted area, matte, and stippled area. **C 162, C14**

mist, n—liquid, usually water in the form of particles suspended in the atmosphere at or near the surface of the earth; small water droplets floating or falling, approaching the form of rain, and sometimes distinguished from fog as being more transparent or as having particles perceptibly moving downward. **D 1356, D22**

mist, n—liquid, usually water, in the form of particles suspended in the atmosphere at or near the surface of the earth; small water droplets floating or falling, approaching the form of rain, and sometimes distinguished from fog as being more transparent or as having particles perceptively moving downward. **E 1620, E29**

misting, n—side effect of ink film splitting within an inking unit, in particular on rapidly-rotating inking rollers. **D 6488, D01**

misting—see **dusting**. **F 335, F05**

mists—distribution of droplets with $50 \mu\text{m} < D_{v,5} \leq 100 \mu\text{m}$. **E 1102, E35**

misweave, n—for *inflatable restraint fabrics*, a change in the weave pattern caused by incorrect interlacing or insertion of a yarn. (Includes *mispick, wrong, draw, jerk-in*.) **D 6799, D13**

mitered fittings—fittings manufactured by using beveled pipe segments. **C 896, C04**

mitered pipe—See **beveled pipe**. **C 896, C04**

miter ending—See **railing systems**. **E 631, E06**

miter ending—an angular or dovetailed member end, designed to fit an adjacent matching member, thereby providing continuity of profile at the connection. **E 631, E06**

miter ending—an angular or dovetailed member end, designed to fit an adjacent matching member, thereby providing continuity of profile at the connection. **E 1481, E06**

mix—See **batch (3)**. **C 162, C14**

mix, n—an adequate mixture of rubber in any form with other material(s). **D 1566, D11**

mixed aniline point, n—the minimum equilibrium solution temperature of a mixture of two volumes of aniline (aminobenzene), one volume of sample, and one volume of *n*-heptane of specified purity. **D 4175, D02**

mixed aniline point, n—the minimum equilibrium solution temperature of a mixture of two volumes of aniline, one volume of sample, and one volume of *n*-heptane of specified purity. **D 4175, D02**

mixed base, adj—in *lubricating grease*, the description of a thickener system composed of soaps of two metals. **D 4175, D02**

mixed bed, n—a physical mixture of anion-exchange and cation-exchange materials. **D 1129, D19**

mixed-bed—a physical mixture of anion-exchange and cation-exchange materials. **D 6161, D19**

mixed end, n—*inwoven fabrics*, a warp yarn differing from that normally being used in the fabric. **D 123, D13**

mixed end, n—*inwoven fabrics*, a warp yarn differing from that normally being used in the fabric. **D 3990, D13**

mixed filling, n—*in woven fabrics*, a filling yarn differing from that normally being used in the fabric. (See also **filling band**. Compare **barré**.) **D 123, D13**

mixed filling, n—*in woven fabrics*, a filling yarn differing from that normally being used in the fabric. (See also **filling band**) (Compare **barré**) **D 3990, D13**

mixed grain size—See **duplex grain size**. **E 7, E04**

mixed-in-place pile—a soil-cement pile, formed in place by forcing a grout mixture through a hollow shaft into the ground where it is mixed with the in-place soil with an auger-like head attached to the hollow shaft. **D 653, D18**

mixed-in-place (road mix), n—a bituminous surface or base course produced by mixing mineral aggregate and cut-back asphalt, bituminous emulsion, or tar at the job-site by means of travel plants, motor graders, drags, or special road-mixing equipment; open or dense-graded aggregates, sand, and sandy soil may be used. **D 8, D04**

mixed liquor, n—*in sewage treatment*, the contents of an aeration tank including the activated sludge mixed with primary effluent or the raw wastewater and return sludge. **D 4175, D02**

mixed liquor, n—*in sewage treatment*, the contents of an aeration tank including the activated sludge mixed with primary effluent or the raw wastewater and return sludge. **D 6384, D02**

mixed potential—the potential of a specimen (or specimens in a galvanic couple) when two or more electrochemical reactions are occurring simultaneously. **G 15, G01**

mixed powder, n—a powder made by mixing two or more powders as uniformly as possible. The constituent powders will differ in chemical composition or in particle size or shape, or a combination thereof. **B 243, B09**

mixed reflection, n—partly specular and partly diffuse reflection. **E 284, E12**

mixed reflection, n—partly regular and partly diffuse reflection.

NOTE—The irradiance or illuminance received from a point source after regular (diffuse) reflection varies inversely as the square of the distance to the source (diffuser). **E 349, E21**

mixed transmission, n—a combination of diffuse and regular transmission. **E 284, E12**

mixed transmission, n—partly regular and partly diffuse transmission.

NOTE—The irradiance or illuminance received from a point source, after regular (diffuse) transmission, varies inversely as the square of the distance to the source (diffuser). **E 349, E21**

mixer—a machine employed for blending the constituents of grout, mortar, or other mixtures. **D 653, D18**

mixer, n—a machine that incorporates and disperses compounding ingredients into rubber to form a mix or a compound, through the action of mechanical work (shear). **D 1566, D11**

mixer, internal, n—a machine with a closed cavity in which a specially shaped rotor(s) masticates the rubber or incorporates and disperses compounding materials, or both, into the rubber. **D 1566, D11**

mixing, n—the thorough intermingling of powders of two or more materials. **B 243, B09**

mixing cycle—the time taken for the loading, mixing, and unloading cycle. **D 653, D18**

mixing ratio (r), n—the ratio of the mass of water vapor m_v to the mass of dry air m_a , present in the moist air;

$$r = \frac{m_v}{m_a}$$

D 4023
D 1356, D22

mixing speed—the rotation rate of a mixer drum or of the paddles in an open-top, pan, or trough mixer, when mixing a batch; expressed in revolutions per minute. **D 653, D18**

mixture design, *n*—a design in which two or more ingredients or components shall be mixed and the response is a property of the resulting mixture that does not depend upon the amount of the mixture. **E 456, E11**

mixture design, *n*—a design in which two or more ingredients or components shall be mixed and the response is a property of the resulting mixture that does not depend upon the amount of the mixture.

NOTE—The proportions of each of the *q* components (X_i) in the mixture shall satisfy the conditions $0 \leq X_i \leq 1$ and $\sum_{i=1}^q X_i = 1$; and each experimental point is defined in terms of these proportions.

NOTE—In some fields of application the experiment mixtures are described by the terms *formulation* or *blend*. The use of mixture designs is appropriate for experimenting with the formulations of manufactured products, such as paints, gasoline, foods, rubber, and textiles.

NOTE—In some applications, the proportions of the components of the mixture may vary between 0 and 100 % of the mixture (*complete domain*). In others, there may be operative restraints, so that at least one component cannot attain 0 or 100 % (*reduced domain*).

E 1325, E11

mobile carrier—distinct species moving freely within a membrane for the purpose of increasing the selective sorption and flux of a specific component in a feed stream relative to all other components. **D 6161, D19**

mobile home—Obsolete term. Use **manufactured home**. (See **building**.) **E 631, E06**

mobius loop—a one-sided surface formed by holding one end of a rectangle fixed, rotating the opposite end through 180° and then applying it to the first end. **F 221, F05**

mocha leather—leather from any variety of hair sheep; after the grain has been removed by a liming process known as frizing, the fine fibers below the grain are sueded. **D 1517, D31**

mocha suede—a washable and durable suede produced from chrome-tanned Arabian blackhead hair sheepskins (commonly called blackhead mochas) mechanically abraded on the flesh side. Tightness of fiber structure found in these skins imparts the characteristic fineness of finish associated with mocha suede. **D 1517, D31**

mock flat-felled seam, *n*—See **double-welt seam**. **D 4965, D13**

mock French seam, *n*—a complex seam formed on the inside of the object with raw edges enclosed and no stitching rows visible on the face side; similar in appearance to the French seam but constructed differently. (Compare **French seam**.) **D 123, D13**

mock French seam, *n*—in *home sewing*, a complex seam formed on the inside of the product with cut edges enclosed and no stitching visible on the face side; similar in appearance to the French seam but constructed differently. (Compare **French seam**.) **D 4965, D13**

mock leno weave, *n*—a weave in which the warp yarns remain parallel but form open warp stripes by programmed interlacing of warp and filling yarns simulating a leno appearance. **D 123, D13**

mock leno weave, *n*—a weave in which the warp yarns remain parallel but form open warp stripes by programmed interlacing of warp and filling yarns simulating a leno appearance. **D 7018, D13**

mockup, *n*—a section or a structure or assembly, built full-size or to scale, for the purpose of studying construction details, testing performance, judging appearance, or any combination thereof. **E 631, E06**

modacrylic—a manufactured fiber in which the fiber-forming substance is any long-chain synthetic polymer composed of less than 85 % but at least 35 % by weight of acrylonitrile units (C₂H₃CH₂C₂H₃CH(C₂H₃)), except fiber qualify-

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ing under **rubber**, 2, and **anidex**.

*******novoloid**—a manufactured fiber containing at least 85 % by weight of a cross-linked novolac. **D 123, D13**

modality, *n*—any of the sensory systems (for example, auditory, taste, olfaction, touch, or visual modality). **E 253, E18**

mode, *n*—the value of the variate for which the relative frequency in a series of observations reaches a local maximum. **D 123, D13**

mode, *n*—an output of an *IR thermometer* that gives a representation of a temperature using a disclosed calculation technique with respect to selected reference (for example, *blackbody*, *oral*, *rectal*, etc.). **E 344, E20**

mode—the type of ultrasonic wave propagating in the materials as characterized by the particle motion (for example, longitudinal, transverse, and so forth). **E 1316, E07**

mode—one of the three classes of crack (surface) displacements adjacent to the crack tip. These displacement modes are associated with the stress-strain fields around the crack tip and are designated one, two, and three. Arabic numerals 1, 2, and 3 are used for the general case, and they represent opening, sliding, and tearing displacements, respectively. Roman numerals are used to specialize the mode to plane strain (I and II) or to antiplane-strain (III). **E 1823, E08**

mode conversion—phenomenon by which an ultrasonic wave that is propagating in one mode can reflect or refract at an interface to form ultrasonic wave(s) of other modes. **E 1316, E07**

model code, *n*—a proposed **code** that is established within the procedural framework of a group of knowledgeable people, and is designed for adoption by governmental authority. **E 631, E06**

model code—See **code**. **E 631, E06**

model evaluation, *n*—the process of quantifying the accuracy of chosen results from a model when applied for a specific use. **E 176, E05**

model signature, *n*—a signature that is used as a prototype for a simulation or copy, by manual electronic or other means. **E 2195, E30**

model validation, *n*—the process of determining the correctness of the assumptions and governing equations implemented in a model when applied to the entire class of problems addressed by the model. **E 176, E05**

model verification, *n*—the process of determining the correctness of the solution of a system of governing equations in a model. With this definition, verification does not imply the solution of the correct set of governing equations, only that the given set of equations is solved correctly. **E 176, E05**

MODEM—modulator/demodulator. **F 1457, F05**

mode of control, *n*—means the pilot uses to direct the activity of the UAV. There are three modes of control: fully autonomous, semi-autonomous, and remote control. A UAV may use different modes of control in different phases of flight. **F 2395, F38**

moderately conductive, *adj*—describes a solid material having a volume resistivity between 1 and 10 000 000 Ω-cm. **D 1711, D09**

moderator—a material used to slow fast neutrons. Neutrons are slowed down when they collide with atoms of light elements such as hydrogen, deuterium, beryllium, and carbon. **E 1316, E07**

modernize, *v*—in *building*, to adapt to current needs, tastes, or usage by **remodeling** or **repair**. **E 631, E06**

modernize—See **building modification**. **E 631, E06**

modes, *n*—of *appearance*, various manners in which colors can be perceived (see also **aperture mode**, **illuminant mode**, **object mode**.) **E 284, E12**

modified Auger parameter—the Auger parameter plus the photon energy, which equals the kinetic energy of the sharpest Auger peak plus the binding energy of the most intense photoelectron peak. **E 673, E42**

modified design—a concrete pipe design changed from a standard design. **C 822, C13**

modified general question test (MGQT), *n*—test format patterned after the Reid test and modified by the U.S. Military. It contains relevant, irrelevant, and comparison questions. The MGQT is widely used in the field, and has a body of validity research. **E 2035, E52**

modified grab test, n —in *fabric testing*, a tensile test in which the control part of the width of the specimen is gripped in the clamps and in which lateral slits are made midlength of the specimen severing all yarns bordering that portion of the specimen held between the two clamps. **D 123, D13**

modified grab test, n —in *fabric testing*, a tensile test in which the control part of the width of the specimen is gripped in the clamps and in which lateral slits are made midlength of the specimen severing all yarns bordering that portion of the specimen held between the two clamps. **D 4850, D13**

modified groove—see **femal end of pipe**. **C 822, C13**

modified internal rate of return (MIRR)—See **adjusted internal rate of return (AIRR)**. **E 631, E06**

modified internal rate of return (MIRR), n —See **adjusted internal rate of return (AIRR)**. **E 833, E06**

modified rosin, n —rosin that has been treated with heat or catalysts, or both with or without added chemical substances, so as to cause substantial change in the structure of the rosin acids, as isomerization, hydrogenation, dehydrogenation, or polymerization, without substantial effect on the carboxyl group. **D 804, D01**

modified tongue—see **male end of pipe**. **C 822, C13**

modified vegetable oil—an oil, extracted from seeds, that has been chemically modified (for example, methylated). **E 1519, E35**

modified vegetable oil concentrate—an emulsifiable, chemically modified vegetable oil product containing 5 to 20 % w/w surfactant and the remainder chemically modified vegetable oil. **E 1519, E35**

modified worsted system, n —a worsted system for spinning manufactured fibers which relies on pin control of fibers during sliver weight reduction, but which bypasses the system of combing required with wool to remove noil. **D 123, D13**

modified worsted system, n —a worsted system for spinning man-made fibers which relies on pin control of fibers during sliver weight reduction, but which bypasses the system of combing required with wool to remove noil. **D 4849, D13**

modifier—in *grouting*, an additive used to change the normal chemical reaction or final physical properties of a grout system. **D 653, D18**

modifier, n —ingredient which, when added to an adhesive, changes its properties. **D 907, D14**

modular container—See **container**. **D 996, D10**

modular dwelling—a manufactured home consisting completely or in part of **modules**. **E 631, E06**

modular dwelling—See **dwelling unit**. **E 631, E06**

modulate, v —to vary a characteristic or parameter of an entity in accordance with a characteristic or parameter of another entity. **E 131, E13**

modulated current plating—a method of electroplating in which the cathode current density is changed periodically. See **pulse plating, ripple plating, periodic reverse plating**. **B 374, B08**

modulation—AES, the periodic waveform added to the spectrometer pass energy to obtain the desired Auger spectrum display. The modulation should be given as eV peak-to-peak, thereby including the geometrical factor of the spectrometer, rather than volts peak-to-peak. The frequency and waveform should also be given. **E 673, E42**

modulation analysis—an analytical method used in electromagnetic testing that separates responses due to various factors influencing the total magnetic field by separating and interpreting, individually, frequencies or frequency bands in the modulation envelope of the (carrier frequency) signal. **E 1316, E07**

modulation frequency, f, v —the frequency, in Hz, at which radiant energy of a given wavenumber is modulated by a rapid-scanning interferometer. **E 131, E13**

modulation, MOD, n —the ratio of minimum edge contrast (ECmin) to symbol contrast (SC) expressed as:

$$\text{MOD} = \text{ECmin}/\text{SC}$$

F 1294, F05

modulation transfer function (MTF)—in infrared imaging systems, the modulus of a Fourier transform that describes the spatial distribution of the overall attenuation in amplitude of a thermal imaging system.

NOTE—MTF is a sensitive function of spatial frequency.

E 1316, E07

modulator/demodulator, n —a device that converts electronic signals from the form used in data processing (digital) to the form used in communication (analog), and vice versa. (See **MODEM**.)

F 1457, F05

module, n —for *inflatable restraints*, an assembly composed of an inflator, a cushion, a mounting device, a trigger, and a cover.

D 123, D13

module—a membrane element combined with the element's housing. Pressure vessel containing membrane element(s). **D 6161, D19**

module, n —for *inflatable restraints*, an assembly composed of an inflator, cushion, mounting device, trigger, and cover. **D 6799, D13**

module, n —a unit of structure based on a standard pattern of standard dimensions. (See also **modular dwelling**.) **E 631, E06**

module, n —the narrowest nominal width of bar or space in a symbol. **F 1294, F05**

modulo, n —an arithmetic operation in which the result is the remainder after division. The type of algorithm used to calculate the check digit for certain bar code symbols. **F 1294, F05**

modulus, n —as related to sealants used in building construction, the stress (force/unit area) at a corresponding strain (elongation) expressed as a percent of the original dimension. **C 717, C24**

modulus, n —the property of a material representative of its resistance to deformation. (See also **chord modulus, initial modulus, tangent modulus, Young's modulus**.) **D 123, D13**

modulus, n —the ratio of stress to strain; that property of a material which, together with the geometry of a specimen, determines the stiffness of the specimen; may be static or dynamic, and if dynamic, is mathematically a vector quantity, the phase of which is determined by the phase of the complex force relative to that of deflection. (See also **complex, elastic, damping**.) **D 1566, D11**

modulus, n —the property of a material representative of its resistance to deformation. (See also **chord modulus, initial modulus, tangent modulus, Young's modulus**.) **D 4848, D13**

modulus, complex—see **complex modulus**. **D 4092, D20**

modulus, complex—see **complex modulus**. **E 1142, E37**

modulus, elastic—see **complex modulus and storage modulus**. **D 4092, D20**

modulus, elastic—see **complex modulus and storage modulus**. **E 1142, E37**

modulus, loss—see **complex modulus and loss modulus**. **D 4092, D20**

modulus, loss—see **complex modulus and loss modulus**. **E 1142, E37**

modulus of deformation—see **modulus of elasticity**. **D 653, D18**

modulus of elasticity—see **complex modulus and storage modulus**. **D 4092, D20**

modulus of elasticity—see **complex modulus and storage modulus**. **E 1142, E37**

modulus of elasticity—for a given material, the ratio of unit stress to unit strain within its elastic range which may be used as a measure of stiffness. Sometimes called *Young's Modulus*. **F 1789, F16**

modulus of elasticity [FL^{-2}], n —the ratio of stress to corresponding strain below the proportional limit. **E 6, E28**

modulus of elasticity (modulus of deformation), $E, M (FL^{-2})$ —the ratio of stress to strain for a material under given loading conditions; numerically equal to the slope of the tangent or the secant of a stress-strain curve. The use of the term **modulus of elasticity** is recommended for materials that deform in accordance with Hooke's law; the term **modulus of deformation** for materials that deform otherwise. **D 653, D18**

modulus of elasticity, MPa (FL^{-2}), n —the ratio of stress (nominal)

modulus of elasticity, MPa (FL^{-2}), *n*

to corresponding strain below the proportional limit of a material, expressed in force per unit area, such as megapascals (pounds-force per square inch). **D 4439**, D35

modulus of rupture in bending [FL^{-2}], *n*—the value of maximum tensile or compressive stress (whichever causes failure) in the extreme fiber of a beam loaded to failure in bending computed from the flexure equation:

$$S_b = MclI$$

where:

M = maximum bending moment, computed from the maximum force and the original moment arm,

c = initial distance from the neutral axis to the extreme fiber where failure occurs, and

I = initial moment of inertia of the cross section about the neutral axis.

E 6, E28

modulus of rupture in torsion [FL^{-2}], *n*—the value of maximum shear stress in the extreme fiber of a member of circular cross section loaded to failure in torsion computed from the equation:

$$S_s = Tr/J$$

where:

T = maximum twisting moment,

r = original outer radius, and

J = polar moment of inertia of the original cross section.

E 6, E28

modulus of subgrade reaction—see **coefficient of subgrade reaction**. **D 653**, D18

modulus of volume change—see **coefficient of volume compressibility**. **D 653**, D18

modulus, secant—slope of the line connecting the origin and a given point of the stress-strain curve. **C 717**, C24

modulus, storage—see **complex modulus and storage modulus**. **D 4092**, D20

modulus, storage—see **complex modulus and storage modulus**. **E 1142**, E37

modulus, tangent, *n*—the slope of the line touching (tangent to) the stress-strain curve at a given point on the curve. **C 717**, C24

modulus, tensile, *n*—See **tensile stress at given elongation**, the preferred term. **D 1566**, D11

modulus, Young's, *n*—the ratio of normal stress to corresponding strain for tensile or compressive stresses below the proportional limit of the material. **D 1566**, D11

moellon—synthetic moellon is made by direct oxidation of cod or other fish oils (see also **degras**). **D 1517**, D31

mohair, *n*—the hair of the Angora goat, *Capra* species. **D 123**, D13

mohair, *n*—the hair of the Angora goat, *Capra* species. **D 4845**, D13

mohair paint roller cover, *n*—a cover in which the paint applying material is woven of short-pile velour that contains wool or angora goat hair. **D 16**, D01

Mohr circle—a graphical representation of the stresses acting on the various planes at a given point. **D 653**, D18

Mohr circle of stress (strain)—a graphical representation of the components of stress (strain) acting across the various planes at a given point, drawn with reference to axes of normal stress (strain) and shear stress (strain). (ISRM) **D 653**, D18

Mohr envelope—the envelope of a sequence of Mohr circles representing stress conditions at failure for a given material. (ISRM) **D 653**, D18

Mohr envelope (rupture envelope) (rupture line)—the envelope of a series of Mohr circles representing stress conditions at failure for a given material. **D 653**, D18

moil—(*l*) the glass remaining on a punty or blowpipe after a gob has been cut off or after a piece of ware has been blown and severed.

(2) the glass originally in contact with the blowing mechanism or head, which becomes cullet after the desired article is severed from it. **C 162**, C14

moiré, *n*—an undesirable, unintended interference pattern caused by the out-of-register overlap of two or more regular patterns such as dots or lines. **D 6488**, D01

moire patter—a pattern developed from interference or light blocking, when gratings, screens, or regularly spaced patterns are superimposed on one another. **E 175**, E41

moist room, *n*—an enclosed room for storage and curing of paste, mortar, and concrete specimens in which temperature and high relative humidity can be controlled within specified limits. **C 219**, C01

moisture, *n*—*in coal*, that water in and on coal assayed in accordance with standard test methods in which the final step is the measurement of mass loss from a coal sample heated to 104 to 110°C at specified conditions of residence time, atmosphere, sample mass, and equipment configuration.

equilibrium moisture, *n*—the moisture in a coal sample as determined in accordance with Test Method D 1412.

inherent moisture, *n*—*in coal*, the moisture that exists as an integral part of the coal in its natural state, including water in pores, but not that present in macroscopically visible fractures.

pore moisture, *n*—moisture in the pores of coal, which may be quantitatively equivalent to or less than inherent moisture depending upon the state of dryness of the sample.

residual moisture, *n*—that moisture remaining in the sample after air drying.

surface moisture, *n*—that portion of total moisture in a coal lot or sample collected from a lot, core face channel, or other source that is in excess of inherent moisture.

total moisture, *n*—all of the moisture in and on a consignment or sample of coal. **D 121**, D05

moisture, *n*—*as used with textiles*, water absorbed, adsorbed or resorbed by a material. (See also **water**.) **D 123**, D13

moisture, *n*—*as used with textiles*, water absorbed, adsorbed, or resorbed by a material. (See also **water**.) **D 4920**, D13

moisture—the volatile substances evolved during volatilization and purging of the sample-residue flask and absorbed on the desiccant contained in the absorption tubes under the conditions of the test. **E 1547**, E15

moisture as-is, *n*—deprecated term. See **moisture content**. **D 4920**, D13

moisture as-received, *n*—deprecated term. See **moisture content**. **D 4920**, D13

moisture, atmospheric—ambient humidity that may be absorbed by hygroscopic material during sampling and testing and may lead to erroneous results. **D 4790**, D16

moisture content—amount of water contained within a concrete masonry unit or related unit at a given time expressed as a percentage of the total amount of water in the unit under saturated conditions. **C 1209**, C15

moisture content—the amount of water contained in the wood, usually expressed as a percentage of the mass of the oven-dry wood. **D 9**, D07

moisture content, *n*—that part of the total mass of a material that is absorbed or adsorbed water, compared to the total mass. (Compare **moisture pick-up** and **moisture regain**.) **D 123**, D13

moisture content—see **water content**. **D 653**, D18

moisture content—the moisture present in a cellulosic material, as determined by prescribed methods, conventionally expressed as a percentage of the total mass of the "wet" material. **D 1695**, D01

moisture content—the water content of a substance as measured under specified conditions. **D 2652**, D28

moisture content, *n*—the percentage, by mass, of water absorbed and adsorbed by carbon black. **D 3053**, D24

moisture content, *n*—the amount of moisture in a material determined under prescribed conditions and expressed as a percentage of the mass of the moist material, that is, the original mass comprising the dried substance plus any moisture present. **D 4845, D13**

moisture content, *n*—that part of the total mass of a material that is absorbed or adsorbed water, compared to the total mass. (Compare **moisture pick-up** and **moisture regain**.) **D4920, D13**

moisture content, *n*—*at moisture-equilibrium*, the moisture content of a material in equilibrium with air of known, or specified, temperature and relative humidity. **D4920, D13**

moisture content—the moisture present in a material, as determined by definite prescribed methods, expressed as a percentage of the weight of the sample on either of the following bases:

- (1) Original weight.
- (2) Moisture-free weight.

NOTE—This is variously referred to as moisture content or moisture “as is” or “as received.”

NOTE—This is also referred to as moisture regain (frequently contracted to “regain”) or moisture content on the “oven-dry,” “moisture-free,” or “dry” basis. **E 41, G03**

moisture content, *n*—the percentage by mass of liquid-phase water in a two-phase mixture of vapor-and liquid-phase water. **E 957, E44**

moisture content—the amount of water contained in the biomass, expressed as either a percentage of the mass of the oven-dry biomass or of the wet biomass, moisture content, dry basis. **E 1705, E48**

moisture content (dry-basis), *n*—deprecated term. See **moisture pick-up**. **D4920, D13**

moisture content, *n*—the amount of moisture in a material determined under prescribed conditions and expressed as a percentage of the mass of the moist material, that is, the original mass comprising the oven-dried substance plus any moisture present. **D 123, D13**

moisture-density curve—see **compaction curve**. **D 653, D18**

moisture-density test—see **compaction test**. **D 653, D18**

moisture (dry-basis), *n*—deprecated term. See **moisture pick-up**. **D4920, D13**

moisture equilibrium, *n*—the condition reached by a material when it no longer takes up moisture from, or gives up moisture to, the surrounding atmosphere. (Compare **moisture-free**.) **D 123, D13**

moisture equilibrium—the condition reached by a sample when it no longer takes up moisture from, or gives up moisture to the surrounding air. **D 1695, D01**

moisture equilibrium, *n*—the condition reached by a material when it no longer takes up moisture from, or gives up moisture to, the surrounding atmosphere. (Compare **moisture-free**.) **D4920, D13**

moisture equilibrium, *n*—*for preconditioning*, the moisture condition reached by a material during free exposure to moving air in the standard atmosphere for preconditioning. **D4920, D13**

moisture equilibrium, *n*—*for testing*, the condition reached by a material during free exposure to moving air in a specified atmosphere for testing. **D4920, D13**

moisture equilibrium—the condition reached by a sample when the net difference between the amount of moisture absorbed and the amount desorbed, as shown by a change in weight, shows no trend and becomes insignificant. **E 41, G03**

moisture equilibrium for preconditioning, *n*—the moisture condition reached by a material during free exposure to moving air in the standard atmosphere for preconditioning. **D 123, D13**

moisture equilibrium for preconditioning—the moisture equilibrium condition reached by a sample after free exposure to air controlled at the standard condition for preconditioning. **D 1695, D01**

moisture equilibrium for testing, *n*—the condition reached by a sample or specimen during free exposure to moving air controlled at specified conditions. **D 123, D13**

moisture equilibrium for testing, *n*—*for industrial yarns and tire cords*, the condition reached when, after free exposure to a test atmosphere which is in motion, two successive weighings not less than 4 h apart, show not more than 0.1 % progressive change in mass of the specimen or sample. **D 123, D13**

moisture equilibrium for testing—the equilibrium moisture condition reached by a sample after free exposure to moving air controlled at standard conditions. **D 1695, D01**

moisture equilibrium for testing, *n*—*for industrial yarns and tire cords*, the condition reached when, after free exposure to a test atmosphere which is in motion, two successive weighings not less than 4 h apart, show not more than 0.1 % progressive change in mass of the specimen or sample. **D 6477, D13**

moisture equivalent:

centrifuge moisture equivalent, W_e , CME (D)—the water content of a soil after it has been saturated with water and then subjected for 1 h to a force equal to 1000 times that of gravity.

field moisture equivalent, FME—the minimum water content expressed as a percentage of the weight of the oven-dried soil, at which a drop of water placed on a smoothed surface of the soil will not immediately be absorbed by the soil but will spread out over the surface and give it a shiny appearance. **D 653, D18**

moisture expansion—an increase in dimension or bulk volume of a ceramic article caused by reaction with water or water vapor. **C 242, C21**

moisture-free, *adj*—the condition of a material that has been exposed in an atmosphere of desiccated air until there is no further significant change in its mass. **D 123, D13**

moisture-free, *adj*—*in textiles*, a descriptive term for a material that (1) has been exposed to a flow of desiccated air at a specified temperature until there is no further significant change in mass, or (2) has been treated by a distillation process using a suitable solvent. (Compare **moisture equilibrium**.) **D 123, D13**

moisture-free, *adj*—the condition of a material that has been exposed in an atmosphere of desiccated air until there is no further significant change in its mass. **D 4845, D13**

moisture-free, *adj*—*in textiles*, a descriptive term for a material that (1) has been exposed to a flow of desiccated air at a specified temperature until there is no further significant change in mass, or (2) has been treated by a distillation process using a suitable solvent. (Syn. **zero-moisture**.) (Compare **moisture equilibrium**.) **D4920, D13**

moisture gradient—a condition of graduated moisture content between successive thickness zones of wood that may be losing or absorbing moisture. During seasoning the gradations are between the relatively dry surface zones and the wet zones at the center of the piece. **D 9, D07**

moisture pick-up, *n*—the mass of absorbed and adsorbed water that is held by material, compared to the mass of the dried material. (Compare **moisture content**, and **moisture regain**.) **D 123, D13**

moisture pick-up, *n*—*at moisture-equilibrium*, the moisture pick-up of a material in equilibrium with air of known, or specified, temperature and relative humidity. **D 123, D13**

moisture pick-up, *n*—the mass of absorbed and adsorbed water that is held by a material, compared to the mass of the dried material. (Compare **moisture content** and **moisture regain**.) **D4920, D13**

moisture pick-up, *n*—*at moisture-equilibrium*, the moisture pick-up of a material in equilibrium with air of known, or specified, temperature and relative humidity. **D4920, D13**

moisture regain, *n*—the amount of moisture in a material determined under prescribed conditions and expressed as a percentage of the mass of the moisture-free material. (See **moisture content**.) **D 123, D13**

moisture regain, *n*—the amount of water resorbed by a dried material at specified equilibrium conditions of temperature and humidity, compared to the mass of the dried material. (See **standard**

- moisture regain.** Compare **commercial moisture regain**, **moisture content**, and **moisture pick-up.**) D 123, D13
- moisture regain**—the moisture present in a cellulosic material, as determined by prescribed methods, expressed as a percentage of the oven-dry mass. D 1695, D01
- moisture regain, *n***—the amount of moisture in a material determined under prescribed conditions and expressed as a percentage of the mass of the moisture-free material. D 4845, D13
- moisture regain, *n***—the amount of water resorbed by a dried material at specified equilibrium conditions of temperature and humidity, compared to the mass of the dried material. (See **standard moisture regain.**) (Compare **commercial moisture regain**, **moisture content**, and **moisture pick-up.**) D 4920, D13
- moisture regain**—the moisture in a material determined under prescribed conditions and expressed as a percentage of the weight of the moisture-free specimen.
NOTE—Moisture regain may result from either absorption or desorption, and differs from moisture content only in the basis used for calculation. E 41, G03
- moisture regain, commercial**—an arbitrary figure formally adopted as the regain to be used in calculating the commercial or legal mass of shipments or deliveries of any specific material. D 1695, D01
- moisture regain, standard**—the moisture regain of sample brought from a lower moisture regain into equilibrium with the standard atmosphere. D 1695, D01
- moisture resistant paper**—a category of optical scanning paper developed to meet unusual ambient or climatic conditions, for example, census forms or meter reading forms. F 149, F05
- moisture, wet-basis, *n***—deprecated term. See **moisture content.** D 4920, D13
- molality (m_1)**—moles (gram molecular weight) of solute per 1000 g of solvent. D 6161, D19
- molar absorptivity, ϵ** —see **absorptivity, molar.** E 131, E13
- molarity (M_1)**—moles (gram molecular weight) of solute per litre of total solution. D 6161, D19
- molar linear absorption coefficient (ϵ_m)**—a constant relating the spectrophotometric absorbance, A_λ , of an optically absorbing molecular species at a given wavelength, λ , per unit pathlength, d , to the molar concentration, c , of that species in solution:
$$\epsilon_m = A_\lambda / (d \times c)$$
- SI Unit: $m^2 \text{ mol}^{-1}$ E 170, E10
- mold, *n***—*in metal or powder injection molding*, the member of the tooling into which the powder and binder mixture is forced, and the configuration of which forms the surfaces of the green part. In isostatic compacting, a mold is also the confining form in which powder is isostatically compacted. B 243, B09
- mold**—a form (usually metal) in which glass is shaped. C 162, C14
- mold, *n***—the support structure that holds the laminate or lay-up during the laminate consolidation process. D 3878, D30
- mold, *n***—form of fungal growth, characterized by long strands of filaments (hyphae) and, under appropriate growth conditions, aerial, spore-bearing structures. D 4175, D02
- molded, *v***—formed in a closed die by the application of external pressure. C 709, D02
- molded, *v***—formed in a closed die by the application of external pressure. D 4175, D02
- molded glass**—glass that is formed in a mold as distinct from cast, rolled, drawn, or offhand ware. C 162, C14
- molded pulp**—See **packaging.** D 996, D10
- molded shape**—*in packaging*, a material formed to specific contours for **cushioning**, or **blocking** or **bracing** purposes. D 996, D10
- mold flux, *n***—a mold powder in its liquid state which protects the steel from re-oxidation, lubricates the solidifying steel shell as it passes through the mold, absorbs inclusions, and controls the heat transfer from the steel shell to the mold. C 71, C08
- mold form**—the cavity or shape that uncured composite laminae are placed into or onto and from which they derive their form. E 631, E06
- mold form**—the cavity or shape that uncured composite laminae are placed into or onto and from which they derive their form. E 1749, E06
- molding, *v***—see **compacting.** B 243, B09
- molding, *v***—shaping of brick by dropping, throwing, or vibrating wet clay or shale in a mold cavity shaped to provide the peripheral dimensions of the brick. C 43, C15
- molding, *n***—a piece of trim, typically wood, milled with a decorative shape or profile. E 1605, E06
- molding, bag**—See **bag molding.** D 883, D20
- molding, blow**—See **blow molding.** D 883, D20
- molding, compression**—See **compression molding.** D 883, D20
- molding, compression, *n***—the process of forming a material to a desired shape by flow induced by a force applied after a material is placed in the mold cavity. D 1566, D11
- molding, contact pressure**—a method of molding or laminating in which the pressure is only slightly more than necessary to hold the materials together during the molding operation. This pressure is usually less than 69 kPa (10 psi). (D20) F 412, F17
- molding, contact pressure, *n***—See **contact pressure molding.** D 883, D20
- molding, high-pressure**—molding or laminating in which the pressure used is greater than 1380 kPa (200 psi). (D20) F 412, F17
- molding, high-pressure, *n***—See **high-pressure molding.** D 883, D20
- molding, injection**—See **injection molding.** D 883, D20
- molding, injection, *n***—the process of forming a material by forcing it from an external heated chamber through a sprue (runner, gate) into the cavity of a closed mold by means of a pressure gradient that is independent of the mold clamping force. D 1566, D11
- molding, low-pressure**—molding or laminating in which the pressure used is 1380 kPa (200 psi) or less. (D20) F 412, F17
- molding, low-pressure, *n***—See **low-pressure molding.** D 883, D20
- molding pressure, compression**—the calculated fluid pressure applied to the material in the mold. D 883, D20
- molding pressure, compression**—the calculated fluid pressure applied to the material in the mold. (D20) F 412, F17
- molding pressure, injection**—the pressure applied to the cross-sectional area of the material cylinder. D 883, D20
- molding pressure, injection**—the pressure applied to the cross-sectional area of the material cylinder. (D20) F 412, F17
- molding pressure, transfer**—the pressure applied to the cross-sectional area of the material pot or cylinder. D 883, D20
- molding pressure, transfer**—the pressure applied to the cross-sectional area of the material pot or cylinder. (D20) F 412, F17
- molding shrinkage, *n***—the difference in dimensions between a molded product and the mold cavity in which it was molded, both the mold and product being at normal room temperature when measured. D 1566, D11
- molding, transfer**—See **transfer molding.** D 883, D20
- molding, transfer, *n***—the process of forming a material by forcing it from an auxiliary heated chamber through a sprue hole (runner, gate) into the cavity of a closed mold by means of a pressure gradient that is dependent on the mold clamping force. D 1566, D11
- mold lubricant**—a substance applied on or into molds to reduce friction or prevent adhesion. C 162, C14
- mold lubricant, *n***—synonym for **release agent (mold).** D 1566, D11
- mold mark**—mark or seam on glassware resulting from a mold joint. C 162, C14
- mold marks, *n***—surface imperfection transferred to a molded product from corresponding marks on a mold. D 1566, D11
- mold open time, *n***—the time interval from the instant the mold begins to open until it is closed again. D 883, D20
- mold powder, *n***—a powder or granular material added to the top of

molten steel in the continuous casting mold which melts, forming a mold flux or liquid layer over the molten steel. **C 71, C08**

mold temperature, *n*—the mean temperature of the mold cavity surface measured after the system has obtained thermal equilibrium and immediately after opening the mold. **D 883, D20**

molecular contaminant, *n*—nonparticulate contaminant that may exist in either a gaseous, liquid, or solid state. **G 126, G04**

molecular diffusion, *n*—a process of spontaneous intermixing of different substances, attributable to molecular motion and tending to produce uniformity of concentration. **D 1356, D22**

molecular flow—the flow of gas through a passage under conditions such that the mean-free path is greater than the largest dimension of a transverse section of the passage. **E 1316, E07**

molecular leak—a leak of such geometric configuration that gas flow through it obeys the laws of molecular flow (Knudsen's law). The flow is proportional to the difference of the end pressures and inversely proportional to the square root of the molecular weight of the gas. **E 1316, E07**

molecular mass, *n*—synonym for **molecular weight**. **D 1566, D11**

molecular replica—See **replica**. **E 7, E04**

molecular SIMS—the SIMS technique when applied to molecular or polyatomic secondary ions. **E 673, E42**

molecular weight, *n*—ratio of the mass of a molecule to one-twelfth ($1/12$) of the mass (1.6605×10^{-27} kg) of a carbon-12 atom, or the sum of the atomic weights of the atoms in a molecule. **D 1566, D11**

molecular weight cut off (MWCO)—the rating of a membrane for the size of uncharged solutes it will reject a percent rejection coefficient for a given membrane. Also referred to as nominal molecular weight cut off (NMWCO). **D 6161, D19**

mole fraction, *n*—the ratio of the number of molecules (or moles) of a compound or element to the total number of molecules (or moles) present.

mole fraction of water vapor (x_v), *n*—the ratio of the number of moles of water vapor, n_v , to the total number of moles of water and dry air:

$$x_v = \frac{n_v}{n_v + n_a}$$

where:

$$n_v = \frac{m_v}{M_v}$$

$$n_a = \frac{m_a}{M_a}$$

and where M_v and M_a = molecular weights of water vapor and air, respectively. **D 1356, D22**

mole run—a meandering ridge in a membrane not associated with insulation or deck joints. **D 1079, D08**

moles of substituent combined, MS—in a cellulose derivative, the average number of substituent molecules per glucose unit. For most derivatives, MS = DS, but for a few, such as hydroxyethyl-cellulose, the substituted group may also be reactive and MS may be greater than DS. **D 1695, D01**

molten cast refractory, *n*—a solidified material made by melting refractory ingredients and pouring into molds (see also **fused or fusion cast refractory**). **C 71, C08**

molten state—the liquid phase of a solid substance existing above its melting point temperature. **D 4790, D16**

molten substances—metals in their liquefied, elevated temperature state, as well as related non-metallic substances also handled at elevated temperatures such as slag, dross, and salt. Excluded are liquid hot substances that may be associated with metal processing such as water, oil, and caustic solutions. **F 1494, F23**

MON—in *gasoline knock testing*, abbreviation for Motor octane number. **D 4175, D02**

monitor, *n*—a device that continually measures or intermittently samples and analyzes atmospheres or emissions for the concentra-

tion of a specific constituent or constituents, or for the level of a physical property (such as temperature) to provide either a real-time read-out or an electrical signal.

continuous monitor, *n*—a device for the uninterrupted measurement of atmospheric or emission concentrations or properties in real or near-real time. **D 1356, D22**

monitor, *n*—something that reminds or warns. **D 4175, D02**

monitoring, *v*—the continual sampling, measuring, recording, and/or signaling, of the characteristics of water or waterborne material. **D 1129, D19**

monitoring, *n*—surveillance to determine (1) whether known or suspected leaded paint is deteriorating; (2) that lead hazard control methods remain effective; (3) whether structural problems threaten the integrity of lead hazard controls; and (4) whether dust lead levels will remain below applicable standards. Monitoring includes both visual assessments and **reevaluations**. **E 1605, E06**

monitoring examination, *n*—A clinical polygraph examination specifically intended to uncover whether the offender has committed any illegal sexual act(s) with a child or any other sexual act forbidden by law during a sex offender's period of supervision. The requested test timeframe can be since the imposition of the offender's parole or probation, since his last test, or any other period designated by supervision officers. This is exclusively a single-issue polygraph test. **E 2035, E52**

monitoring path—See **point analyzer**. **D 1356, D22**

monitoring path length—See **point analyzer**. **D 1356, D22**

monitoring well (observation well)—a special well drilled in a selected location for observing parameters such as liquid level or pressure changes or for collecting liquid samples. The well may be cased or uncased, but if cased the casing should have openings to allow flow of borehole liquid into or out of the casing. **D 653, D18**

monochromatic, *adj*—characterized by a single wavelength or, by extension, by a small range of wavelengths that can be described by stating a single wavelength. **E 284, E12**

monochromatic—a property of a beam of electromagnetic radiation in which all waves in the beam have the same wavelength. **E 1316, E07**

monochromatic (homogeneous)—of the same wavelength. **E 7, E04**

monochromatic objective—an objective, usually made of fused quartz, which has been corrected for use only with monochromatic light. **E 7, E04**

monochromatic radiation, *n*—radiation characterized by a single frequency. By extension, radiation of a very small range of frequency or wavelength that can be described by stating a single frequency or wavelength. **E 349, E21**

monochromator—a device or instrument that, with an appropriate energy source, may be used to provide a continuous calibrated series of electromagnetic energy bands of determinable wavelength or frequency range. **E 131, E13**

monochromator, *n*—a device for isolating monochromatic radiation from a beam of polychromatic radiation. **E 135, E01**

monochromator, *n*—a device for isolating a narrow band of wavelengths from a beam of radiation containing a broader range of wavelengths. **E 284, E12**

monochromator—a device for isolating monochromatic radiation from a beam of radiation which includes a broad range of wavelengths. **E 1316, E07**

monochromator (X-rays)—a device for producing monochromatic radiation from heterochromatic radiation. It usually consists of a crystal so arranged as to diffract one wavelength of particularly high intensity, such as the characteristic, out of a beam of mixed white and characteristic radiation. **E 7, E04**

monochrome decoration—a single color decoration. **C 242, C21**

monoclinic—having three axes of any length with two included angles equal to 90° and one included angle not equal to 90° . **E 7, E04**

monocyclic terpenes, *n*—a designation sometimes used in the trade to describe a heterogeneous mixture of monocyclic, bicyclic, and

monocyclic terpenes, *n*

other related terpene C₁₀H₁₆ hydrocarbons recovered or removed in the fractionation of certain terpenes or other essential oils, or as a by-product in the chemical conversion of pinenes generally sold under trade names. **D 804, D01**

monodisperse, *adj*—describing a population of drops of substantially equal diameter. **E 1620, E29**

monofilament, *n*—a single filament which can function as a yarn in commercial textile operations, that is, it must be strong and flexible enough to be knitted, woven, or braided, etc. (See **yarn**.) **D 123, D13**

monofilament—a continuous filament strong enough to function as a yarn in commercial textile operations or as an entity in other operations. **D 3878, D30**

monofilament, *n*—a single filament which can function as a yarn in commercial textile operations, that is, it must be strong and flexible enough to be knitted, woven, or braided, etc. (see **yarn**.) **D 4849, D13**

mono-hydrated lime—dolomitic lime which has been hydrated at atmospheric pressure and contains more than 8% unhydrated oxides. **C 51, C07**

monolithic, *n*—a material of uniform composition applied as a continuous surface or structure. **C 904, C03**

monolithic mass—a mass that has good dimensional stability, to freezing and thawing resistance, low permeability, a high bearing capacity, and resistance to attack by biological agents. The EPA states that an end product such as this could be used as a foundation for buildings or roads, or simply buried and covered over in a landfill (EPA/SW-872). **D 5681, D34**

monolithic refractory, *n*—a refractory which may be installed *in situ*, without joints to form an integral structure. **C 71, C08**

monolithic refractory construction, *n*—a refractory installation utilizing monolithic refractories. **C 71, C08**

monomer, *n*—a low-molecular-weight substance consisting of molecules capable of reacting with like or unlike molecules to form a polymer. **D 883, D20**

monomer, *n*—a relatively simple compound which can react to form a polymer. (Compare **polymer**.) **D 907, D14**

monomer, *n*—a low molecular weight substance consisting of molecules capable of reacting with like or unlike molecules to form a polymer. **D 1566, D11**

monomer, *n*—a relatively simple compound which can react to form a polymer. (See also **polymer**.) (D20) **F 412, F17**

monomer, *n*—a relatively simple compound which can react to form a polymer. (See also **polymer**.) **F 1251, F04**

monomolecular layer—an adsorbed film, one molecule thick. **D 2652, D28**

monopack—See **color film**. **E 7, E04**

monotectic equilibrium—a reversible binary univariant transformation in which a liquid phase, that is stable only at higher temperatures, decomposes, with lowering temperature, into a new liquid phase and a solid phase, for example: $L_1 = L_2 + \alpha$. **E 7, E04**

monotectic point—the composition and temperature in a binary system at which exists a liquid that is capable of univariant decomposition, with lowering temperature, into another liquid phase and a solid phase. **E 7, E04**

monotropic transformation—a nonreversible metastable phase change. **E 7, E04**

montan wax, *n*—a wax-like material comprised primarily of montanic acid and its ester, higher aliphatic alcohols, and resins obtained from the solvent extraction of lignite. **D 4175, D02**

month, *n*—for reporting analyses of outdoor air on a monthly rate, results are calculated to a base of thirty days. **D 1356, D22**

montmorillonite—a group of clay minerals characterized by a weakly bonded sheet-like internal molecular structure; consisting of extremely finely divided hydrous aluminum or magnesium silicates that swell on wetting, shrink on drying, and are subject to ion exchange. **D 653, D18**

monumental stone—rock of adequate quality to be quarried and cut

as dimension stone as it exists in nature, as used in the monument and memorial industry. **C 119, C18**

moonstone glass—a type of opal glass resembling the mineral moonstone. **C 162, C14**

mop-and-flop—a procedure in which roofing elements (insulation boards, felt plies, cap sheets, and so forth) are initially placed upside down adjacent to their ultimate locations, are coated with adhesive, and are then turned over and adhered to the substrate. **D 1079, D08**

mopping—the application of hot bitumen with a mop or mechanical applicator to the substrate or to the plies of a built-up roof. There are four types of mopping: (1) *solid*—a continuous coating; (2) *spot*—bitumen is applied in roughly circular areas, generally about 460 mm (18 in.) in diameter, leaving a grid of unmopped, perpendicular areas; (3) *strip*—bitumen is applied in parallel bands, generally 200 mm (8 in.) wide and 300 mm (12 in.) apart; (4) *sprinkle*—bitumen is shaken onto the substrate from a broom or mop in a random pattern. **D 1079, D08**

Morocco grain—embossed imitation of the natural goat grain on other kinds of leather. **D 1517, D31**

Morocco leather—vegetable-tanned fancy goatskin leather having a distinctive pebbled grain. **D 1517, D31**

morphology—the shape characteristics of a structure; the form and orientation of specific phase or constituent. **E 7, E04**

morphology, *n*—the form and structure of a particular organism. **F 1494, F23**

mortar, *n*—a mixture of gypsum plaster with aggregate or hydrate lime, or both, and water to produce a trowelable fluidity. **C 11, C11**

mortar, *n*—a mixture of finely divided hydraulic cementitious material, fine aggregate, and water in either the unhardened or hardened state; hydraulic mortar. **C 219, C01**

mortar, *n*—a mixture consisting of cementitious materials, fine aggregate, water, with or without admixtures, that is used to construct unit masonry assemblies. **C 1180, C12**

mortar, air-setting, *n*—a composition of finely ground materials, marketed in either a wet or dry condition, which may require tempering with water to attain the desired consistency and which is suitable for laying refractory brick and bonding them strongly upon drying and upon subsequent heating at furnace temperatures. **C 71, C08**

mortar board samples—those obtained from the mortar board after some established time period from the end of mixing, and before retempering. Retempered mortar board samples are those obtained from the mortar board after retempering. Since mortar on a mason's mortar board is disturbed by the activity of the mason, samples from a mason's mortar board shall be so identified to differentiate them from samples taken from a mortar board used exclusively for test purposes. **C 1180, C12**

mortar bond or grout bond, *n*—adhesion between mortar or grout and masonry units, reinforcement, or connectors. **C 1180, C12**

mortar cement, *n*—a hydraulic cement manufactured for use in masonry mortar designed for specific bond and air content criteria. **C 219, C01**

mortar, heat setting, *n*—a refractory mortar of finely ground materials whose potential strength is dependent on use at furnace or process temperatures. **C 71, C08**

mortar, refractory, *n*—a finely ground preparation which becomes plastic and trowelable when tempered with water, and is suitable for laying and bonding refractory brick. **C 71, C08**

mosaic crystal—an imperfect single crystal composed of regions each very slightly disoriented with respect to its neighbor. **E 7, E04**

mosaic structure—the structure of a material containing mosaic crystals. **E 7, E04**

mote, *n*—a whole, immature cotton seed. **D 123, D13**

mote, *n*—a whole, immature cotton seed. **D 7139, D13**

- mote trash*—See **trash**. **D 3990**, D13
- mother liquor**, *n*—the residual liquid that remains after the crystallization or isolation processes. **E 2363**, E55
- motion control**—the restriction of extraneous motion of the foot by the shoe. **F 869**, F08
- motion segment**, *n*—two adjacent vertebrae, the intervening disc, and the associated ligamentous structures. **F 1582**, F04
- motor-generator (MG set)**—a machine that consists of one or more motors mechanically coupled to one or more generators. In plating, such a machine in which the generator delivers dc of appropriate amperage and voltage. **B 374**, B08
- motoring**, *n*—*for the CFR engine*, operation of the CFR engine without fuel and with the ignition shut off. **D 4175**, D02
- motorized nozzle**, *n*—an attachment for a vacuum cleaner containing an electric motor-driven agitator that assists in dirt removal from a floor surface. **F 395**, F11
- motor octane number**, *n*—*for spark-ignition engine fuel*, the numerical rating of knock resistance obtained by comparison of its knock intensity with that of primary reference fuels when both are tested in a standardized CFR engine operating under the conditions specified in this test method. **D 4175**, D02
- motor octane number of primary reference fuels above 100**, *n*—determined in terms of the number of millilitres of tetraethyl lead in *isooctane*. **D 4175**, D02
- motor octane number of primary reference fuels from 0 to 100**, *n*—the volume % of *isooctane* (equals 100.0) in a blend with *n*-heptane (equals 0.0). **D 4175**, D02
- mottle**, *n*—the nonuniform transfer or absorption of the ink into the substrate creating an uneven ink film. **D 6488**, D01
- mottle**, *n*—a spotty nonuniformity of color appearance on a scale that is larger than the colorant particles, typically 1 to 10 mm. **E 284**, E12
- mottle**—a gross random nonuniformity in the visual density of a printed area. **F 335**, F05
- mottle, back trap**, *n*—a nonuniform density variation of a printed ink film due to nonuniform ink absorption into the paper. **D 6488**, D01
- mottled iron**, *n*—a cast iron containing a mixed structure of gray iron and white iron of variable proportions. The fracture has a mottled appearance. **A 644**, A04
- mottle, halftone**, *n*—a nonuniform transfer of halftone dots. **D 6488**, D01
- mottle, print**, *n*—an uneven appearance within the continuous ink film solid areas of a print, with respect to density, gloss or color. Also referred to as “solid area mottle.” **D 6488**, D01
- mottle, trapping**, *n*—nonuniform print due to improper tack sequence of the inks. **D 6488**, D01
- mottle, water interference**, *n*—nonuniform print caused by poor ink transfer due to the printing substrates’ inability to absorb fountain solution. **D 6488**, D01
- mottling**—the presence in the surface of a glaze or body of irregularly shaped, randomly distributed areas that vary in color, gloss, or sheen causing the surface to be nonuniform in appearance. **C 242**, C21
- mottling**, *vt*—the presence in the surface of a film, of irregularly shaped, randomly distributed areas that vary in color, gloss, or sheen, causing the film to be non-uniform in appearance, also known as **blotching**. **D 16**, D01
- mottling**—physical migration of polish film from smooth, even distribution at time of application to small discrete pools of material, resulting in a blotchy or spotty appearance. **D 2825**, D21
- mottling**, *n*—non-uniformity of image density which follows patterns in the substrate or by non-uniform ink-substrate interaction. **F 1857**, F05
- moulding**—a specially worked wood member used mostly for decoration but often serves a useful purpose in other ways; generally worked from lumber of strip size; may be a plane surface but often curved or patterned. **D 9**, D07
- moulding and trim nail**—bright zinc-plated, slim, hardened-steel, 1¼ by 0.054 to 2½ by 0.083-in. nails with blunt point and button head. (See **finishing nail**, **finenail**, **hardboard nail**, **insulation building-board nail**, **tileboard nail**, **wallboard nail**.) **F 547**, F16
- mountain permafrost**—permafrost existing at high altitudes, regardless of latitude. **D 7099**, D18
- mouse teeth**—distal tip teeth that interdigitate. **F 1638**, F04
- mouth**, *n*—*in zippers*, the opening in a slider that receives the chain. **D 123**, D13
- mouth**, *n*—the opening in a slider that receives the chain. **D 2050**, D13
- mouthfeel**, *n*—a mixed experience deriving from sensations in the oral cavity that relate to physical (for example, density, particulate) or chemical (for example, astringency, menthol cooling) properties of a stimulus material. **E 253**, E18
- mouth width**, *n*—*of zippers*, the measurement between the slider flanges at the point where they bear against the shoulders of the interlocked elements or at the outermost edges of the bead if the bead extends beyond the elements. **D 123**, D13
- mouth width**, *n*—the measurement between the slider flanges at the point where they bear against the shoulders of the interlocked elements or at the outermost edges of the bead if the bead extends beyond the elements. **D 2050**, D13
- mouton**—a sheepskin shearling tanned and finished for use as a fur, usually with wool straightened. **D 1517**, D31
- movable bed**—a stream bed made up of materials readily transportable by the stream flow. **D 4410**, D19
- movable by-pass clincher**—clinching mechanism for forming a by-pass clinch. **F 592**, F16
- movable in-line clincher**—clinching mechanism for forming an in-line clinch. **F 592**, F16
- movable retainer**, *n*—*in zippers*, a movable or sliding device performing a similar function to that of the fixed retainer, the purpose being to permit separation of the two stringers from the bottom, without the necessity of opening the zipper from the top. **D 123**, D13
- movable retainer**, *n*—a movable or sliding device performing a similar function to that of the fixed retainer, the purpose being to permit separation of the two stringers from the bottom, without the necessity of opening the zipper from the top. **D 2050**, D13
- moveable property**—tangible property, other than real property or tangible intellectual property, that is transportable and visible. **E 2135**, E53
- movement cycle**, *n*—the change between the minimum and the maximum joint widths of a joint system. **E 176**, E05
- moving beam scanner**, *n*—a scanning device where scanning motion is achieved by mechanically moving the light beam through the bars and spaces of a bar code symbol. **F 1294**, F05
- moving range**, *n*—the difference without regard to sign between two successive observations. **D 123**, D13
- MPP**—see **maximum print position**. **F 1457**, F05
- MPU/IG**—see **microprocessor unit/image generator**. **F 1457**, F05
- MR-8**—the original optical scanning test device that measures the amount of reflected light in millivolts. **F 149**, F05
- 2200 m/s cross section**, $\sigma(v_0)$ —the neutron cross section at $v_0 = 2200$ m/s (E is about 0.0253 eV). **E 170**, E10
- MTBE**—abbreviation for methyl *tert*-butyl ether. **D 4175**, D02
- mucilage**, *n*—an adhesive prepared from a gum and water, and also in a more general sense, a liquid adhesive which has a low order of bonding strength. (See also **adhesive**, **glue**, **paste**, and **sizing**.) **D 907**, D14
- muck**—stone, dirt, debris, or useless material; or an organic soil of very soft consistency. **D 653**, D18
- mucker tire**, *n*—a flotation type of tire specifically designed for use in soft grounds. **D 5681**, D34
- mud**—a mixture of soil and water in a fluid or weakly solid state. **D 653**, D18

mud circle

mud circle—a type of nonsorted circle developed in fine-grained materials. **D 7099**, D18

mud-cracking, *n*—an irregular broken network of cracks in the film, which occurs due to volatile loss while drying or curing. **D 16**, D01

mud cracking—surface cracking resembling a dried mud flat. **D 1079**, D08

mudcracking—in *protective coatings*, a particular pattern of cracking in a coating with the appearance of a dried mud puddle (see cracking and checking). **D 4538**, D33

mudflow—a mass of water-sediment mixture which, because of its high viscosity, moves more slowly than water. **D 4410**, D19

mudguard, *n*—a strip of material applied to a shoe upper just above the sole intended as a protection against dampness or as an ornament. **F 1646**, F13

mudjacking—see **slab jacking**. **D 653**, D18

mud mat, *n*—in construction design: (1) a surfacing layer suitable for the application of membrane waterproofing, installed on a prepared subgrade; (2) an area of fill compacted to no less than 95 % of the maximum dry density of the fill based upon the appropriate laboratory compaction test, such as defined in Test Methods D 698 or D 1557. **D 1079**, D08

mud pit—usually a shallow, rectangular, open, portable container with baffles into which drilling fluid and cuttings are discharged from a borehole and that serves as a reservoir and settling tank during recirculation of the drilling fluids. Under some circumstances, an excavated pit with a lining material may be used. **D 653**, D18

mud slab, *n*—a 2 in. (50 mm) minimum thickness non-reinforced concrete slab suitable as the substrate for membrane waterproofing. **D 1079**, D08

mud-up—to seal a furnace structure with wet clay or castable refractory material. **C 162**, C14

muffle—an enclosure in a furnace to protect the ware from the flame and products of combustion. **C 162**, C14

mukluk leather—leather usually made from deer, elk, or similar skins. It is tanned white with aldehydes, alum, or syntans. It is highly permeable to moisture vapor and retains its flexibility at very low temperatures. **D 1517**, D31

mulch treatment, *n*—a spray application of bituminous material used to temporarily stabilize a recently seeded area; the bituminous material can be applied to the soil or to straw or hay mulch as a tie-down, also. **D 8**, D04

mull—See **windows and doors**. **E 631**, E06

Mullen test—See **package testing**. **D 996**, D10

Mullins Effect, *n*—the softening of a vulcanized rubber (reduction in the stress at a given strain) as a result of previous deformation. **D 1566**, D11

Mullins Effect, *n*—the phenomenon occurring in vulcanized rubber whereby the second and succeeding hysteresis loops exhibit less area than the first, due to breaking of physical cross-links; may be permanent or temporary, depending on the nature of the material. (See also **preflex effect**.) **D 1566**, D11

mullion—See **windows and doors**. **E 631**, E06

mullite—a rare mineral of theoretical composition $3\text{Al}_2\text{O}_3 \cdot 2\text{SiO}_2$, a relatively stable phase in ceramics produced by the high temperature reaction of alumina and silica or by the thermal decomposition of alumina-silica minerals such as kyanite, sillimanite, andalusite, and various clay minerals. **C 242**, C21

mullite porcelain—a vitreous ceramic whiteware for technical application in which mullite ($3\text{Al}_2\text{O}_3 \cdot 2\text{SiO}_2$) is the essential crystalline phase. **C 242**, C21

mullite refractories, *n*—refractory products consisting predominantly of mullite ($3\text{Al}_2\text{O}_3 \cdot 2\text{SiO}_2$) crystals formed either by conversion of one or more of the sillimanite group of minerals, or by synthesis from appropriate materials employing either melting or sintering processes. **C 71**, C08

mullite whiteware—any ceramic whiteware in which mullite ($3\text{Al}_2\text{O}_3 \cdot 2\text{SiO}_2$) is the essential crystalline phase. **C 242**, C21

multi-axial tension, *n*—stress in more than one direction.

D 4439, D35

multibench blasting—the blasting of several benches (steps) in quarries and open pits, either simultaneously or with small delays. (ISRM) **D 653**, D18

multi-cased well—a well constructed by using successively smaller diameter casings with depth. **D 653**, D18

multicomponent system—the complete series of compositions produced by mixing, in all proportions, two or more components. **E 7**, E04

multidirectional magnetization—the alternative application of magnetic fields in different directions during the same time frame. **E 1316**, E07

multi-family dwelling, *n*—a structure that contains more than one separate residential unit, which is used or occupied, or is intended to be used or occupied, in whole or in part, as the home or residence of one or more persons. **E 1605**, E06

multifont reader—a reading device that can read forms containing intermixed characters printed in a number of fonts. Multifont reading eliminates the need to prebatch the input data by font prior to submission to the scanner. **F 149**, F05

multigroup cross section—average particle fluence-weighted cross section in an energy interval of a multigroup model. (See also **multigroup model**).

$$\sigma_i = \int_{E_i}^{E_{i+1}} \Phi(E) \sigma(E) dE / \int_{E_i}^{E_{i+1}} \Phi(E) dE$$

E 170, E10

multigroup model—subdivision of an energy spectrum into a number of subintervals: (E_i , E_{i+1}), where: $i = 1, 2, \dots, n$. **E 170**, E10

multigroup particle fluence—particle fluence in the energy intervals of a multigroup model (see also **multigroup model**).

$$\Phi = \int_{E_i}^{E_{i+1}} \Phi(E) dE$$

E 170, E10

multilateral arrangement—recognition arrangement that covers the acceptance of each other's results by more than two parties. (ISO Guide 2) **E 1187**, E36

multilayer deposit—a deposit consisting of two or more layers of metal deposited successively, consisting of either different metals or layers of the same metal with different characteristics. **B 374**, B08

multilayered sample, *n*—a sample consisting of two or more clearly differentiated components. **D 5681**, D34

multilayered structure—in *flexible barrier materials*, a structure that consists of two or more continuous layers or plies of material. **F 17**, F02

multilayered structure—See Terminology F 17. **F 1327**, F02

multilayer pipe, *n*—A pipe constructed of multiple layers that are bonded to each other and in which at least 60% of the wall thickness consists of polymeric material(s).

In the case of multilayer pipes intended for pressure applications two types of pipes are recognized as follows:

Type 1 multilayer pipe—A pressure rated pipe in which at least 60% of its wall thickness is comprised of a polymeric material that has an established HDB (Hydrostatic Design Basis) or MRS (Minimum Required Strength) from which the pressure rating of the pipe is determined.

Type 2 multilayer pipe—A pressure rated pipe in which at least 60% of the wall thickness is comprised of a polymeric material, and for which the pipe pressure rating has been determined for each pipe size and pipe wall construction based on the pipe's experimentally established PDB (Pressure Design Basis) or MRP (Minimum Required Pressure). **F 412**, F17

multilevel pile, *n*—for *pile yarn floor coverings*, pile in which some tuft legs are substantially longer than others, resulting in a sculptured appearance or pattern. **D 123**, D13

- multilevel pile, *n***—for *pile yarn floor covering*, pile in which some tuft legs are substantially longer than others, resulting in a sculptured appearance or pattern. **D 5684, D13**
- multimedia filter**—filter with a bed consisting of three or more separate filter media. The coarsest, lowest density at the top and the finest, highest density at the bottom. **D 6161, D19**
- multimolecular layer**—an adsorbed film more than one molecule thick. **D 2652, D28**
- multiphase coolant, *n***—an engine coolant composed of immiscible liquids or undissolved solids, or both. **D 4725, D15**
- multiple back reflections**—successive reflections from the back surface of the material under examination. **E 1316, E07**
- multiple-cavity mold**—a mold possessing multiple cavities for simultaneous fabrication of multiple articles of glass. **C 162, C14**
- multiple-cavity process**—a glass-molding process that uses multiple charges of glass and forms them simultaneously. **C 162, C14**
- multiple chemical sensitivity, MCS, *n***—a diagnostic label for people who suffer multi-symptom illnesses as a result of contact with, or proximity to, a variety of airborne agents and other substances. **E 2114, E06**
- multiple cloning site**—DNA that contains several contiguous restriction enzyme recognition sites; also called a polylinker. **E 1705, E48**
- multiple correlation coefficient, (*R*)**—the correlation, $r_{y\hat{y}}$, between the accepted reference values, Y_i , and the values determined using the calibration equation, \hat{Y}_i , equal to the square root of the coefficient of multiple determination, R^2 . **E 131, E13**
- multiple-facet polygraph test, *n***—a test in which the relevant questions cover the same event, though the questions may cover different aspects of that event. Because the relevant questions all relate to the same event, in field conditions the examinee would typically be entirely either truthful or deceptive to all questions, though this is not a condition of the multiple-facet polygraph test. One multiple-facet PDD format is the Reid Test. **E 2035, E52**
- multiple font reader**—a reading device that can read more than one type font, but only one font may be read at a time. **F 149, F05**
- multiple-gob process**—See **multiple-cavity process**. **C 162, C14**
- multiple headspace extraction, *n***—a technique to determine the total concentration of a gas trapped in a liquid by analysis of successive gas extractions from the vapor space of a closed vessel containing a known amount of the sample. **D 4175, D02**
- multiple heat, *n***—two or more molten **primary heats**, in whole or in part, combined in a common ladle or in a common non-oscillating mold. **A 941, A01**
- multiple imaging separation**—the angular separation of primary and secondary multiple images as measured from the design eye position. **F 2429, F07**
- multiple-issue polygraph test, *n***—a test in which the relevant questions cover two or more areas that are partially or completely independent from one another. Forms of multiple-issue polygraph testing include Post-Conviction Sex Offender Testing, applicant testing, and counterintelligence screening. **E 2035, E52**
- multiple laboratories operational precision, *n***—the standard deviation of the results of a series of determinations by several laboratories employing the method with its associated sample container preparation, collection, splitting, preservation, transmission, and storage on a homogeneous sample. **D 1129, D19**
- multiple-layer adhesive, *n***—film adhesive, usually supported, with a different adhesive composition on each side. **D 907, D14**
- multiple length staple fibers, *n***—manufactured staple fibers that are two or more times the nominal cut fiber length. **D 123, D13**
- multiple-length staple fibers, *n***—manufactured staple fibers that are two or more times the nominal cut fiber length. **D 4849, D13**
- multiple pressing, *n***—a method of pressing whereby two or more compacts are produced simultaneously in separate die cavities. **B 243, B09**
- multiple reflections**—successive echoes of ultrasonic energy between two surfaces. **E 1316, E07**
- multiple retrogressive slide**—a type of mass movement associated with shear failure in unfrozen sediments underlying permafrost, leading to detachment of blocks of frozen ground that move downslope. This type of slide is not unique to frozen geological materials and may also occur in non-permafrost conditions. **D 7099, D18**
- multiple-row blasting**—the drilling, charging, and firing of several rows of vertical holes along a quarry or opencast face. (ISRM) **D 653, D18**
- multiple scattering event**—ISS, a collision process that may be described as a sequence of binary scattering events which may or may not be elastic. **E 673, E42**
- multiple-screened wells**—two or more monitoring wells situated in the same borehole. These devices can be either individual casing strings and screen set at a specific depth, a well with screens in more than one zone, or can consist of devices with screens with tubing or other collecting devices attached that can collect a discrete sample. **D 653, D18**
- multiple stitch zigzag, *n***—in *home sewing*, a simple machine stitch pattern of alternating diagonal segments with each segment of two or more stitches having equal length and width. **D 5646, D13**
- multiplet or exchange splitting**—XPS, splitting of a photoelectron line caused by the interaction of the unpaired electron created by photoemission with other unpaired electrons in the atom. **E 673, E42**
- multi-plexing**—the sharing of a common set of physical optical and/or electrical components across multiple numbers of sensors. Each sensor is capable of monitoring a unique sample. Each sample is monitored separately and referenced against its unique baseline characteristics. **D 6161, D19**
- multiplicity factor**—a factor used in calculating the intensity of diffraction from a polycrystalline specimen. It is equal to the number of sets of planes of the same family. **E 7, E04**
- multiplicity of infection**—the ratio of infecting phage to host bacteria. **E 1705, E48**
- multi-ribbed**—See **thread, vertical**. **F 547, F16**
- multi-row symbology, *n***—symbologies where a long symbol is broken into sections and “stacked” one upon another similar to sentences in a paragraph. Examples are: Code 16K, Code 49 and PDF417. **F 1294, F05**
- multi-stage sampling, nested sampling**—sampling in which the sample is selected by stages, the sampling units at each stage being from the larger sampling units chosen at the previous stage.
- NOTE—Multi-stage sampling is different from multiple sampling. (see **acceptance sampling**). **E 1402, E11**
- multi-strike film ribbon**—is a ribbon wherein the substrate film such as polyester is coated or impregnated with an ink which allows several different imprints be made from multiple overstrikes on the same location on the ribbon, and still result in full characters being printed. **F 221, F05**
- multivariant**—having two or more degrees of freedom. **E 7, E04**
- multivariate calibration, *n***—a process for creating a calibration model in which multivariate mathematics is applied to correlate the absorbances measured for a set of calibration samples to reference component concentrations or property values for the set of samples. **D 4175, D02**
- municipal ferrous scrap, *n***—ferrous waste that is collected from industrial, commercial, or household sources and destined for disposal facilities. **D 5681, D34**
- municipal ferrous scrap**—ferrous waste that is collected from industrial, commercial, or household sources and destined for disposal facilities. Typically, municipal ferrous scrap consists of a metal or alloy fraction, a combustible fraction, and an inorganic noncombustible fraction that includes metal oxides. **D 5681, D34**
- municipal solid wastes (MSW)**—the refuse materials collected from urban areas in the form of organic matter, glass, plastics, waste paper, etc., not including human wastes. **E 1705, E48**

Munsell Book of Color, *n*—current Munsell Color Company physical exemplification of the Munsell color order system, consisting of about 1600 color chips arranged in a cylindrical coordinate system of planes of constant Munsell hue on which Munsell value is displayed vertically and Munsell chroma horizontally.

E 284, E12

Munsell chroma, *n*—an attribute of color used in the Munsell color-order system to indicate the degree of departure of a color from a gray of the same Munsell value, in steps that are visually approximately equal in magnitude.

E 284, E12

Munsell color-order system, *n*—a system of specifying colors of surfaces illuminated by daylight and viewed by an observer adapted to daylight, in terms of three attributes: hue, value, and chroma, using scales that are perceptually approximately uniform.

E 284, E12

Munsell hue, *n*—an attribute of color used in the Munsell color-order system to indicate the hue of a specimen viewed in daylight.

E 284, E12

Munsell notation, *n*—(1) the Munsell hue (H), value (V), and chroma (C) assigned to the color of a specimen by visually comparing the specimen to the chips in the Munsell Book of Color. The numbers are customarily arranged in the expression H V/C.

(2) a notation in the Munsell color system, derived from luminous reflectance *Y* and Chromaticity Coordinates *x* and *y* in the 1931 CIE system for Standard Illuminant *C*, by the use of scales defined by the Optical Society of America Subcommittee on the Spacing of the Munsell Colors.

E 284, E12

Munsell value, *n*—an attribute of color used in the Munsell color-order system to indicate the lightness of a specimen viewed in daylight, on a scale extending from 0 for ideal black to 10 for ideal white, in steps that are visually approximately equal in magnitude.

E 284, E12

muntin, *n*—a secondary intermediate member subdividing a glazed area.

C 717, C24

muntin—See **windows and doors**.

E 631, E06

Murgatroyd belt—{archaic} that portion of the sidewall of a bottle near the bottom.

C 162, C14

muskeg—level, practically treeless areas supporting dense growth consisting primarily of grasses. The surface of the soil is covered with a layer of partially decayed grass and grass roots which is usually wet and soft when not frozen.

D 653, D18

muslin, *n*—as applied to bed sheeting, a plain weave fabric with not fewer than 128 yarns/in. ²(645 mm²).

D 123, D13

muslin, *n*—as applied to bed sheeting, a plain weave fabric with not fewer than 128 yarns/in. ²(645 mm²).

D 7023, D13

mussiness, *n*—surface distortion in a fabric characterized by undesirable unevenness due to many minor deformations.

D 123, D13

mussiness, *n*—surface distortion in a fabric characterized by objectionable unevenness due to many minor deformations.

D 3990, D13

mutagen—a substance that increases the normal mutation rate.

F 1600, F20

mutual aid—the furnishing of resources, from one individual or agency to another individual or agency, including but not limited to facilities, personnel, equipment, and services, pursuant to an agreement with the individual or agency, for use within the jurisdiction of the individual or agency requesting assistance.

F 1177, F30

m-value—the negative slope of a curve plotting log flow versus log time. A measurement of the degrees of membrane compaction as a result of temperature, pressure and time.

D 6161, D19

MV (mega or million volt)—a unit of electrical potential difference equal to one million volts, used to describe the accelerating potential of an X-ray tube.

E 1316, E07

mycoplasma—the smallest prokaryotes capable of living freely, lacking a cell wall, having a circular double-stranded DNA relatively rich in adenine and thymine, and containing 16s and 23s ribosomal RNAs. They can be found as contaminants in cell cultures.

E 1705, E48

mylonite—a microscopic breccia with flow structure formed in fault zones. (ISRM)

D 653, D18

mythical image—the assumed intersections of the extended sides of a microindentation which is established in order that a true diagonal can be approximated.

E 7, E04

N

NaHMP—sodium hexametaphosphate, an antiscalant. **D 6161, D19**

nail, *n*—straight, slender fastener, usually pointed and headed; designed to be driven through connector plate or plates with or without nail holes; serving as separate supplementary or primary fastener. **E 631, E06**

nail—straight, slender fastener, usually pointed and headed; 6 in. or less in length; designed to be driven; to hold two or more pieces together or to act as support. (See **screw nail; drive screw**.)
F 547, F16

nail-base fiberboard sheathing—a specially manufactured cellulosic fiberboard product, approximately 25 lb/ft³, designed for use in frame construction to permit the direct application of certain exterior siding materials such as wood-based or composite shingles. **D 1554, D07**

nail hole, *n*—an appropriately sized opening such that tile shall not be fractured by the fastener and fixing process used to attach the tile to the roof deck. **C 43, C15**

nail hole—round perforation in metal connector plate through which a nail can be driven to fasten plate to wood members (or section) and to transmit shear loads; providing predetermined location for appropriately locating nails to be driven. See **plate hole**.
E 631, E06

nailing—(1) exposed-nauling of roofing wherein nail heads are bare to the weather;
(2) concealed-nauling of roofing wherein nail heads are concealed from the weather. (See also **blind nailing**). **D 1079, D08**

nail-on plate—solid or prepunched (or predrilled) metal connector plate of specified thickness (gage); manufactured to various sizes, that is, lengths and widths; designed to be fastened with nails (or staples) to wood members and to transmit forces from one wood member (or section) to another one or more wood members (or section).
natural grade—See **grade**. **E 631, E06**

NAK, *n*—a signal from the printer which indicates that the previous data block was in error and that retransmission can begin; also used as a not ready signal. **F 1457, F05**

Nanofiltration (NF)—a crossflow process with pore sizes designed to remove selected salts and most organics above about 300 molecular weight range, sometimes referred to as loose RO. A pressure-driven membrane separation process in which particles and dissolved molecules smaller than about 2nm are rejected.
D 6161, D19

nanopowder, *n*—a powder consisting of particles typically less than 100 nm in size. **B 243, B09**

nap—the wooly or fuzzy surface finish of some fabrics and some leathers such as suede and antelope, reversed calf and side leather. **F 869, F08**

napa leather—chrome, alum, or combination tanned sheepskin glove leather, drum colored. **D 1517, D31**

nap finish—a process in which the natural grain layer of the leather is removed and the outer surface of the leather is then given a napped finish. (See also **suedefinish**.) **D 1517, D31**

naphtha, aromatic solvent—a concentrate of aromatic hydrocarbons including C₈, C₉ and C₁₀ homologs.
D 4790, D16

naphtha-based oil—a petroleum oil containing a majority of the naphtha fraction. **E 1519, E35**

naphthalene (C₁₀H₈)—mol weight 128.16; monoclinic prismatic plates; commercially available as white scales, powder, balls, or cakes; odor of moth balls; solidification point, 80.1°C; sublimes above melting point. **D 4790, D16**

naphthene-aromatics, *n*—a mixture of naphthenic and aromatic hydrocarbons which are adsorbed from a paraffinic solvent on an adsorbent during percolation and then desorbed with an aromatic solvent such as toluene. **D 8, D04**

naphthenic oil, *n*—a hydrocarbon process oil containing more than 30 %, by mass, of naphthenic hydrocarbons. **D 1566, D11**

naphthenic oil—a term applied to mineral insulating oil derived from special crudes having very low, naturally occurring *n*-paraffin (wax) contents. Such an oil has a low natural pour point and does not need to be dewaxed nor does it usually require the use of a pour depressant. **D 2864, D27**

narrow crown—staple crown usually 5/16 in. (8 mm) in width or smaller. **F 592, F16**

narrow elastic fabric, *n*—an elastic fabric that is less than 150 mm, (6 in.), in width. (Compare **wide elastic fabric**.) **D 123, D13**

narrow elastic fabric, *n*—an elastic fabric that is less than 150 mm, (6 in.), in width. (Compare **wide elastic fabric**.) **D 4850, D13**

narrow fabric, *n*—a fabric not exceeding 12 in. (300 mm) in width. **D 123, D13**

narrow fabric, *n*—a fabric not exceeding 300 mm (12 in.) in width. **D 4850, D13**

National Contingency Plan (NCP)—the National Oil and Hazardous substances Pollution Contingency Plan found at 40 CFR § 300, which is the EPA's regulations for how hazardous substances are to be cleaned up pursuant to CERCLA. **D 5681, D34**

National ITS Architecture, *n*—a document prepared through the sponsorship of the U.S. DOT that provides a common structure for the design of intelligent transportation systems giving a framework around which multiple design approaches can be developed by defining: (1) the functions that must be performed to implement a given user service, (2) the physical entities or subsystems where these functions reside, (3) the interfaces/information flows between the physical subsystems, and (4) the communication requirements for the information flows. **E 867, E17**

National Lead Laboratory Accreditation Program (NLLAP)—a program mandated by Title X, Section 405b in which EPA confers recognition of a laboratory's ability to meet strict quality system requirements in a program conducted by accrediting bodies within a memorandum of understanding with EPA. **E 1605, E06**

National Priorities List—list compiled by EPA pursuant to CERCLA 42 USC § 9605(a)(8)(B) of properties with the highest priority for cleanup pursuant to EPA's Hazard Ranking System. See 40 CFR Part 300. **D 5681, D34**

national standard—an artifact, such as a well-characterized instrument or radiation source, that embodies the international definition of primary physical measurement standard for national use. **E 170, E10**

national standards laboratory—the laboratory which maintains a nation's measurement standards, such as the National Institute of Standards and Technology in the United States. **E 170, E10**

native asphalt, *n*—asphalt occurring as such in nature. **D 8, D04**

native hide—a cattlehide without a brand. **D 1517, D31**

native material—in place geologic (or soil) materials encountered at a site. **D 653, D18**

native species, *n*—(1) A species that is indigenous in a specified area for all or part of its life span. (2) Used in reference to plants: a plant whose presence and survival in a specific region is not due to human intervention. **E 2114, E06**

native water—water from a sampled medium; this water has been unaffected by sampling, handling, and preservation. **D 4410, D19**

natural aging, *n*—spontaneous aging of a super-saturated solid solution at room temperature. **A 941, A01**

natural cement, *n*—a hydraulic cement produced by calcining a naturally occurring argillaceous limestone at a temperature below the sintering point and then grinding to a fine powder. **C 219, C01**

natural clay tile—a tile made by either the dust-pressed method or the plastic method, from clays that produce a dense body having a distinctive, slightly textured appearance. **C 242, C21**

natural cleft—an irregularly textured low-relief surface, produced by splitting stone along its bedding plane, stratification, or rift. **C 119, C18**

Natural Color System, *n*—color order system based on resemblances of colors to up to four of six "elementary" colors red, yellow,

Natural Color System, n

- green, blue, black, and white, in which the attributes of the colors are hue, chromaticness, and blackness. **E 284, E12**
- natural convection**—see **convection, natural**. **E 772, E44**
- natural fiber, n**—a class name for various genera of fibers (including filaments) of (1) animal, (2) mineral, or (3) vegetable origin. (Compare **man-made fiber**.) **D 123, D13**
- natural fiber, n**—a class name for various genera of fibers (including filaments) of (1) animal, (2) mineral, or (3) vegetable origin. **D 4845, D13**
- natural frequency**—the frequency at which a body or system vibrates when unconstrained by external forces. (ISRM) **D 653, D18**
- natural frequency (displacement resonance) f_n** —frequency for which phase angle is 90° between the direction of the excited force (or torque) vector and the direction of the excited excursion vector. **D 653, D18**
- natural gas**—a naturally occurring mixture of hydrocarbon and nonhydrocarbon gases found in porous geological formations (reservoirs) beneath the earth's surface, often in association with petroleum. The principal constituent of natural gas is methane. **D 4150, D03**
- natural gas odorant**—an intensively smelling organic chemical or combination of chemicals (for example, sulfur compounds), added to fuel gases to impart a characteristic and distinctive (usually disagreeable) warning odor so gas leaks can be detected. **D 4150, D03**
- natural gas, processed**—a methane-rich commercial gaseous product derived from naturally occurring gas mixtures by processing (also referred to as merchantable natural gas). **D 4150, D03**
- natural grade**—the elevation of the original or undisturbed surface of the ground. **E 631, E06**
- natural grain**—refers to a surface that is not filled with pigments and the haircells are easily viewed with the naked eye. **D 1517, D31**
- natural graphite, n**—*in carbon and graphite technology*, a material consisting predominantly of graphitic carbon, which forms in the earth's crust as the result of igneous or metamorphic processes acting on carbonaceous materials. **C 709, D02**
- natural graphite, n**—*in carbon and graphite technology*, a material consisting predominantly of graphitic carbon, which forms in the earth's crust as the result of igneous or metamorphic processes acting on carbonaceous materials. **D 4175, D02**
- natural levee**—raised berms or crests above the flood-plain surface adjacent to the channel usually containing coarser materials deposited by flood flows. **D 4410, D19**
- natural linewidth**—See **intrinsic linewidth**. **E 673, E42**
- naturally aspirated aircraft engine, n**—aircraft piston engine that breathes without forced means from either turbochargers or superchargers. **D 4175, D02**
- naturally dispersed sample**—a sample having sediment that will not settle in about 4 h due to the character of fineness of particles or due to the nature of the dissolved constituents, or both. **D 4410, D19**
- natural materials, n**—synthesized or produced by living cells. **F 2312, F04**
- natural pH, n**—the measured pH of the pulp before the addition of collector, frother, or any conditioning agents. **D 121, D05**
- natural process limits (NPL), n**—limits which include a stated fraction of the individuals in a population.
- NOTE—*Natural process limits* will not ordinarily be the dimensional limits shown on an engineering drawing. They are mostly used to compare the natural capability of the process to tolerance limits. **E 456, E11**
- natural resin**—see **resin, natural**. **D 16, D01**
- natural resin, n**—a resin of vegetable or animal origin. **D 6440, D01**
- natural rubber, n**—the material processed from the spa (latex) of *Hevea Brasiliensis* (rubber tree). **D 5681, D34**
- natural spreading rate, n**—the spreading rate that occurs when a coating is applied in a manner natural to the operator's technique, perceptions, and expectations, as they relate to coating tools, substrate, and characteristics of the coating itself. **D 16, D01**
- natural state**—condition of woodwork before priming and painting. **E 631, E06**
- natural-type environment**—in solar energy applications, the natural aspects of the outdoor exposure environment elements (or simulation), including changes with time, that may affect the thermal performance of a collector through degradation of collector materials or physical damage to the collector configuration. (Typical aspects include radiant exposure, ambient temperature, and rain impingement.) **E 772, E44**
- natural weathering**—long-term exposure of materials to unconcentrated sunlight on fixed-angle (or seasonally adjusted) racks, the purpose of which is to assess the effects of environmental factors in various functional and decorative parameters of interest. **E 772, E44**
- natural weathering, n**—outdoor exposure of materials to unconcentrated sunlight, the purpose of which is to assess the effects of environmental factors on various functional and decorative parameters of interest. **G 113, G03**
- naval stores, n**—chemically reactive oils, resins, tars, and pitches derived from the oleoresin contained in, exuded by, or extracted from wood chiefly of the pine species (*Genus Pinus*). **D 804, D01**
- navel, n**—a component of an open-end spinning machine located on the axis of the rotor through which the yarn is withdrawn from the rotor and which modifies the twist of the yarn inside the rotor. (See **doffing tube**.) **D 123, D13**
- navel, n**—a component of an open-end spinning machine located on the axis of the rotor through which the yarn is withdrawn from the rotor and which modifies the twist of the yarn inside the rotor. **D 3888, D13**
- NBS color difference, n**—color difference calculated by use of the Judd-Hunter National Bureau of Standards equations, which are unique in including terms taking account of (1) the masking effect of gloss on the detection of color differences and (2) the relative importance of chromaticness and lightness in a particular viewing arrangement, such as variation in the separation between the two specimens compared. **E 284, E12**
- NC**—effective thermal neutron content or neutron radiographic contrast. NC is the percent background film exposure due to unscattered thermal neutrons. **E 1316, E07**
- near-diagonal element, n**—*in bispectral photometry*, off-diagonal elements of an uncorrected bispectral matrix whose values include a significant reflection component, due to reflection overspill. For instruments with irradiation and viewing bandpass functions which approximate the recommended trapezoidal or triangular shape, this should be limited to within two to three bands of the diagonal. **E 284, E12**
- near field**—the region of the ultrasonic beam adjacent to the transducer and having complex beam profiles. Also known as the Fresnel zone. **E 1316, E07**
- near-infrared**—pertaining to the infrared region of the electromagnetic spectrum with wavelength range from approximately 0.78 to 2.5 μm (wavenumber range 12 800 to 4000 cm^{-1}). **E 131, E13**
- near-real-time-data, n**—data that is collected, processed, aggregated very close in time, usually within seconds or just a few minutes, to the actual time period or instance when the phenomenon being measured or observed actually occurred. **E 867, E17**
- near size particle, n**—a particle of a size approximately equal to the aperture size of the sieve. **ISO/DIS 2395 E 1638, E29**
- near-specular, adj**—pertaining to the appearance of a material when viewed from a direction close to the specular angle, typically within 25°. **E 284, E12**
- near-specular angle, n**—the aspecular angle when a material is viewed close to the specular direction, typically within 25°. **E 284, E12**
- near-specular color, n**—color of a material when viewed at a specified near-specular angle. **E 284, E12**

- near surface discontinuity**—a discontinuity not open to, but lying near, the surface of a part undergoing examination which produces broad, fuzzy, lightly held powder patterns. **E 1316, E07**
- neat cement grout**—a mixture of hydraulic cement and water without any added aggregate or filler materials. **D 653, D18**
- neat gypsum plaster**—see **gypsum neat plaster**. **C 11, C11**
- neat petroleum, n**—oil visibly free of contaminants. **D 1129, D19**
- nebulize, v**—to produce droplets. **E 1620, E29**
- nebulizer, n**—a device for converting a sample solution into a gas-liquid aerosol for atomic absorption, emission, fluorescence, or mass analysis. **E 135, E01**
- neck**—(1) the part of a bottle between finish and shoulder.
(2) {archaic} the structure that connects the melting and working chambers of a melting furnace.
(3) the structure connecting the uptake and port in a melting furnace. **C 162, C14**
- neck base girth, n**—*in body measurements*, the circumference of the neck over the cervicale at the back and at the top of the collar bone at the front. **D 123, D13**
- neck base girth, n**—the circumference of the neck, taken over the cervicale at the back and the top of the collarbone at the front. **D 5219, D13**
- neck base girth, n**—*in body measurements*, the circumference of the neck over the cervical at the back and at the top of the collar bone at the front. **F 1494, F23**
- neck formation, n**—during sintering, the development of a neck-like bond between particles. **B 243, B09**
- neck girth, n**—*ingarment construction*, with shirt open in front and collar fully extended and laid out flat, measure from center of collar button to the far end of the button hole. **F 1494, F23**
- necking, n**—*in building construction*, the localized reduction in cross section that may occur in a material under stress. **C 717, C24**
- necking, n**—the localized reduction in cross-section which may occur in a material under tensile stress. **D 883, D20**
- necking, n**—the localized reduction in cross section that may occur in a material under tensile stress. **D 1566, D11**
- necking, n**—the onset of nonuniform or localized plastic deformation, resulting in a localized reduction of cross-sectional area. **E 6, E28**
- necking, n**—the localized reduction in cross section that may occur in a material under tensile stress. (D20) **F 412, F17**
- neck ring**—a metal mold part used to form the finish of a hollow glass article. **C 162, C14**
- necktie, n**—a decorative band of fabric worn around the neck and tied in a knot or a bow. **D 123, D13**
- necktie, n**—a decorative band of fabric worn around the neck and tied in a knot or a bow. **D 7022, D13**
- neck to bust point, n**—the distance from the side of the neck base to the bust apex (contour), taken with the arms down. **D 5219, D13**
- needle**—the vertical, reciprocating, refractory part of a feeder which alternatively forces the glass through the orifice and pulls it up after shearing. **C 162, C14**
- needle damage, n**—*in sewn fabrics*, the partial or complete yarn severance or fiber fusing caused by a needle passing through a fabric during sewing. **D 123, D13**
- needled felt, n**—a textile structure composed entirely of fibers principally interlocked and reoriented through the action of felting needles. **D 123, D13**
- needled felt, n**—a textile structure composed entirely of fibers physically interlocked and reoriented through the action of felting needles. **D 4845, D13**
- needle ductility**—a measure of the amount of plastic bending a needle can withstand. **F 1840, F04**
- needle glazing**—*in building construction*, the application of a small bead of a sealant at the sight line adhering to the sash and glass or panel by means of a nozzle with an orifice not exceeding 3.18 mm [$\frac{1}{8}$ in.] in diameter. **C 717, C24**
- needle gun**—a power tool that removes paint by the impact of a set of thin metal rods. **E 1605, E06**
- needle ice**—thin, elongated, crystals of ice that form perpendicular to the surface of the ground. **D 7099, D18**
- needle length, n**—the distance measured along the needle curvature from end to end. **F 1840, F04**
- needle point**—point forming circular cone. **F 547, F16**
- needle-punched batting, n**—a textile filling material which is stabilized by mechanically entangling the fibers. **D 123, D13**
- needle-punched batting, n**—a textile filling material which is stabilized by mechanically entangling the fibers. **D 7022, D13**
- needle radius, n**—the radius of the uniformly curved portion or portions of the needle measured from the centerline of the needle body. **F 1840, F04**
- needles, n**—elongated rod-like particles. **B 243, B09**
- needles per unit width, n**—*for tufted pile yarn floor covering*, the number of binding sites per unit of floor covering width; needles being the means of inserting the pile yarn into the backing fabric. **D 123, D13**
- needles per unit width, n**—*for tufted pile yarn floor covering*, the number of binding sites per unit of floor covering width; needles being the means of inserting the pile yarn into the backing fabric. **D 5684, D13**
- needle wire diameter, n**—the gage or thickness of the needle wire, measured at a location between the needle body and the attachment area, where either no or minimal work has taken place. **F 1840, F04**
- needs, n**—the functions that the value analysis team determines to be fulfilled by the product/project. **E 833, E06**
- Neel temperature**—the temperature above which an antiferromagnetic material becomes paramagnetic. **E 1142, E37**
- Néel wall**—in a thin magnetic film (less than about 10^{-6} cm thick for iron), a domain wall in which the magnetic moment at any point is substantially parallel to the film surface. See also **domain wall**. **A 340, A06**
- negative**—an image in which the dark tones of the original appear light and the light tones appear dark. **F 335, F05**
- negative air pressure (vacuum) test**—test procedure utilizing air at a pressure less than atmospheric pressure, intended to determine the acceptability of a pipe section or multiple pipe sections, or an installed pipeline or manhole before or after backfill. **C 822, C13**
- negative developer**—see **reversal developer**. **F 335, F05**
- negative development**—see **reversal development**. **F 335, F05**
- negative distortion**—See **distortion**. **E 7, E04**
- negative eyepiece**—an eyepiece in which the real image of the object is formed between the lens elements of the eyepiece. **E 7, E04**
- negative image**—a developed image in which dark areas correspond to light area of the original subject. **F 335, F05**
- negative load**—a load that results in the indoor side of a glass specimen being the high-pressure side. **E 631, E06**
- negative, photographic**—a sensitized plate or film which has been exposed in a camera and which upon development has the lights and shades inverse to those of the original subject. The plate or film does not become a negative until it is exposed, after which it may be an undeveloped or a developed negative. **E 7, E04**
- negative print**—a photograph having approximately the opposite rendition of light and shade as the original subject. **E 7, E04**
- negative replica**—See **replica**. **E 7, E04**
- negative side waterproofing, n**—an application wherein the waterproofing system and the source of hydrostatic pressure are on opposite sides of the structural element. **D 1079, D08**
- negative test**—the absence of the characteristics color change within a specified time limit, usually within a few minutes.
- net assignable area**—See **space categories**. **E 631, E06**
- negative thixotropy**—synonym of **anti-thixotropy**. **E 1142, E37**
- neoprene**—a synthetic rubber (polychloroprene) used in liquid- or sheet-applied elastomeric roofing membranes or flashing. **D 1079, D08**

neoprene

neoprene—an elastomer, polychloroprene, formed by adding hydrogen chloride to monovinylacetylene. **F 869, F08**

neoprene treated, *adj*—*in glass fiber*, a descriptive term for the application of polychloroprene rubber compound to improve the stability, knot holding properties, and abrasion resistance of the cord. **D 123, D13**

neoprene treated, *adj*—*in glass fiber*, a descriptive term for the application of polychloroprene rubber compound to improve the stability, knot holding properties, and abrasion resistance of the cord. **D 7018, D13**

nep, *n*—a tightly tangled knot-like mass of unorganized fibers. **D 123, D13**

nep, *n*—a tightly tangled knot-like mass of unorganized fibers. (Compare **pills**.) **D 3990, D13**

nep, *n*—one or more fibers occurring in a tangled and unorganized mass. **D 4845, D13**

nep, *n*—a tightly tangled knot-like mass of unorganized fibers. Compare **nap** and **pill**. **D 4849, D13**

neper, *n*—a division of the logarithmic scale wherein the number of nepers is equal to the natural logarithm of the scalar ratio of either two voltages or two currents. **D 1711, D09**

nepheline syenite—a mineral aggregate consisting chiefly of albite, microcline, and nephelite, each in significant amount. **C 242, C21**

nephelometer—an instrument that measures the amount of light scattered in a suspension. **D 4410, D19**

nephelometer—a device used to measure mainly the turbidity of water with results expressed in nephelometric turbidity units (NTU). Measures light at 90°. **D 6161, D19**

Nernst equation—a mathematical description of electrode behavior:

$$E = E_x + 2.3 RT/zF \log A$$

where:

E = total potential developed between the sensing and reference electrodes, mV,

E_x = potential dependent on the choice of reference electrodes,

RT/zF = Nernst factor,

R and F = constants,

z = charge on the ion, including sign,

T = temperature, and,

A = activity of the ion to which the electrode is responding. **D 4127, D19**

Nernst factor—the term $2.3RT/nF$ in the Nernst equation, which is equal (at $T = 25^\circ\text{C}$) to 59.16 mV when $n = 1$ and 29.58 mV when $n = 2$, and which includes the sign of the charge on the ion in the term n . The Nernst factor varies with temperature. This factor is often referred to as the *electrode slope*. **D 4127, D19**

Nernstian response—the response of an ion-selective electrode is over a given range of activity (or concentration) in which a plot of the potential of such an electrode in conjunction with a reference electrode versus the logarithm of the ionic activity of a given species (a_A) is linear with a slope of $2.303 \times 10^{-3} RT/z_A F$ mV/decade (59.16/z_A mV per unit of pa_A at 25°C). **D 4127, D19**

nerve, *n*—the elastic resistance of unvulcanized rubber or rubber mixes to permanent deformation. **D 1566, D11**

nest, *n*—a group of articles, **cans**, **baskets**, or **boxes** of various sizes, that fit one within the other. **D 996, D10**

nest, *n*—*for pattern standard def.*, a graded nest. **D 6963, D13**

nested experiment, *n*—an experiment to examine the effect of two or more factors in which the same level (version) of a factor cannot be used with all levels (versions) of other factors. Synonym: hierarchical experiment. **E 456, E11**

nested experiment, *n*—an experiment to examine the effect of two or more factors in which the same level (version) of a factor cannot be used with all levels (versions) of other factors. Synonym: hierarchical experiment. **E 1325, E11**

nestling down, *n*—a down not fully developed with a sheath and with soft barbs emanating from the sheath. **D 123, D13**

nestling feathers, *n*—immature feathers in which the barbs are held together and covered by a sheath. **D 123, D13**

σ_{net} —net stress based on area at minimum diameter of notched round bar **F 2078, F07**

net assignable area—See **space categories**. **E 1480, E06**

net benefits (savings)—the difference between the benefits and the costs—where both are discounted to present or annual value dollars.

net floor area—See **floor area**. **E 631, E06**

net benefits (savings), *n*—the difference between the benefits and the costs—where both are discounted to present or annual value dollars. **E 833, E06**

net boom—special purpose boom in which all or part of the membrane material is netting. **F 818, F20**

net calorific value—a lower value calculated from the gross calorific value. It is equivalent to the heat produced by combustion of a unit quantity of solid fuel at a constant pressure of one atmosphere, under the assumption that all water in the products remains in the form of vapor. **D 5681, D34**

net calorific value—the energy released by combustion of a unit quantity of refuse-derived fuel at constant volume or constant pressure in a suitable calorimeter under specified conditions such that all water in the products remains in the gaseous form. The net calorific value is the lower heating value that can be calculated from the gross calorific value by making a correction for the heat of vaporization of the water. This is the measure of calorific value in Europe but is rarely used in the United States. Synonym: lower heating value. **E 856, D34**

net calorific value (net heat of combustion at constant pressure), *n*—the heat produced by combustion of unit quantity of a solid or liquid fuel when burned, at a constant pressure of 1 atm (0.1 MPa), under conditions such that all the water in the products remains in the forms of vapor. **D 121, D05**

net calorific value (net heat of combustion at constant pressure), Q_p , *n*—the heat produced by combustion of unit quantity of a solid or liquid specimen when burned at a constant pressure of 0.1 MPa (1 atm), under conditions such that all the water in the products remains in the form of vapor. **D 5681, D34**

net calorific value (net heat of combustion at constant pressure), Q_p —the heat produced by combustion of unit quantity of a solid or liquid fuel when burned at a constant pressure of 0.1 MPa (1 atm), under conditions such that all the water in the products remain in the form of vapor. **D 5681, D34**

net count rate—the count rate recorded in a spectrometer after correcting for background and coincidence events. **E 170, E10**

net density—total density less fog and support (film base) density. **E 1316, E07**

net floor area—that part of the **gross floor area** located within **occupiable space**. **E 631, E06**

net floor area—See **floor area**. **E 1480, E06**

net heating value (also called lower heating value)—the amount of energy per volume transferred as heat from the complete, ideal combustion of the gas at standard temperature in which all the water formed by the reaction remains in the vapor state. **D 4150, D03**

net heat of combustion, *n*—the oxygen bomb (see Test Method D 3286) value for the heat of combustion, corrected for gaseous state of product water. **E 176, E05**

net heat of combustion, *n*—the oxygen bomb calorimeter value for the heat of combustion, corrected for the gaseous state of product water. **E 176, E05**

net heat of combustion, Q_n (MJ/kg), *n*—the quantity of energy released when a unit mass of fuel is burned at constant pressure, with all of the products, including water, being gaseous. **D 4175, D02**

net molded edge—an edge, not physically altered after molding, in final form ready for use.

net programmable area—See **space categories**.

newel—See **railing systems**. E 631, E06

net molded edge—an edge, not physically altered after molding, in final form ready for use. E 1749, E06

net positive suction head, NPSH, *n*—the difference between total pressure and vapor pressure in a fluid flow, expressed in terms of equivalent height of fluid, or “head,” by the equation:

$$\text{NPSH} = (P_s/w) + (V^2/2g) - (P_v/w)$$

where:

P_s = static pressure,

P_v = vapor pressure,

V = flow velocity,

w = specific weight of fluid, and

g = gravitational acceleration.

This quantity is used in pump design as a measure of the tendency for cavitation to occur at the pump inlet. It can be related to the cavitation number. G 40, G02

net power—the difference between gross power and freewheeling power; net power is the power required for processing. D 5681, D34

net processing time—the time during which refuse is processed through the size reduction device. D 5681, D34

net programmable area—See **space categories**. E 1480, E06

net pyrgeometer—see **pyranometer, net**. E 772, E44

net pyrradiometer—see **pyranometer, net**. E 772, E44

net-section area, A_N [L^2]—area of the net remaining ligament. E 1823, E08

net thickness, B_N [L]—distance between the roots of the side grooves in side-grooved specimens. E 1823, E08

network, *n*—a three-dimensional reticulate structure formed by interchain or intrachain bonding of polymer molecules in combination with chain entanglements. D 1566, D11

network level analysis, *n*—evaluation of a network of pavement to enable selection of candidate projects, project scheduling, and budget estimates. E 867, E17

network structure—a structure in which one constituent occurs primarily at the grain boundaries, thus partially or completely enveloping the grains of the other constituents; on a two-dimensional section cut through such a structure, the grain boundary constituent will appear as a network. E 7, E04

Neumann bands—See **twin bands**. E 7, E04

neutral, *adj*—achromatic or without hue. E 284, E12

neutral body—a comparison piece used in the differential method of thermal analysis, which has nearly the same thermal properties as the test specimen, and which produces no heat effects within the temperature range through which the specimen is being tested. See Practice E 14. E 7, E04

neutral content, *n*—the total amount of material contained in naval stores, such as rosin, tall oil, and their derivatives that do not contain any acidic functionality. D 804, D01

neutral fat—the unsaponified and unsaponifiable matter that becomes included along with fatty acids in a diethyl ether extract of samples under analysis for soap content, as described in 25.2 of Test Method D 460. D 459, D12

neutral filter—see **filter, neutral**. E 131, E13

neutral filter—see **filter, neutral**. E 135, E01

neutralization value—a number used as a measure of the acidic or basic constituents present in an insulating liquid, usually expressed in terms of equivalent milligrams of potassium hydroxide per gram of sample. D 2864, D27

neutralizer—a dilute alkaline solution with which sheet metal ware is treated as a part of the pickling process subsequent to the acid

treatment. A chemical or mixture of chemicals which, when added to water, produces the dilute alkaline solution. C 286, B08

neutralizing potential (NP), *n*—the potential for a solid material sample to neutralize acidic effluent produced from the oxidation of iron-sulfide minerals, based on the amount of carbonate present in the sample. The NP is also presented in terms of tons of calcium carbonate equivalent per 1000 tons of solid material. It is calculated by digesting the solid material with an excess of standardized acid and back-titrating with a standardized base to measure and convert the acid consumption to calcium carbonate equivalents. D 5681, D34

*neutral refractories, *n**—see **refractories, neutral**. C 71, C08

neutral sized paper, *n*—paper that has been manufactured using a procedure or process at a pH value of 7 (with a normal range of 6.5 to 7.5) that results in paper that has resistance to aqueous liquid penetration. See **sizing**. D 1968, D06

neutral soap—under **soap**, see **neutral soap**. D 459, D12

neutral solution—a fluid environment containing an equal amount of hydrogen and hydroxyl ions, that is, pH = 7. E 1823, E08

neutral stress—see **stress**. D 653, D18

neutral white surface—a highly reflecting surface whose diffuse reflectance makes it a colorimetric match of a nonselective reflecting white surface under specified viewing conditions. (psychophysical definition). D 459, D12

neutron—a neutral elementary particle having an atomic mass close to 1. In the free state outside of the nucleus, the neutron is unstable having a half-life of approximately 10 min. E 1316, E07

neutron activation detector—a neutron fluence sensing device, well-characterized with respect to geometry, mass, composition and cross section which produces activity with a sufficiently long half life to permit its measurement after withdrawal from the neutron field. E 170, E10

neutron fluence—see **particle fluence**. E 170, E10

neutron fluence rate—see **particle fluence rate**. *neutronflux*—see **particle fluence rate**. E 170, E10

neutron radiography—the process of producing a radiograph using neutrons as the penetrating radiation. E 1316, E07

neutron radiography (NRT)—a process of making an image of the internal details of an object by the selective attenuation of a neutron beam by the object. E 1316, E07

neutron spectrum—see **particle fluence spectrum**. E 170, E10

newel, *n*—a decorative or structural post member at the start or end of a stair run, often extending above a handrail; usually square or rectangular in cross section, supporting the end of a stair railing or serving as the common support for two stair railings, often supporting a stair stringer and platform; also, the center post of a spiral stair. E 631, E06

newel, *n*—a decorative or structural post member at the start or end of a stair run, often extending above a handrail; usually square or rectangular in cross section, supporting the end of a stair railing or serving as the common support for two stair railings, often supporting a stair stringer and platform; also, the center post of a spiral stair. E 1481, E06

new tire, *n*—a tire that has never been mounted on a rim. D 5681, D34

Newtonian behavior, *n*—the property of a liquid in which its viscosity is constant over a stated range of strain rates. (Compare **non-Newtonian behavior**.) D 907, D14

Newtonian flow, *n*—a Newtonian liquid is one that flows immediately on application of even the smallest force, and for which the rate of flow is directly proportional to the force applied. D 4175, D02

newtonian fluid—a true fluid that tends to exhibit constant viscosity at all rates of shear. D 653, D18

Newtonian fluid, *n*—a fluid that at a given temperature exhibits a constant viscosity at all shear rates or shear stresses. D 4175, D02

Newtonian oil or fluid, *n*

Newtonian oil or fluid, *n*—an oil or fluid that at a given temperature exhibits a constant viscosity at all shear rates or shear stresses.

D 4175, D02

Newtonian viscosity—see **viscosity, Newtonian**.

newton (N)—the SI unit of force ($\text{kg}\cdot\text{m}/\text{s}^2$).

E 1316, E07

***n*-factor**—the ratio of the surface freezing or thawing index to the air freezing or thawing index.

D 7099, D18

2ⁿ factorial experiment, *n*—a factorial experiment in which *n* factors are studied, each of them in two levels (versions).

E 456, E11

2ⁿ factorial experiment, *n*—a factorial experiment in which *n* factors are studied, each of them in two levels (versions).

E 1325, E11

NFS(B)—notched fracture strength in bending

F 2078, F07

NFS(B)_{F1624}—notched fracture strength in bending of a bare specimen at Test Method F 1624 step-loading rates

F 2078, F07

NFS(T)—notched fracture strength in tension

F 2078, F07

nick—indentation on the surface of a bolt, nut, screw, or stud. Also referred to as a gouge.

F 1789, F16

nickel, *n*—a refined nickel primarily produced from ore or matte or similar raw material containing a minimum of 99.80 percent nickel by weight.

B 899, B02

nickel alloy, *n*—a material that conforms to a specification that requires, by weight percent, more nickel than any other element.

B 899, B02

nickel-base alloy and nickel-based alloy—these terms are not used in ASTM standards under the jurisdiction of Committee B02 and are not preferred. See **nickel alloy**.

B 899, B02

nickel dipping, nickel flashing, or nickel pickling—a process for depositing metallic nickel on steel by galvanic action, reduction, or both.

C 286, B08

Nicol prism—a prism, used for polarizing or analyzing light, made by cementing together, with Canada balsam, two pieces of calcite in such a way that the extraordinary ray from the first piece passes through the second piece while the ordinary ray is reflected to the side into an absorbing layer of black print. When two Nicol prisms are crossed, therefore, no light passes through.

E 7, E04

Nicol prism—a prism, used for polarizing or analyzing light, made by cementing together, with Canada balsam, two pieces of calcite in such a way that the extraordinary ray from the first piece passes through the second piece while the ordinary ray is reflected to the side into an absorbing layer of black paint. When two Nicol prisms are crossed, therefore, no light passes through.

E 175, E41

nineteen-inch selvage—a prepared roofing sheet with a 432-mm (17-in.) granule-surfaced exposure and a 483-mm (19-in.) selvage.

D 1079, D08

ninety-pound—a prepared roll roofing with a granule-surfaced exposure that has a mass of approximately $4400 \text{ g}/\text{m}^2$ ($90 \text{ lb}/108 \text{ ft}^2$).

D 1079, D08

nip, *n*—the radial clearance between rolls of a mill or calendar on a line of centers.

D 1566, D11

NIST, *n*—acronym for National Institute of Standards and Technology.

D 4175, D02

Nitinol—a generic trade name for a Ni-Ti alloy.

F 2005, F04

nitrate pulps—pulp used for the manufacture of cellulose nitrate and subject to various specifications by the manufacturers, including those of alpha-cellulose content and viscosity.

D 1695, D01

nitre—an industrial term for NaNO_3 .

C 162, C14

nitride-carbide inclusion types—a compound with the general formula $M_x(C, N)_y$, observed generally as colored idiomorphic cubic crystals, where *M* includes Ti, Cb, Ta, Zr.

E 7, E04

nitriding, *n*—introducing nitrogen into a solid steel object by holding it at a suitable temperature in contact with a nitrogenous environment.

A 941, A01

nitrocellulose—see **cellulose nitrate**.

D 1695, D01

nitrogen alloying, *n*—the transfer of nitrogen from a furnace atmosphere to powder or a P/M part, in such a way as to increase the nitrogen content of the material within controlled limits.

B 243, B09

nitrogen narcosis, *n*—a distinct anesthetic effect, characterized by

loss of judgment and disorientation, caused from breathing nitrogen at increased partial pressures.

F 1549, F32

nitrogen surface area (NSA), *n*—the total surface area of carbon black that is calculated from nitrogen adsorption data using the B.E.T. theory.

D 3053, D24

nits or nitty enamel—a porcelain enamel blemish in dry process enameling characterized by minute surface pits visible only on close examination.

C 286, B08

(*n, k*) symbology, *n*—a class of bar code symbologies in which each symbol character is *n* modules in width and is composed of *k* bar and space pairs. A subset of these is the *n, k, m*, class of symbologies, where *m* represents the maximum width of an element in modules. (See **module**.)

F 1294, F05

NLGI, *n*—National Lubricating Grease Institute

D 4175, D02

NLGI number, *n*—a numerical scale for classifying the consistency range of lubricating greases and based on the Test Method D 217 worked penetration.

D 4175, D02

NMR absorption band; NMR band—a region of the spectrum in which a detectable signal exists and passes through one or more maxima.

E 131, E13

NMR absorption line—a single transition or a set of degenerate transitions is referred to as a line.

E 131, E13

NMR apparatus; NMR equipment—an instrument comprising a magnet, radio-frequency oscillator, sample holder, and a detector that is capable of producing an electrical signal suitable for display on a recorder or an oscilloscope, or which is suitable for input to a computer.

E 131, E13

noble—the positive (increasingly oxidizing) direction of electrode potential.

G 15, G01

noble metal—a metal that does not readily tend to furnish ions, and therefore does not dissolve readily, nor easily enter into such reactions as oxidations, etc. The opposite of base metal.

NOTE—Since there is no agreement over the sign of electrode potentials, the words noble and base are often preferred because they are unambiguous.

B 374, B08

noble metal—a metal with a standard electrode potential that is more noble (positive) than that of hydrogen.

G 15, G01

noble metal thermocouple, *n*—thermocouple whose thermoelements are composed primarily of noble metals and their alloys. (See also **base metal thermocouple; refractory metal thermocouple**.)

E 344, E20

no conclusion (totally inconclusive, indeterminable)—This is the zero point of the confidence scale. It is used when there are significantly limiting factors, such as disguise in the questioned and/or known writing or a lack of comparable writing, and the examiner does not have even a leaning one way or another.

Examples—No conclusion could be reached as to whether or not the John Doe of the known material wrote the questioned material, or I could not determine whether or not the John Doe of the known material wrote the questioned material.

E 1658, E30

node, *adj*—point, line, or surface of standing wave system at which the amplitude is zero.

D 653, D18

node—the bonded portion of the honeycomb flat sheet material; the honeycomb cell's double wall.

E 631, E06

node—the bonded portion of the honeycomb flat sheet material; the honeycomb cell's double wall.

E 1749, E06

no deception indicated (NDI), *n*—no deception indicated is a conventional term for a PDD outcome. A decision of NDI means that the physiological data are stable and interpretable and that the evaluation criteria used by the examiner concluded that the examinee was being completely truthful to the relevant issue. No deception indicated corresponds to the term "No Significant Physiological Responses," or NSR.

E 2035, E52

nodular fireclay, *n*—see **fireclay, nodular**.

C 71, C08

nodular graphite, *n*—graphite in the form of nodules or spheroids in iron castings.

A 644, A04

nodularity, *n*—the volumetric proportion of spheroidal or nodular

graphite to total graphite in a ductile iron or a compacted graphite iron matrix (see Test Method A 247, for Evaluating the Microstructure of Graphite in Iron Castings, Types I and II). **A 644, A04**

nodularity, degree of, *n*—the volumetric proportion of spheroidal or nodular graphite to total graphite in a ductile iron matrix (see Test Method A 247, Types I and II). **A 644, A04**

nodular powder, *n*—irregular particles having knotted, rounded, or similar shapes. **B 243, B09**

nodule—a rounded projection formed on a cathode during electrodeposition. **B 374, B08**

nodules—small irregularly shaped imperfections in the electrolytic copper foil which do not cause the foil to fail the thickness tolerance. **B 846, B05**

nodulizing alloy, *n*—an alloy added to molten iron for the primary purpose of causing the formation of spheroidal graphite during solidification. **A 644, A04**

no-flow point, *n*—the temperature corresponding to a specified degree of blockage of a screen by separated solids. **D 4175, D02**

no-frost state—the case where the frost point of a sealed insulating glass unit is below the temperature specified by the purchaser or user. **E 631, E06**

no identification—this expression could be understood to mean anything from a strong probability that the suspect wrote the questioned writing; to a complete elimination. It is not only confusing but also grammatically incorrect when used informally in sentences such as. "I no identified the writer" or "I made a no ident in this case." **E 1658, E30**

noil, *n*—the short fibers removed in combing; applied particularly to wool, but also to other fibers as cotton, silk, and rayon. **D 123, D13**

noil, *n*—the short fibers removed in combing; applied particularly to wool, but also to other fibers such as cotton, silk, and rayon. **D 4845, D13**

noise—See **contact noise**. **B 542, B02**

noise, *n*—an extraneous electronic signal that effects baseline stability. **D 1129, D19**

noise—See **analyzer**. **D 1356, D22**

noise—in surface analysis, the random fluctuation of the measured intensity at a particular location in a spectrum, usually expressed as an RMS (root-mean-square), standard deviation, or a peak-to-peak value. **E 673, E42**

noise—in electromagnetic inspection, any nonrelevant signal that tends to interfere with the normal reception or processing of a desired flaw signal. It should be noted that such noise signals may be generated by inhomogeneities in the inspected part that are not detrimental to the end use of the part. **E 1316, E07**

noise—the data present in a radiological measurement which is not directly correlated with the degree of radiation attenuation by the object being examined. **E 1316, E07**

noise—any undesired signal (electrical or acoustic) that tends to interfere with the reception, interpretation, or processing of the desired signal. **E 1316, E07**

noise, *n*—In PDD, it is the random variation in the recorded data that has no diagnostic value, and when excessive, may take the identification of diagnostic patterns more difficult. **E 2035, E52**

noise—the maximum amplitude, peak-to-peak, for all random variations.

noise, short term—is that with a frequency greater than six cycles per min (equivalent to a period of 10 seconds or less).

noise, long term—is that with a frequency between 0.6 and 6 cycles per min (equivalent to periods of 100 and 10 s). **E 2161, E37**

noise—(1) random variations of one or more characteristics of any entity such as voltage, current, or data.

(2) a random signal of known statistical properties of amplitude, distribution, and spectral density.

(3) loosely, any disturbance tending to interfere with the normal operation of a device or system. **F 149, F05**

noise equivalent temperature difference (NETD)—the target-to-background temperature difference between a blackbody target and its blackbody background at which the signal-to-noise ratio of a thermal imaging system or scanner is unity. **E 1316, E07**

noise isolation class, NIC—a single-number rating calculated in accordance with Classification E 413 using measured values of noise reduction. It provides an estimate of the sound isolation between two enclosed spaces that are acoustically connected by one or more paths. **C 634, E33**

noise reduction coefficient, NRC—a single-number rating derived from measured values of sound absorption coefficients in accordance with 11.7 of Test Method C 423. It provides an estimate of the sound absorptive property of an acoustical material. **C 634, E33**

noise reduction, *NR*—in a specified frequency band, the difference between the average sound pressure levels measured in two enclosed spaces or rooms due to one or more sound sources in one of them. **C 634, E33**

no-knock condition, *n*—for octane rating, where the knock intensity in all cylinders is less than light knock. Refer to Annex A1 for description of knock intensity. **D 4175, D02**

NOM—natural organic matter. **D 6161, D19**

nominal, *adj*—name or identifying value of a measurable property by which a conductor or component or property of a conductor is identified, and to which tolerances are applied. **B 354, B01**

nominal, *n*—representative value of a measurable property determined under a set of conditions, by which a product may be described. **D 4439, D35**

nominal, *n*—commonly used to refer to the average size product (chip) that comprises 50 % or more of the throughput in a scrap tire processing operation. It should be noted that any scrap tire processing operation also would generate products (chips) above and below the "nominal" range of the machine. **D 5681, D34**

nominal airflow rate, Q_{nom} , *n*—the flow rate indicated by the blower door using the manufacturer's calibration coefficients (m^3/s , ft^3/min). **E 631, E06**

nominal contact pressure, $[FL^{-2}]$, *n*—in tribology, an average contact pressure between two conforming bodies, calculated by dividing the contact force by the **apparent area of contact**. **G 40, G02**

nominal diameter—references the internal diameter in name only to the nearest unit dimension. **C 896, C04**

nominal diameter—the diameter of a sphere that has the same volume as the sediment particle. Sometimes called *equivalent spherical diameter*. **D 4410, D19**

nominal dimension—dimension that is greater than the specified dimension by the thickness of a mortar joint. It is usually expressed as a whole number. **C 1232, C15**

nominal discount rate—the rate of interest reflecting the time value of money stemming both from inflation and the real earning power of money over time. **E 631, E06**

nominal discount rate, *n*—the rate of interest reflecting the time value of money stemming both from inflation and the real earning power of money over time. **E 833, E06**

nominal filtration rating, *n*—(Deprecated term) an arbitrary micrometer value for a filter medium indicated by a filter manufacturer. **D 4175, D02**

nominal filtration rating, *n*—an arbitrary micrometer value indicated by a filter manufacturer. Due to lack of reproducibility this rating is deprecated. **D 4175, D02**

nominal gage length, *n*—*General* — in tensile testing, the length of a specimen under specified pretension measured from nip-to-nip of the jaws of the holding clamps in their starting position at the beginning of the test, and including any portion of the specimen in contact with bollard or snubbing surfaces.

Specific I, the length of a specimen under specific pre-tension between frets, in instruments where the specimen is not held by clamps, for example, in a vibroscope.

nominal gage length, *n*

Specific 2, the length of a specimen measured between the points of attachment to the tabs while under specified pretension.

D 123, D13

nominal gage length, *n*—in tensile testing, (*General*) the length of a specimen under specified pretension measured from nip-to-nip of the jaws of the holding clamps in their starting position at the beginning of the test, and including any portion of the specimen on contact with bollard or snubbing surfaces. (*Specific 1*), the length of a specimen under specific pre-tension between frets, in instruments where the specimen is not held by clamps, for example, in a vibroscope. (*Specific 2*), the length of a specimen measured between the points of attachment to the tabs while under specified pretension.

D 4849, D13

nominal joint width, *n*—the specified opening of a joint in practice that is selected for test purposes.

E 176, E05

nominal maximum size (of aggregate), *n*—in specifications for, or description of aggregate, the smallest sieve opening through which the entire amount of the aggregate is permitted to pass.

C 125, C09

nominal maximum size (of aggregate), *n*—in specifications for, or descriptions of aggregate, the smallest sieve opening through which the entire amount of the aggregate is permitted to pass.

D 8, D04

nominal mesh size, *n*—the designated dimension of the openings of a sieve.

E 1638, E29

nominal (net-section) stress, σ_N [FL^{-2}]—in fracture testing, a measure of the stress on the net cross section calculated in a simplified manner and without taking into account stress gradients produced by geometric discontinuities such as holes, grooves, fillets, and so forth.

E 1823, E08

nominal plunger energy $\frac{1}{2} [ML^2/T^2]$, *n*—in tire testing, one half of the product of a peak force (required to rupture the tire structure in tread area) and maximum plunger travel into a tire at the time of rupture.

F 538, F09

nominal pressure—the intended operating pressure.

E 631, E06

nominal pressure—the intended operating pressure.

E 1749, E06

nominal product size—the screen size corresponding to 90 % cumulative passing by weight.

D 5681, D34

nominal size—as applied to products such as lumber, traditionally the approximate rough-sawn commercial size by which it is known and sold in the market. Actual rough-sawn sizes may vary from the nominal. Reference to standards or grade rules is required to determine nominal/actual finished size relationships.

D 9, D07

nominal size, *n*—the average size product (chip) that comprises 50 % or more of the through put in a scrap tire processing operation; scrap tire processing operations generate products (chips) above and below the nominal size.

D 5681, D34

nominal stress, *n*—the stress at a point calculated on the net cross section by simple elastic theory without taking into account the effect on the stress produced by discontinuities such as holes, grooves, fillets, or any combination of them. Taken in part from

D 907, D14

nominal stress [FL^{-2}], *n*—the stress at a point calculated on the net cross section by simple elastic theory without taking into account the effect on the stress produced by geometric discontinuities such as holes, grooves, fillets, and so forth.

E 6, E28

nominal temperature—the intended operating temperature.

nondestructive test—See **test, nondestructive**.

nonbearing wall—See **wall**.

E 631, E06

nominal temperature—the intended operating temperature.

E 1749, E06

nominal thickness, *n*—of steel sheet, an ordering designation which indicates that the applicable tolerance for thickness is both plus and minus from the ordered thickness.

A 902, A05

nominal value, *n*—representative value of a measurable property by which a product may be described

D 4439, D35

nominal wall, *n*—specified wall thickness with a published plus and minus tolerance from the specified thickness at any point.

B 899, B02

nominal width, *n*—in reference to bar codes, the intended width of an element.

F 1294, F05

non-alteration distributor—distributor of mechanical fasteners who buys, resells, and may repack the fasteners, but does not change the individual fasteners in any way.

F 1789, F16

nonaromatic hydrocarbons—one or more types of hydrocarbons identified as paraffins, cycloparaffins (naphthenes), and olefins. Generally, the saturated types, paraffins and cycloparaffins, constitute the impurities in the commercial grades of aromatic hydrocarbons.

D 4790, D16

nonassociated gas—natural gas not in contact with, nor dissolved in, reservoir liquids.

D 4150, D03

nonbanded coal—See *nonbanded coal* under **coal**.

D 121, D05

noncanopy—a fixed device located in close proximity over cooking equipment and in some cases having a shelf-like appearance. The purpose of which is to channel air movement to contain and capture the unwanted by-products resulting from cooking activities.

F 1827, F26

noncarbonated mechanically refrigerated visible product, beverage dispenser—counter-top equipment, mechanically refrigerated, with a transparent, impact-resistant container designed to afford a visual display of the beverage.

F 1827, F26

non-carbonate hardness—hardness caused by chlorides, sulfates, and nitrates of calcium and magnesium.

D 6161, D19

non-chlorine bleach, *n*—a bleach that does not release the hypochlorite ion in solution, for example, sodium perborate, sodium percarbonate.

D 123, D13

non-chlorine bleach, *n*—a bleach that does not release the hypochlorite ion in solution, for example, sodium perborate, sodium percarbonate.

D 3136, D13

nonchromatic, adj—see **achromatic**.

E 284, E12

noncohesive sediments—discrete particles, the movement of which for given erosive forces depends only upon the properties of shape, size, and density and upon the relative position of the particle with respect to surrounding particles.

D 4410, D19

non-combustible, *adj*—not capable of undergoing combustion under specified conditions. (Contrast **combustible**.)

E 176, E05

noncombustible—that fraction of a macrosample remaining after moisture and combustibles are driven off by heat and combustion. It is composed of metallic and glass particles in addition to the residue from the combustion of organic substances.

E 856, D34

noncombustible textile, *n*—a textile that will neither ignite nor give off vapors that will ignite when subjected to external sources of ignition. (Compare **combustible textile**)

D 123, D13

noncombustible textile, *n*—a textile that will neither ignite nor give off vapors that will ignite when subjected to external sources of ignition. (Compare **combustible textile**.)

D 4391, D13

noncombustive reaction, *n*—a reaction other than combustion or thermal degradation undergone by certain materials upon exposure to elevated temperatures.

D 4175, D02

non-composite, *n*—as applied to loadbearing elements, structural interaction between contiguous elements is assumed not to exist in the evaluation of load capacity.

E 176, E05

noncompounded engine oil, *n*—a lubricating oil having a viscosity within the range of viscosities of oils normally used in engines, and that may contain anti-foam agents or pour depressants, or both, but not other additives.

D 4175, D02

*non-compression glazing, *n**—see **non-compression glazing system**.

C 717, C24

non-compression glazing, *v*—in building construction, the act of installing components into a non-compression glazing system.

C 717, C24

non-compression glazing system, *n*—in building construction, a sealant or combination of sealant(s) used to provide weather-tightness by way of the adhesive/cohesive characteristics of the components in the joint.

C 717, C24

noncondensable gas—a gas whose temperature is above its critical

temperature, so that it cannot be liquefied by increase of pressure alone. **E 1316, E07**

noncondensable gas content, *n*—the concentration of noncondensable gas in a geothermal fluid. **E 957, E44**

noncondensable gases, *n*—in geothermal, chemical species (such as carbon dioxide or hydrogen sulfide) that are constituents of geothermal fluids, that partition primarily into the vapor phase when geothermal fluids boil, and that do not condense along with geothermal steam when put through a condenser in a geothermal power plant. **E 957, E44**

nonconformance—fastener or fastener component which does not conform to a specification or other inspection standard. **F 1789, F16**

nonconforming, *adj*—a description of a unit or a group of units that does not meet the unit or group tolerance. **D 123, D13**

nonconforming item, *n*—an item that does not satisfy the requirements of the applicable specification. **D 123, D13**

non-conforming item, *n*—an item containing at least one nonconformity. **E 456, E11**

nonconforming unit, *n*—a unit of product containing at least one nonconformity. **D 1711, D09**

nonconformities per hundred units, *n*—a calculated ratio of nonconforming units to the number of units inspected, the quotient being multiplied by 100 (see **percent nonconforming**). **D 1711, D09**

nonconformity, *n*—an occurrence of failing to satisfy the requirements of the applicable specification; a condition that results in a nonconforming item. **D 123, D13**

nonconformity, *n*—a departure of a quality characteristic from its intended level or state that occurs with a severity sufficient to cause a test result not to meet a specification requirement. **D 1711, D09**

nonconformity—the nonfulfillment of specified requirements, (ISO 8402). **E 1187, E36**

nonconformity, *n*—nonfulfillment of a requirement. **E 1605, E06**

non-contact, *n*—a method of bar code reading typified by fixed or moving beam scanners having a greater optical throw and depth of field than contact, or wand scanners. **F 1294, F05**

noncryotic ground—geological materials at temperatures above 0°C. **D 7099, D18**

nondegradable, *adj*—in *erosion control*, not subject to decomposition to the point the material loses its ability to function for its intended purpose for the design life of the project under biological, chemical, and/or ultraviolet processes associated with typical application environments. **D 653, D18**

Nondestructive Evaluation—see **Nondestructive Testing**. **E 1316, E07**

Nondestructive Examination—see **Nondestructive Testing**. **E 1316, E07**

Nondestructive Inspection—see **Nondestructive Testing**. **E 1316, E07**

nondestructive test—See **test, nondestructive**. **E 1749, E06**

Nondestructive Testing (NDT), *n*—the development and application of technical methods to examine materials or components in ways that do not impair future usefulness and serviceability in order to detect, locate, measure and evaluate flaws; to assess integrity, properties and composition; and to measure geometrical characteristics. **E 1316, E07**

nondrying oil, *n*—an oil that does not of itself possess to a perceptible degree the power to take up oxygen from the air and lose its liquid characteristics. **D 16, D01**

non-elastic elongation, (NE), *n*—of *rope*, elongation after cyclic tensioning the rope to a specified force for a specified number of cycles. **D 123, D13**

non-erasable optical data—a non-erasable, non-rewriteable storage medium where the digital data is represented by the degree of reflectivity of the mediums recording layer. The data cannot be altered. **E 1316, E07**

nonferromagnetic material—a material that is not magnetizable and

hence, essentially not affected by magnetic fields. This would include paramagnetic materials and diamagnetic materials.

E 1316, E07

nonferrous alloys—alloys that do not contain iron as their main constituent although iron may be present as an impurity. The most common nonferrous groups are copper, nickel, aluminum, and titanium alloys. **F 1789, F16**

nonfibrous spicules—acicular particles resembling assemblages of asbestos fibers composed of nonfibrous, or semifibrous minerals such as picrolite. **D 2946, C17**

non-fill, *n*—defect resulting from the failure of the rubber to fill out all the mold pattern detail. **D 1566, D11**

nonflaming mode, *n*—the mode of testing that does not use a pilot flame. **E 176, E05**

nonflammable textile, *n*—any combustible textile that burns without a flame. (See also **glow, smoldering**. Compare **flammable textile, combustible textile, and noncombustible textile**.) **D 123, D13**

nonflammable textile, *n*—any combustible textile that burns without a flame. (See also **glow, smoldering**.) (Compare **flammable textile, combustible textile, noncombustible textile**.) **D 4391, D13**

non-frost-susceptible soil—a soil that does not display significant detrimental ice segregation during freezing. **D 7099, D18**

non-graphitizable carbon, *n*—in *carbon and graphite technology*, a carbon which cannot be transformed into graphitic carbon solely by heat treatment up to 3000°C under inert atmosphere or reduced pressure (also known as a hard carbon). **C 709, D02**

non-graphitizable carbon, *n*—in *carbon and graphite technology*, a carbon which cannot be transformed into graphitic carbon solely by heat treatment up to 3000°C under inert atmosphere or reduced pressure (also known as a hard carbon). **D 4175, D02**

non-hygroscopic material, *n*—material which neither absorbs nor retains water vapor. **D 1356, D22**

nonimpact printer—a printer in which image formation is not the result of mechanical impacts. Examples are thermal printers, electrostatic printers, electrophotographic printers, and ink jet printers. **F 909, F05**

non-interlocking tile, *n*—tile without restrictive ribs, grooves, or channels at the side lap or head lap. **C 43, C15**

nonionic cellulose ethers—that class of cellulose ethers which does not contain any ionizable groups. **D 1695, D01**

nonionic detergent—under **detergent**, see **nonionic detergent**. **D 459, D12**

nonionic polyelectrolyte—neutral charged polymers, usually polyacrylamides, used for coagulation/flocculation. See **polyelectrolytes**. **D 6161, D19**

nonionic surfactant—a chemical compound that produces uncharged surface active particles in solution. **D 459, D12**

nonionic surfactant—a surface-active agent having no ionizable polar end groups but comprised of hydrophilic and lipophilic segments. **E 609, E35**

nonionic surfactant—a surface-active agent having no ionizable polar end groups but comprised of hydrophilic and lipophilic segments. **E 1519, E35**

nonlinearity—the maximum deviation of the transducer output(s) (of the wheel force transducer system) from the best-fit linear relation to the applied calibration force, expressed as a percentage of full scale. Proven outliers are excluded. **E 867, E17**

non-lint content, *n*—that portion of a mass of cotton fiber which is essentially foreign matter. **D 123, D13**

non-lint content, *n*—that portion of a mass of cotton fiber which is essentially foreign matter. **D 7139, D13**

nonloadbearing tile, *n*—tile for use in masonry constructions carrying no superimposed loads. See **Specification C 56**. **C 43, C15**

nonmagnetic—a relative term describing a material which, for practical purposes, may be considered to have a relative permeability close to unity.

nonmagnetic

NOTE—Certain materials may be nonmagnetic only under limited conditions. A 340, A06

nonmetal, *n*—any material other than a metal, nonpolymeric alloy, or any composite in which the metallic component is not the most easily ignited component and for which the individual constituents cannot be evaluated independently, including (ceramics, such as glass, synthetic polymers, such as most rubbers, thermoplastics, and thermosets, and natural polymers, such as naturally occurring rubber, wood, and cloth.) **nonmetallic***adj.* G 126, G04

nonmetallic inclusions—particles of impurities (usually oxides, sulfides, silicates and such) that are held mechanically or are formed during solidification or by subsequent reaction within the solid metal (See **exogenous inclusions**). E 7, E04

nonmetallic reinforcing mesh, *n*—a fiberglass component of the EIFS encapsulated in the base coat to strengthen the system.

NOTE—Nonmetallic reinforcing mesh is available in various weights to achieve different levels of impact resistance. E 2110, E06

non-Newtonian behavior, *n*—the property of a liquid in which its viscosity is not constant over a stated range of strain rates. D 907, D14

non-Newtonian flow, *n*—a non-Newtonian liquid is one whose viscosity depends on the rate of shear. Some will not flow until the force applied is greater than a definite value called the yield point. D 4175, D02

non-Newtonian oil or fluid, *n*—an oil or fluid that at a given temperature exhibits a viscosity that varies with changing shear stress or shear rate. D 4175, D02

non-Newtonian viscosity—see **viscosity, non-Newtonian**.

E 1142, E37

nonoperational mode—the condition that exists when a solar collector has been filled, purged of heat transfer fluid (if a liquid), and capped (but not sealed) to prevent contamination by foreign substances prior to exposure. E 772, E44

nonoriented electrical steel—a flat-rolled electrical steel which has approximately the same magnetic properties in all directions. A 340, A06

nonparametric, *adj*—a term referring to a statistical technique that does not assume the nature of the underlying frequency distribution is known. D 123, F03

nonplastic ceramics—nonclay ceramic materials that when mixed with water do not exhibit the rheological property-plasticity. C 242, C21

non-point sources, *n*—diffuse pollution sources (that is, without a single point of origin or not introduced into a receiving stream from a specific outlet). E 2114, E06

non-pressure pipe—pipe designed for gravity-conveyed medium which must resist only intermittent static pressures and does not have a pressure rating. F 412, F17

nonprobability sample, *n*—a sample of which the sampling units have not been selected in a manner that satisfies the minimum requirements for probability sampling. D 121, D05

nonreactive, *adj*—a condition which will not produce a chemical transformation or change. E 344, E20

non-read, *n*—the failure of a bar code scanner to recognize or decode a bar code symbol after a scanning attempt. Such a non-read may be caused by bar code symbol defects, scanner defects, or operator error. F 1294, F05

nonread ink—See **reflective ink**.

F 149, F05

nonreducing end groups—those terminal glucose units of cellulose or its derivatives which contain a free hydroxyl in the 4-position and do not reduce Fehling's solution or similar reagents. D 1695, D01

non-reference oil, *n*—any oil other than a reference oil; such as a research formulation, commercial oil, or candidate oil. D 4175, D02

nonreflective ink—See **scan ink**.

F 149, F05

nonreinforced pipe—concrete pipe designed without reinforcement. C 822, C13

nonrelevant indication, *n*—an NDT indication that is caused by a condition or type of discontinuity that is not rejectable. False indications are non-relevant. E 1316, E07

non-renewable resource, *n*—resource that exists in a fixed amount that cannot be replenished on a human time scale. E 2114, E06

nonresonant forced and vibration technique, *n*—a technique for performing dynamic mechanical measurements, in which the sample is oscillated mechanically at a fixed frequency. D 4092, D20

nonrigid plastic, *n*—for purposes of general classification, a plastic that has a modulus of elasticity either in flexure or in tension of not over 70 MPa (10 000 psi) at 23°C and 50 % relative humidity when tested in accordance with Test Methods D 790, Test Method D 747, Test Method D 638, or Test Methods D 882. D 883, D20

non-sample contacting equipment—related equipment associated with the sampling effort, but that does not directly contact the sample (for example, augers, drilling rods, excavations machinery). D 653, D18

nonscan ink—See **reflective ink**.

F 149, F05

nonscreen-type film (direct-type film)—X-ray film designed for use with or without metal screens, but not intended for use with salt screens. E 1316, E07

nonselective radiator, *n*—thermal radiator whose spectral emissivity is independent of wavelength over the range considered. E 349, E21

nonselective surface—a surface for which the spectral optical properties reflectance, absorptance, transmittance, and emittance are essentially independent of wavelength over a particular wavelength range.

NOTE—For solar absorbers, the absorption of solar energy is largely confined to the wavelength range from 0.3 to 3.0 μm , but there is significant flux emitted at wavelengths out to about 30 μm . E 772, E44

nonselectivity reflecting white surface—a surface that exhibits equal, diffuse and high reflectance at all wavelengths in the visible region [380 to 700 nm.] (physical definition). D 459, D12

nonseparable zipper, *n*—a zipper having two stringers that are permanently attached to each other at either or both ends. (Compare **separable zipper**.) D 123, D13

nonseparable zipper, *n*—a zipper having two stringers that are permanently attached to each other at one or both ends. (Compare **separable zipper**.) D 2050, D13

non-soap thickener (synthetic thickener, inorganic thickener, organic thickener), *n*—*in lubricatinggrease*, any of several specially treated or synthetic materials, excepting metallic soaps, that can be thermally or mechanically dispersed in liquid lubricants to form the lubricating grease structure. D 4175, D02

nonsorted circle—a form of patterned ground that is equi-dimensional in several directions with a dominantly circular outline which lacks a border of stones. D 7099, D18

nonsorted net—a type of patterned ground with cells that are equi-dimensional in several directions, but neither circular nor polygonal, and lacking borders of stones. D 7099, D18

nonsorted polygon—a type of patterned ground that is equi-dimensional in several directions, with a dominant polygonal outline, and lacking a border of stones. D 7099, D18

nonsorted step—a type of patterned ground with a step-like form and a downslope border of vegetation embanking an area of relatively bare ground upslope. D 7099, D18

nonsorted stripe—a type of patterned ground with a striped and nonsorted appearance, which is due to parallel strips of vegetation-covered ground and intervening strips of relatively bare ground, and orientated down the steepest available slope. D 7099, D18

non-spiked sample—a sample, devoid of analyte, that is targeted for addition of analyte but is not fortified with all target analytes prior to sample preparation. E 631, E06

non-spiked sample—a portion of a homogenized sample that is targeted for addition of analyte but that is not fortified (spiked) with all the lead before sample preparation. Analysis results for

this sample are used to correct for background levels in soil that are used for the spiked and spiked duplicate samples. **E 631, E06**

non-spiked sample—a blank wipe sample that was targeted for addition of analyte but was not fortified with all the target analysis before sample preparation. **E 631, E06**

non-spiked sample—a portion of a homogenized sample that was targeted for the addition of analyte but is not fortified with all the target analytes before sample preparation. **E 1605, E06**

non-standard test, n—a test that is not conducted in conformance with the requirements in the standard test method; such as running on an uncalibrated test stand, using different test equipment, applying different equipment assembly procedures, or using modified operating conditions. **D 4175, D02**

non-standard virgin material—a plastic resin or compound in the form of powder or pellets which does not meet the specification requirements for which it was manufactured, and has not been subjected to use or processing other than that required for its initial manufacture. **F 412, F17**

non-sulfur vulcanizing system, n—a vulcanizing system not requiring free or donated sulfur. **D 1566, D11**

non-tactile switch—a switch assembly that has a tactile ratio equal to zero. **F 2112, F01**

nonvitreous (nonvitrified)—that degree of vitrification evidenced by relatively high water absorption. **C 242, C21**

non-volatile—term used to denote the calculated chemical basis of a material in which the volatile fraction of that material is removed, relative to a specific temperature. For example, in lime and limestone, the loss on ignition is considered to be the volatile fraction. **C 51, C07**

nonvolatile content, n—the portion of a coating that does not evaporate during drying or curing under specified conditions, comprising the binder and, if present, the pigment. (The percent volatile content is obtained by subtracting the nonvolatile content from 100.) **D 16, D01**

nonvolatile content, n—the portion of a material that remains after volatile matter has been evaporated under specified ambient or accelerated conditions. (See **solids content**.) **D 907, D14**

nonvolatile extractables—for purposes of the ASTM tests for volatile extractables and nonvolatile extractables, nonvolatiles shall be defined as those compounds that give more than 50 % recovery in studies using the applicable nonvolatile extractables method. **F 17, F02**

nonvolatile extractables—those chemical species which are released from microwave food packaging under simulated use conditions and are detected using an applicable nonvolatile extractables method. **F 1479, F02**

nonvolatile ingredient—component of an aerosol formulation with a vapor pressure less than atmospheric pressure (14.7 psia (101 kPa)) at 105 °F (40.6 °C). **D 3064, D10**

nonvolatile matter, n—in insulating varnish, that portion of a varnish which is not volatilized when exposed to specified conditions. **D 1711, D09**

nonvolatile matter—the oily, gummy, or resinous residue remaining after evaporating volatile hydrocarbon materials. **D 4790, D16**

nonvolatile organic chemical—See **organic chemical**. **D 1356, D22**

nonvolatile residue (NVR), n—molecular or particulate matter remaining following the filtration and controlled evaporation of a liquid containing contaminants. **G 126, G04**

nonvolatiles—materials remaining after the loss of volatile components. **D 2825, D21**

nonvolatile vehicle, n—the liquid portion of a paint excepting its volatile thinner and water. **D 16, D01**

nonwaterfowl feathers, n—feathers derived from chickens, turkeys, or other landfowl. **D 123, D13**

nonwoven blanket, n—a blanket produced by bonding or interlocking of fibers, or both, accomplished by mechanical, chemical, thermal, or solvent means, or combination thereof. **D 123, D13**

nonwoven blanket, n—a blanket produced by bonding or interlocking of fibers, or both, accomplished by mechanical, chemical, thermal, or solvent means, or combination thereof. **D 7023, D13**

nonwoven fabric, n—a textile structure produced by bonding or interlocking of fibers, or both, accomplished by mechanical, chemical, thermal, or solvent means and combinations thereof. **D 123, D13**

nonwoven fabric—See *nonwoven fabric* under **fabric**. **D 3878, D30**

nonwoven fabric, n—a textile structure produced by bonding or interlocking of fibers, or both, accomplished by mechanical, chemical, thermal, or solvent means and combinations thereof. **D 5684, D13**

no-observed-effect concentration (NOEC)—in a toxicity test, the tested concentration of one or more chemicals immediately below the lowest tested concentration that resulted in a statistically significant change in a particular toxicological variable compared to that value in the control (s). **E 943, E47**

normal—an imaginary line forming a right angle with the tangent to a curved surface at a particular point. It is used as a basis for determining angles of incidence, reflection, and refraction. **E 175, E41**

normal, ⊥—directional in a direction normal (perpendicular) to a surface. **E 772, E44**

normal consistency, n—a degree of plasticity of a hydraulic-cement paste that is appropriate for testing as measured by a stipulated method. **C 219, C01**

normal cure—method of setting or hardening asbestos-cement products wherein the hydraulic cement is allowed to hydrate at atmospheric conditions of pressure, preferably under conditions to inhibit water loss. **D 2946, C17**

normal direction, n—for *geotextiles*, the direction perpendicular to the plane of a geotextile. **D 4439, D35**

normal direction—that direction which is perpendicular to the plane of working in a worked material. (See **cross direction**). **E 7, E04**

normal distribution, n—the distribution that has the probability function:

$$f(x) = (1/\sigma)(2\pi)^{-1/2} \exp[-(x-3)^2/2\sigma^2]$$

$$f \sim x! 5 \sim 1/s! \sim 2p! \quad \exp @ 2 \sim x 2\mu! / 2s \#$$

where:

x = random variate,

μ = mean of the distribution, and

s = standard deviation of the distribution.

(Syn. Gaussian distribution, law of error) **D 123, D13**

normal distribution, n—the distribution that has the probability function:

$$f(\chi) = (1/\sigma) (2\pi)^{-1/2} \exp[-(\chi-\mu)^2/2\sigma^2]$$

where:

χ = a random variate,

μ = the mean distribution, and

σ = the standard deviation of the distribution.

(Synonym—*Gaussian distribution, law of error*.)

D 4175, D02

normal distribution—drop size distribution described by the following equation:

$$f_n(D) = \{1/[\sigma\sqrt{(2\pi)}]\} \int_{-\infty}^D \exp\{-[x - \bar{D}, o]^2/(2\sigma^2)\} dx$$

where:

$f_n(D)$ = the (D) fraction of drops of diameter less than D .

E 1620, E29

normal force—that component of the force between contacting bodies perpendicular to their interface. **B 542, B02**

normal force—a force directed normal to the surface element across which it acts. (ISRM) **D 653, D18**

normal force [F], n

normal force [F], n —of a tire, the component of a tire force vector in the Z' direction. **F 538, F09**

normal human temperature—the conventionally accepted average body temperature in healthy human beings (37 °C or 98.6 °F). **E 344, E20**

normal impact velocity, n —See **impact velocity**. **G 40, G02**

normal incidence (see also **straight beam**)—a condition in which the axis of the ultrasonic beam is perpendicular to the entry surface of the part under examination. **E 1316, E07**

normal incidence sound absorption coefficient, α_n ; [dimensionless] — of a surface, at a specified frequency, the fraction of the perpendicularly incident sound power absorbed or otherwise not reflected. **C 634, E33**

normal inspection—inspection that is used when there is no statistically significant evidence that the quality of the product being submitted is better or poorer than the specified quality level. **D 1517, D31**

normalization—converting actual data to a set of reference conditions in order to “standardize” operation to common base. **D 6161, D19**

normalization, n —in *spectrometric analysis*, (1) the process of adjusting instrument output to conform to an established condition using one or more homogeneous specimens or reference materials; (2) the adjustment of the analysis total to 100 %, or some other total. **E 135, E01**

normalize—by calculation, to revert a given thickness (actual) of cured composite to a standard thickness (that is, a specific per ply thickness standard) to yield equivalent fiber stress (based upon the standard). **E 631, E06**

normalize—by calculation, to revert a given thickness (actual) of cured composite to a standard thickness (that is, a specific per ply thickness standard) to yield equivalent fiber stress (based upon the standard). **E 1749, E06**

normalized crack size, a/W —the ratio of crack size, a , to specimen width, W . **E 1823, E08**

normalized erosion resistance, N_e , n —the volume loss rate of a test material, divided into the volume loss rate of a specified reference material similarly tested and similarly analyzed. “Similarly analyzed” means that the two erosion rates must be determined for corresponding portions of the erosion rate-time pattern; for instance, the maximum erosion rate or the terminal erosion rate. **G 40, G02**

normalized incubation resistance, N_o , n —in *cavitation and liquid impingement erosion*, the incubation period of a test material, divided by the incubation period of a specified reference material similarly tested and similarly analyzed. (See also **normalized erosion resistance**.) **G 40, G02**

normalized inflation pressure, n —measured pressure of a tire adjusted, according to the ideal gas law, to the nominal test temperature and one atmosphere barometric pressure. **F 538, F09**

normalized K -gradient, $C = (1/K) \cdot dK/da [L^{-1}]$ —the fractional rate of change of K with increasing crack size. **E 1823, E08**

normalized noise isolation class, NNIC—a single-number rating calculated in accordance with Classification E 413 using measured values of normalized noise reduction. (See **normalized noise reduction**.) **C 634, E33**

normalized noise reduction, NNR—between two rooms, in a specified frequency band, the value that the noise reduction in a given field test would have if the reverberation time in the receiving room were 0.5 s. NNR is calculated as follows:

$$NNR = NR + 10 \log (T/0.5)$$

where:

NR = noise reduction, dB and

T = reverberation time in receiving room, s.

C 634, E33

normalizing, n —heating a steel object to a suitable temperature

above the **transformation range** and then cooling it in air to a temperature substantially below the **transformation range**.

A 941, A01

normalizing—variation of full annealing in which steel is heated above the upper critical temperature and is then air cooled in air, rather than in a furnace. Normalizing relieves the internal stresses caused by previous working, and while it produces sufficient softness and ductility for many purposes, it leaves the steel harder and with a higher tensile strength than full annealing. To remove cooling stresses, normalizing is often followed by tempering.

F 1789, F16

normally consolidated soil deposit—a soil deposit that has never been subjected to an effective pressure greater than the existing overburden pressure. **D 653, D18**

normal mode—of a room, one of the possible ways in which the air in a room, considered as an elastic body, will vibrate naturally when subjected to an acoustical disturbance. With each normal mode is associated a resonance frequency and, in general, a group of wave propagation directions comprising a closed path.

C 634, E33

normal operating conditions—the usual range of physical operating conditions (flow, pressure, temperature, etc.) for component or system. **E 1705, E48**

normal operating conditions—the usual range of physical conditions for which a facility was designed to operate. **E 1705, E48**

normal permeability—the ratio of the induction (when cyclically made to change symmetrically about zero) to the corresponding change in magnetizing force. **E 1316, E07**

normal segregation—a concentration of alloying components or constituents that have lower melting points in those regions which are the last to solidify. **E 7, E04**

normal stress—see **stress**. **D 653, D18**

normal stress, (FL^{-2}) , n —the component of applied stress that is perpendicular to the surface on which the force acts. **D 4439, D35**

normal stress [FL^{-2}], n —the stress component perpendicular to a plane on which the forces act. **E 6, E28**

normal stress, s —the stress component perpendicular to a plane on which the forces act. (E28) **D 4092, D20**

normal temperature, n —as applied to laboratory observations of the physical characteristics of bituminous materials, 25°C (77°F). **D 8, D04**

normal weather conditions—the range of environmental conditions in a local climatic region that occurred during the past 30 years. This excludes extreme conditions that have occurred only once during that period. **E 1705, E48**

normal weight concrete masonry unit—unit whose oven-dry density is 125 lb/ft³ (2000 kg/m³) or greater. **C 1209, C15**

normative, n —information that is part of the standard. **F 1294, F05**

normative terminology, n —a terminology that is standardized or authoritatively prescribed. **E 1992, E02**

nose, n —the lower visible edge of tile as applied on the roof. **C 43, C15**

nose—{archaic} the working end or refining chamber of a tank. **C 162, C14**

nose—guide-body area where fastener is driven from tool. **F 592, F16**

nose extension—See **lip**. **F 592, F16**

nose lugs, n —projections on the underside of the nose of each tile contoured to fit into the main water courses of the tile immediately below, inhibiting the entry of wind-driven rain. **C 43, C15**

no-slump grout—grout with a slump of 1 in. (25 mm) or less according to the standard slump test (Test Method C 143). See also **slump** and **slump test**. **D 653, D18**

notch, n —a shape used to mark a location. **D 6963, D13**

notch, n —a groove smaller in both width and length than a lateral groove that contains one closed end. **F 538, F09**

notched head—nail head with semi-circular rim and “V”-notch, having rounded “V” corners, wide notch part at rim, and narrow

notch part at nail-shank projection, formed during heading, to allow tight collating of nails in strip form. **F 592, F16**

notched tensile strength—the maximum nominal (net section) stress that a notched tensile specimen is capable of sustaining. **F 2078, F07**

notch length, a_n (L)—the distance from a reference plane to the front of the machined notch. The reference plane depends on the specimen form, and normally is taken to be either the boundary, or a plane containing either the forceline or the centerline of a specimen or plate. The reference plane is defined prior to specimen deformation. **E 1823, E08**

notch tensile strength (NTS) [FL⁻²]—the maximum nominal (net-section) stress that a notched tensile specimen is capable of sustaining. **E 1823, E08**

not ready signal, *n*—a signal from a device in a system indicating that it will not be able to receive or send the next data segment. **F 1457, F05**

novolac (or novolak), *n*—a phenolic-aldehyde resin which, unless a source of methylene groups is added, remains permanently thermoplastic. (See also **resinoid** and **thermoplastic**.) **D 883, D20**

novolak, *n*—a phenolic resin containing less than a 1 : 1 ratio of formaldehyde to phenol so that normally it remains thermoplastic until heated with an appropriate amount of a compound (for example, formaldehyde or hexamethylenetetramine) capable of giving additional linkages, thereby producing an infusible material. **D 907, D14**

nozzle, *n*—a part of a vacuum cleaner system that is applied to a surface to be cleaned and may incorporate an agitation device to assist dirt removal. **F 395, F11**

nozzle refractory, *n*—a refractory shape containing an orifice for the purpose of transmitting molten metal from a refractory-lined container. **C 71, C08**

***n*-propylbenzene**—1-phenyl propane (C₉H₁₂) mol weight 120.19; used as a reference standard for identifying and determining C₉ aromatics; melting point, -99.2°C; boiling point, 159.2°C. **D 4790, D16**

NSF (International)—National Sanitation Foundation (international), a U.S.-based organization that provides testing procedures to certify that equipment meets certain minimum standards to produce potable water. **D 6161, D19**

NTU—see **nephelometer**. **D 6161, D19**

nuance, *n*—a two-dimensional attribute that distinguishes among colors having the same hue. **E 284, E12**

nub head—head with protruding knob. (See **washer head**.) **F 547, F16**

nubuck—type of leather where the grain layer is very lightly buffed (snuffed), to create a very fine nap and still called top grain leather. **D 1517, D31**

nuclear activity—the number of disintegrations occurring in a given quantity of material per unit of time. "Curie" is the unit of measurement. One curie is equivalent to 3.7×10^{10} disintegrations per second. **E 1316, E07**

nuclear magnetic resonance (NMR) spectroscopy—that form of spectroscopy concerned with radio-frequency-induced transitions between magnetic energy levels of atomic nuclei. **E 131, E13**

nucleation—the preplating step in which a catalytic material, often a palladium or gold compound, is absorbed on a surface to act as sites for initial stages of deposition. **B 374, B08**

nucleation, *n*—the formation of crystal nuclei in liquid in the supercooled state. **E 344, E20**

nucleocapsid—the outer protein coat or shell (capsid) of a virus plus its inner core of nucleic acid and proteins. **E 1705, E48**

nucleide, *n*—an atomic species characterized by the constitution of its nucleus, specifically by the number of protons and neutrons. **D 1129, D19**

nuclide—a species of an atom characterized by its mass number, atomic number, and its nuclear energy state. **E 170, E10**

Nukiyama-Tanasawa distribution—drop size distribution described by the following equation:

$$dN/dD = a \times D^m \exp(-b \times D^n)$$

where:

N = the number of drops of diameter smaller than D , and a , m , b , and n are parameters (usually $m = 2$ and $n \neq 1$).

E 1620, E29

Nukiyama-Tanasawa nozzle—an internal mixing pneumatic atomizer consisting of two concentric tubes. Liquid emerging from the inner tube is atomized by air flowing through the annulus between the tubes. **E 1620, E29**

NUL—see **null signal**. **F 1457, F05**

null signal, *n*—an electronic signal with no data. **F 1457, F05**

number density—the number of particles contained in a specified volume of space at a given instant. **E 1620, E29**

number of pieces of trash, *n*—*in testing cotton with the Trash Meter*, a number correlated with the total number of pieces of trash on the surface of the sample of cotton over the viewing window. **D 123, D13**

number of pieces of trash, *n*—*in testing cotton with the Trash Meter*, a number correlated with the total number of pieces of trash on the surface of the sample of cotton over the viewing window. **D 7139, D13**

number system character, *n*—the first, or left-hand, digit in a UPC number that identifies a particular numbering system. Similar to AI or DI numbers, but used specifically for retail applications according to UCC rules. **F 1294, F05**

numeral head—head with raised or depressed, identifying number or numbers on top surface of head. **F 547, F16**

numeric—a machine vocabulary that includes only the primary numbers as contrasted to **alphanumeric**, which includes both letters and numerals. **F 149, F05**

numerical aperture—the product of the lowest index of refraction in the object space multiplied by the sine of half the angular aperture of the objective. **E 175, E41**

numerical aperture (NA)—the sine of half the angular aperture of an objective lens multiplied by the refractive index of the medium between the lens and the sample. **E 7, E04**

numerical aperture (NA), *n*—the sine of one half of the vertex angle of the largest cone of meridional rays that can enter or leave an optical system or element, multiplied by the refractive index of the medium in which the cone is located. **E 131, E13**

numerical value of a quantity—magnitude of a quantity expressed by the product of a number and the unit in which the quantity is measured.

"O"—See **windows and doors**. **E 631, E06**

nut—internally threaded product intended for use on external or male screw threads such as a bolt or a stud for the purpose of tightening or assembling two or more components. **F 1789, F16**

nutrient—a substance that supports organismal growth. **F 1600, F20**

nutrient broth, *n*—a liquid medium. **F 1494, F23**

nu-value—see synonymous term **Abbé value**. **C 162, C14**

N (Wide to Narrow Ratio), *n*—*in symbologies with two element widths*, the wide to narrow ratio of elements is calculated by summing the average wide bar width and average wide space width and dividing the sum by 2 times Z . Intercharacter gaps, if applicable, are not included.

$$N = (\text{average wide bar} + \text{average wide space}) (2 * Z)$$

F 1294, F05

******nylon**—a manufactured fiber in which the fiber-forming substance is a long-chain synthetic polyamide in which less than 85 % of the amide (ICzCICzNHICz) linkages are



attached directly to two aromatic rings. **D 123, D13**

nylon plastic, *n*—a plastic based on resins composed principally of a

nylon plastic, n

long-chain synthetic polymeric amide which has recurring amide groups as an integral part of the main polymer chain. **F 1251, F04**

nylon plastics, n—plastics based on resins composed principally of a long-chain synthetic polymeric amide which has recurring amide groups as an integral part of the main polymer chain. **D 883, D20**

nylon plastics—plastics based on resins composed principally of a long-chain synthetic polymer amide which has recurring amide groups as an integral part of the main polymer chain. (D20)

F 412, F17

Nyquist frequency—modulation frequency or wavenumber above which aliasing occurs. **E 131, E13**

nytril—a manufactured fiber containing at least 85 % of a long-chain polymer of vinylidene dinitrile ($(\text{CzCH}_2\text{CzC}(\text{CN}_2)\text{Cz})$) where the vinylidene dinitrile content is no less than every other unit in the polymer chain.

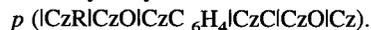
***olefin**—a manufactured fiber in which the fiber-forming substance is any long-chain synthetic polymer composed of at least 85 % by weight of ethylene, propylene, or other olefin units, except amorphous (noncrystalline) polyolefins qualifying under **rubber, 1**.

*******PBI**—a manufactured fiber in which the fiber-forming substance is a long chain aromatic polymer having reoccurring imidazole groups as an integral part of the polymer chain.

*****polyester**—a manufactured fiber in which the fiber-forming substance is any long-chain synthetic polymer composed of at least 85 % by weight of an ester of a substituted aromatic carboxylic acid, including but not restricted to substituted terephthalate units,



and para substituted hydroxy-benzoate units,



D 123, D13

object beam—the portion of laser radiation which illuminates the test object surface, is scattered, and carries object information to the recording medium. **E 1316, E07**

object beam angle—the angle between a line from the center of the object to the center of the recording medium and the normal to the center of the recording medium. **E 1316, E07**

object evaporation—See **shadowing**. **E 7, E04**

object-film distance—the distance between the surface of the source side object and the plane of the recording medium.

NOTE—In the case where the recording medium is placed directly in contact with the object being examined, the distance is equal to the thickness of the object. **E 1316, E07**

objective—the primary magnifying system of a microscope. A system, generally of lenses, less frequently of mirrors, forming a real, inverted, and magnified image of the object. **E 175, E41**

objective, n—the first part of a performance statement, consisting of a qualitative statement of the performance to be provided by the built element being addressed in order to satisfy a particular user need. **E 2151, E06**

objective aperture—See **aperture**. **E 7, E04**

objective evidence, n—data supporting the existence or verity of something. **E 1605, E06**

objective, fluorite—an objective using the mineral fluorite in its construction. It is usually intermediate between achromatic and apochromatic in correction, but may be more highly corrected. **E 175, E41**

object mode, n—color seen as ascribed to an object. **E 284, E12**

object plane resolution—the dimension in the object plane that corresponds to the product of a system's instantaneous field-of-view and a specified distance from the system to the object. **E 1316, E07**

object scattered neutrons—neutrons scattered by the test objects that contribute to the film exposure. **E 1316, E07**

objects of cultural heritage, n—any items taken from nature, or modified or created by humankind that are significant for cultural interpretation and scientific research. **D 123, D13**

objects of cultural heritage, n—any man-made or modified natural article that reflects the beliefs, social forms, and material traits of racial, social, religious, or other specific groups. **D 5038, D13**

objects of natural heritage, n—any items taken from nature, modified or unmodified, that are significant for the interpretation of the natural environment, or that are significant for cultural and scientific research. **D 123, D13**

objects of natural heritage, n—any items taken from nature, modified or unmodified, that are significant for the interpretation of the natural environment. **D 5038, D13**

obligate aerobe, n—microorganism with an absolute requirement for atmospheric oxygen in order to function. **D 4175, D02**

obligate anaerobe, n—microorganism that cannot function when atmospheric oxygen is present. **D 4175, D02**

oblique illumination—nonspecular illumination under which the light impinges at an oblique angle to the optical axis. (See **conical illumination**; **diffuse illumination**; **darkfield illumination**.) **E 7, E04**

oblique illumination—see **illumination, oblique**. **E 175, E41**

observation, n—the process of determining the presence or absence of attributes or making measurements of a variable. **D 123, D13**

observation, n—a result of the process of determining the presence or absence of an attribute or making a measurement of a variable. (Compare **measurement value**, **determination value**, and **test result**) **D 123, D13**

observation, n—the process of obtaining information regarding the presence or absence of an attribute of a test specimen, or of making a reading on a characteristic or dimension of a test specimen. **E 456, E11**

observation, n—a judgement that is based on what one sees while

conducting lead hazard activities and that is substantiated by **objective evidence**. **E 1605, E06**

observation angle, n—angle between the axes of the incident beam and the observed (reflected) beam, (in **retroreflection**, α , angle between the illumination axis and the observation axis). **E 284, E12**

observation well—typically, a small diameter well used to measure changes in hydraulic head, usually in response to a nearby pumping well. **D 653, D18**

observed dropping point, n—the value noted on the thermometer monitoring the internal temperature of the grease test cup when the first drop of material falls from the test cup and reaches the bottom of the test tube. **D 4175, D02**

observed fluorescence lifetime, τ —the time required for the fluorescence intensity to decay to 1/e of its initial value after the termination of excitation. **E 131, E13**

observed value, n—the value obtained by making an observation. **E 456, E11**

observer, n—(1) an assessor in a visual sensory test. (See also **assessor**.) (2) a person who is watching an individual or group to collect information about behavior, responses to products, test protocols, or processes. **E 253, E18**

observer metamerism, n—the property of specimens having different spectral characteristics and having the same color when viewed by one observer, but different colors when viewed by a different observer under the same conditions. **E 284, E12**

obsidian—a highly siliceous natural glass. **C 162, C14**

obvious ignition, n—pronounced continuous and self-sustaining combustion of the test system accompanied by rapid generation of heat and smoke. It is a matter of operator judgment based upon experience in this type of operation. **E 176, E05**

occluded cell—an electrochemical cell created at a localized site on a metal surface which has been partially obstructed from the bulk environment. **G 15, G01**

occluded vapor phase—condition of contaminant residence in which volatilized contaminants occur in porosity that is ineffective to free and open gaseous flow and exchange, such porosity generally being microporosity; frequently termed dead-end pore space. **D 653, D18**

occlusion—the trapping of undissolved gas in a solid during solidification. **E 1316, E07**

occlusion, n—the physical process of covering a chemical that has been applied to or spilled on the skin, thereby disallowing its evaporation and generally increasing its absorption through the skin. **F 1494, F23**

occupancy instrument (OI) (accord d'occupation(AO))—agreement between a prospective or current occupant and the manager or owner of a facility concerning occupancy in that facility. **E 631, E06**

occupancy instrument (OI) (accord d'occupation(AO))—agreement between a prospective or current occupant and the manager or owner of a facility concerning occupancy in that facility. **E 1480, E06**

occupancy, n (occupation)—discouraged term, to be used only in connection with building codes, where the term refers to the number of occupants in a space, or other specific classification of use. **E 631, E06**

occupancy, n (occupation)—discouraged term, to be used only in connection with building codes, where the term refers to the number of occupants in a space, or other specific classification of use. **E 1480, E06**

occupant, n—of a facility, a group, department, agency or corporation, or other organization, or a part thereof, or an individual or individuals thereof, that is or will be occupying space in a particular facility.

occupiable space—See **building space**.

office—See **building space**.

occupant, n

office, n—a place, such as an open workspace, room, suite, or building, in which business, clerical, or professional activities are conducted.

ogee—See **railing systems**. E 631, E06

occupant (occupant)—(1) Department, agency, corporation, or other organization, or a part thereof, that is or will be occupying space in a particular facility. (2) Individual or family living in a housing dwelling.

building occupant (occupantd'un immeuble)—one who has certain rights to, possession of, or control over the premises occupied, such as **tenant** or owner.

overall serviceability score—See **serviceability score**. E 631, E06

occupant (occupant)—(1) Department, agency, corporation, or other organization, or a part thereof, that is or will be occupying space in a particular facility. (2) Individual or family living in a housing dwelling.

building occupant (occupantd'un immeuble)—one who has certain rights to, possession of, or control over the premises occupied, such as **tenant** or owner. E 1480, E06

occupants—those tenants, subtenants, or other persons or entities using the property or a portion of the property. D 5681, D34

occupational exposure limit to asbestos—the maximum time weighted average (TWA) number of asbestiform fibers to which nearly all workers may be repeatedly subjected over a normal day or a 40-h week and the peak number of asbestiform fibers to which an individual may be subjected during 15 min or less, without known adverse health effects. Lifetime exposure is based on 99 % probability of protecting all workers from acquiring clinically significant disease for a working life of 50 years. E 1542, E34

occupational exposure limit to carbon disulfide—the maximum time weighted average (TWA) of carbon disulfide to which nearly all workers may be repeatedly subjected over a normal 8-h day or a 40-h week, the ceiling concentration of carbon disulfide or the maximum peak above ceiling concentration of carbon disulfide that cannot be exceeded, without known adverse health effects. Lifetime exposure is undefined. E 1542, E34

occupational exposure limit to ozone—the maximum time weighted average (TWA) of ozone to which nearly all workers may be repeatedly subjected over a normal 8-h day or a 40-h week or the ceiling limit of ozone that cannot be exceeded, without known adverse health effects. Lifetime exposure is undefined. E 1542, E34

occupational exposure limit to quartz dust—the maximum time weighted average (TWA) concentration of respirable quartz particles to which nearly all workers may be repeatedly subjected over a normal 10-h day or a 40-h week without known adverse health effects. Ceiling and lifetime exposures are undefined. E 1542, E34

occupational exposure limit to synthetic amorphous silica—the maximum time weighted average (TWA) concentration of respirable synthetic amorphous silica to which nearly all workers may be repeatedly subjected over a normal 8-h day or a 40-h week without known adverse health effects. Ceiling and lifetime exposures are undefined. E 1542, E34

occupational exposure limit to water-insoluble chromates—the maximum time weighted average (TWA) concentration of water-insoluble chromates as chromium to which nearly all workers may be repeatedly subjected over a normal 8-h day or a 40-h week without known adverse health effects. Ceiling and lifetime exposures are undefined. E 1542, E34

occupational exposure limit XXXXX, "generic"—the maximum time weighted average (TWA) concentration to which nearly all workers may be repeatedly subjected for a normal 8- to 10-h workday, 40-h workweek without known adverse health effects. E 1542, E34

occupiable space—space normally used by people. E 631, E06

occurrences spectrum—*in fatigue loading*, representation of spectrum loading contents by the number of times a particular loading

parameter (peak, range, and so forth) occurs within each specified loading interval between lower and upper bound values.

E 1823, E08

OCR—See **optical characterrecognition**. F 149, F05

OCR-A—an abbreviation commonly applied to the character set contained in ANSI X3.17-81. F 149, F05

OCR-B—an abbreviation commonly applied to the character set contained in ANSI X3.49-75 (R-1982). F 149, F05

octane number, n—*for spark ignition engine fuel*, any one of several numerical indicators of resistance to knock obtained by comparison with reference fuels in standardized engine or vehicle tests.

D 4175, D02

octave band, n—a band of sound frequencies for which the highest frequency in the range is (within 2%) twice the lowest frequency. The position of the band is identified by the rounded geometric mean of the highest frequency and the lowest frequency of the band. The nominal mid-band frequencies of "preferred" octave bands as defined in ANSI S1.6 fall in the series 16, 31.5, 63, 125, 250, 500, 1000 Hz etc. C 634, E33

octave band sound pressure level, OBSPL— L_{p1}/f where f indicates the nominal center frequency of a specific band if applicable, [nd], (dB), n —sound pressure level for sound filtered using an octave-band filter meeting the requirements of ANSI S1.11. C 634, E33

ocular—see **eyepiece**. E 175, E41

ocular micrometer—a glass disk, of a diameter which permits introducing it into standard oculars, upon one surface of which a fine scale is engraved accurately. E 7, E04

OD—the outside dimension of a **package** or part, or outside diameter of a cylindrical container or wire or rod. D 996, D10

odor, n—that property of a substance which affects the sense of smell; any smell; scent; perfume.

odor threshold, n—the concentration of an odorous compound at which the physiological effect elicits a response 50 % of the time. D 1356, D22

odor, n—*of a wax*, the numerical rating corresponding to the odor scale description that best fits the sample being tested.

D 4175, D02

odor, n—See **aroma**. E 253, E18

odorant, n—odorous substance. D 1356, D22

odorant, n—a substance that stimulates the olfactory receptors. E 253, E18

odor-intensity index, n—the number of times the concentration of the original sample is halved by addition of odor-free water to obtain the least definitely perceptible odor. D 1129, D19

odor threshold—See **odor**. D 1356, D22

odor threshold number, n—the greatest dilution of the sample with odor-free water to yield the least definitely perceptible odor.

D 1129, D19

OEM—original equipment manufacturer. D 6161, D19

OEM coatings, n—original equipment manufacturers coatings, which include automotive, marine, furniture, appliance, as well as many other miscellaneous consumer and industrial applications.

D 16, D01

oersted, Oe—the unit of magnetic field strength in the cgs-emu system of units. One oersted equals a magnetic field strength of 1 Gb/cm of flux path. One oersted equals $1000/4\pi$ or 79.58 ampere-turns per metre. See **magnetic field strength**. A 340, A06

offal—parts of hides not used for standard grades of leathers, the heads, shoulders, and bellies of heavy leather. D 1517, D31

off-axis laminate—a laminate whose principal axis is oriented at an angle theta other than 0 or 90° with respect to a reference direction, usually related to principal load or stress direction. D 3878, D30

off-axis response ($U/(U_r \cos \theta)$), n—the ratio of the indicated wind speed (U) at various angles of attack θ to the indicated wind speed at zero angle of attack (U_r) multiplied by the cosine of the angle of attack. D 1356, D22

off-diagonal element, n—*in bispectral photometry*, any element of a

- bispectral matrix for which irradiation and viewing wavelengths are not equal. E 284, E12
- offgas*, *v*—see **outgas**. E 2114, E06
- off grade**, *adj*—not meeting predetermined specifications. D 1968, D06
- offhand glass**—glass produced by the offhand process. C 162, C14
- offhand process**—the process of forming glassware by a craftsman working without the aid of molds. C 162, C14
- office**, *n*—a place, such as a room, suite, or building, in which business, clerical, or professional activities are conducted. E 631, E06
- office copies**, *n*—(also *quick copies*, *imaged copies*), reproductions made by direct or indirect electrostatic printing, ink jet printing, thermographic processing or similar processes, as contrasted with conventional printing, such as letterpress or offset. D 1968, D06
- office overhead**, *n*—in *construction design planning and estimating*, the non-permanent portion of construction cost that is attributable to the prime contractor's home office (overhead) cost of doing business. E 833, E06
- official test aerosol**, **OTA**—a standard insecticide dispenser and formulation prepared by the Chemical Specialties Manufacturers Association (CSMA) for use in aerosol test methods for flying insects. D 3064, D10
- off-line**—pertaining to the operation of a functional unit not under the direct control of the computer. F 149, F05
- off-line measurements**, *n*—measurement where the sample is removed, isolated from, and analyzed in an area remote from the manufacturing process. E 2363, E55
- off-line medical director**—a physician responsible for all aspects of an EMS system dealing with the provision of medical care (also known as System Medical Director). F 1177, F30
- off-line testing**—eddy current tests conducted on equipment that includes the test coil and means to propel individual tubes under test through the coil at appropriate speeds and conditions. E 1316, E07
- offset**—an imperfection resulting from mold parts not properly matched, that is, a finish or base offset from the body or neck. C 162, C14
- offset*—see **set-off**. F 335, F05
- offset**, *n*—unintentional transfer of ink (as from a freshly printed substrate). F 1857, F05
- off set barbs**, *n*—angling of the barb cluster from the center line of the tape in opposite directions. F 1379, F14
- offset hinge**—a swing gate hinge that permits the gate to swing 180° from the closed to the open position (see Specification F 900). F 552, F14
- offset modulus**, J_o , (FL^{-1}), Nm^{-1} , *n*—for *geosynthetics*, the ratio of the change in force per unit width to the change in elongation below an arbitrary offset point at which there is a proportional relationship between force and elongation, and above the inflection point on the force-elongation curve. D 4439, D35
- offset paper**, *n*—an uncoated or coated paper designed for use in offset lithography. D 1968, D06
- offset point*—See **side point**. F 547, F16
- off the road tire (OTR)**, *n*—tire designed primarily for use on unpaved roads or where no roads exist, built for ruggedness and traction rather than for speed. D 5681, D34
- ogee**, *n*—a molding with a profile having a double curve formed by a convex line turning into a concave line, resulting in an S-shape. E 631, E06
- ogee**, *n*—a molding with a profile having a double curve formed by a convex line turning into a concave line, resulting in an S-shape. E 1481, E06
- ohm**—unit of electric resistance equal to the resistance of a circuit in which a potential difference of one volt produces a current of one ampere. D 6161, D19
- oil**—See **petroleum**, **vegetable**, **paraffinic**, and so forth. E 1519, E35
- oil absorption number (OAN)**, *n*—the number of cubic centimetres of dibutyl phthalate (DBP) or paraffin oil absorbed by 100 g of carbon black under specified conditions. D 3053, D24
- oil absorption number of compressed sample (COAN)**, *n*—the number of cubic centimetres of dibutyl phthalate (DBP) or paraffin oil absorbed by 100 g of carbon black after being compressed four times in a compression cylinder at 165 MPa (24 000 psi) under specified conditions. D 3053, D24
- oil air filter**—a filter or series of filters placed in the air flow line from an air compressor to reduce the oil content of the air. D 653, D18
- oil canning**—a form of buckling; in *flat sandwich constructions*, a defect occasioned by excessive compressive loads and represented by waviness of the product. E 631, E06
- oil canning**—a form of buckling; in *flat sandwich constructions*, a defect occasioned by excessive compressive loads and represented by waviness of the product. E 1749, E06
- oil color**, *n*—an oil paint containing a high concentration of colored pigment, commonly used for tinting paint. D 16, D01
- oil content**, *n*—the measured amount of oil contained in an oil-impregnated object, for example, a self-lubricating bearing. B 243, B09
- oiled**, *adj*—describing a coating applied to metallic coated steel sheet alone or in addition to chemical treatment for further protection against the onset of storage corrosion; the oil coating is intended as a corrosion inhibitor only and not as a rolling or drawing lubricant. A 902, A05
- oil furnace process**, *n*—a process for producing furnace carbon blacks that uses oil as the source of hydrocarbons for decomposition by injection into a high-velocity stream of combustion gases. D 3053, D24
- oil-gas tar**, *n*—tar produced by cracking oil vapors at high temperatures in the manufacture of oil gas. D 8, D04
- oiling off**—coating the surface of leather with oil. D 1517, D31
- oil of (pine) tar**, *n*—certain heavier fractions of the volatile oil recovered by distilling pine-tar oil to convert it into pine tar. D 804, D01
- oil of turpentine**, *n*—the pharmaceutical name for spirits of turpentine that conforms to the requirements of the National Formulary. D 804, D01
- oil paint*—under **paint**, see *oil paint*. D 16, D01
- oil resistance**, *n*—of *insulating varnish*, a measure of the retention of properties after exposure to a specified oil under specified conditions of test. D 1711, D09
- oil resistance**, *n*—the ability of a substrate to resist oil present on human fingers. F 1857, F05
- oil separation**, *n*—the appearance of a liquid fraction from an otherwise homogeneous lubricating composition. D 4175, D02
- oil spillage**, *n*—a localized deterioration or softening of a bituminous pavement surface caused by the spilling of oil, fuel, or other solvents. E 867, E17
- oil spillage**, *n*—a localized deterioration or softening of the pavement surface caused by the spilling of oil, fuel, or other solvents. E 1778, E17
- oil tannage**—tannage with cod oil or other oxidizable oil, usually of marine origin. D 1517, D31
- oil-tempered**—heated above the critical temperature, quenched in oil, and tempered. F 547, F16
- oil trap**—a device used to remove oil from the compressed air discharged from an air compressor. D 653, D18
- oil varnish*—under **varnish**, see *oil varnish*. D 16, D01
- OL**—abbreviation for **open loop**. F 1457, F05
- old growth**—timber in or from a mature, naturally established forest. If the trees have grown during most of their lives in active competition for sunlight, the bole is usually straight and relatively free of limbs. D 9, D07
- olefin fiber**—a manufactured fiber in which the fiber-forming substance is any long-chain synthetic polymer composed of at least

olefin fiber

85 % by weight of ethylene, propylene, or other olefin units, except amorphous (noncrystalline) polyolefins qualify under rubber. **D 123, D13**

olefin fiber—a manufactured fiber in which the fiber-forming substance is any long-chain synthetic polymer composed of at least 85 % by weight of ethylene, propylene, or other olefin units, except amorphous (noncrystalline) polyolefins qualify under rubber. **D 4849, D13**

olefin plastic, n—a plastic based on polymers made by the polymerization of olefins or copolymerization of olefins with other monomers, the olefins being at least 50 mass %. **F 1251, F04**

olefin plastics—plastics based on polymers made by the polymerization of olefins or copolymerization of olefins with other monomers, the olefins being at least 50 mass %. **D 883, D20**

olefin plastics—plastics based on polymers made by the polymerization of olefins or copolymerization of olefins with other monomers, the olefins being at least 50 mass %. (D20) **F 412, F17**

oleoresin, n—pine gum, the nonaqueous secretion of resin acids dissolved in a terpene hydrocarbon oil that is produced or exuded from the intercellular resin ducts of a living tree, and is present, together with oxidation products, in the dead wood of weathered limbs and stumps. **D 804, D01**

oleoresin, n—a plant product containing chiefly essential oil and resin. **F 141, F06**

oleoresins—nonaqueous secretions of resin acids dissolved in terpenic hydrocarbons that are produced or exuded from the intercellular resin ducts of living trees, especially the conifers, and accumulated, together with oxidation products, in the wood of weathered limbs or stumps. **D 1695, D01**

olfaction, n—(1) the sense of smell. (2) pertaining to the act of smelling. **E 253, E18**

olfactory, adj—of, relating to, or connected with the sense of smell. **D 1356, D22**

olfactory, adj—pertaining to the sense of smell. **E 253, E18**

oligomer, n—a substance composed of only a few nonomeric units repetitively linked to each other, such as a dimer, trimer, tetramer, etc., or their mixtures. **D 883, D20**

oligomer, n—a polymer consisting of only a few monomer units such as a dimer, trimer, tetramer, and the like, or their mixtures. **D 1566, D11**

oligomer, n—a polymer consisting of only a few monomer units such as a dimer, trimer, tetramer, etc., or their mixtures. (D20) **F 412, F17**

oligomer, n—a polymer consisting of only a few monomer units such as a dimer, trimer, tetramer, and so forth, or their mixtures. **F 1251, F04**

oligomerization, n—the process of converting a monomer or mixture of monomers into a oligomer. **D 883, D20**

oligosaccharides—polymeric carbohydrates containing relatively few (compared to the polysaccharides) sugar units connected by glycosidal linkages. Two to nine units has been suggested as a suitable range. For longer chains the polymers cannot be readily separated into individual molecular species. **D 1695, D01**

O&M—operation and maintenance. **D 6161, D19**

omnidirectional, adj—refers to a code format that can be read, regardless of orientation, from a multiplicity of angles. **F 1294, F05**

OMR (optical mark reading)—the process of identification of marks by an optical scanner. **F 149, F05**

one-coat ware, one-coat work—(1) articles finished in a single coat of porcelain enamel.

(2) Sometimes a contraction of one-cover-coat ware, in which the finish consists of a single cover coat applied over ground coat. **C 286, B08**

one-fire finish—a porcelain enamel on the finished product processed in a single firing. **C 286, B08**

one-on-one—the application of a single ply of roofing over the

substrate, followed by the application of a second single ply over the first (phased application). **D 1079, D08**

one-percent length (L1 %N), n—*in fiber testing*, the length exceeded by 1 % of the number of fibers in a test specimen. **D 123, D13**

one-percent length (L1 %N), n—*in fiber testing*, the length exceeded by 1 % of the number of fibers in a test specimen. **D 7139, D13**

one-piece woven, adj—*for inflatable restraints*, a descriptive related to either 1) a tubular woven fabric composed of two-layer inflatable sections, visible lines where the two layers initially interlace, and non-inflatable woven sections, or 2) the cushion cut from such fabric. **D 6799, D13**

on-feet—the desired and optimum uniformity of contact between the type font line and the platen. **F 221, F05**

on-grade—in contact with the ground, *as related to floor location*, in contact with the ground or with less than 18 in. of well-ventilated space between the bottom of the lowest horizontal structural member and any point of the ground. **F 141, F06**

onion—(1) a term sometimes used for the bulklike mass of glass at the origin of the drawn sheet in the Fourcault process.

(2) the spread of molten glass as it flows from a canal onto a tin bath. **C 162, C14**

on-line—pertaining to the operation of a functional unit when under the direct control of the computer. **F 149, F05**

on-line analysis—analytical procedure performed in a process environment using automatic or continuous sampling. **D 4790, D16**

on-line instrument—automated instrument that samples gas directly from the pipeline, but is installed externally. **D 4150, D03**

on-line measurements, n—measurement where the sample is diverted from the manufacturing process, and may be returned to the process stream. **E 2363, E55**

on-line medical physician—a physician immediately available for communication of medical direction to non-physician prehospital care providers in remote location. **F 1177, F30**

on-line testing—eddy current tests conducted on equipment that includes the test coil and means to propel tubes under test through the coil at appropriate speeds and conditions as an integral part of a continuous tube manufacturing sequence. **E 1316, E07**

on-location cleaning, n—*for textile floorcoverings and upholstered furniture*, a cleaning process performed in the location where a product is used. **D 123, D13**

on-location cleaning, n—*for textile floor coverings and upholstered furniture*, a cleaning process performed in the location where a product is used. **D 5253, D13**

onset point (temperature or time), n—the temperature or time at which a deflection is first observed from the established baseline prior to the thermal event. **E 473, E37**

onset temperature, n—the temperature at which a deflection from the established baseline is first observed. **E 1445, E27**

onset temperature, n—in a thermal transfer ribbon, the temperature at which the imaging material begins to change physical form (that is, start to melt). **F 1623, F05**

onshore permafrost—permafrost beneath exposed land surfaces. **D 7099, D18**

onyx marble—translucent, generally layered, cryptocrystalline calcite with colors in pastel shades, particularly yellow, brown, and green. **C 119, C18**

oolitic limestone—a limestone composed largely of the spherical or subspherical particles called oolites or ooliths. **C 119, C18**

ooze—traditionally, vegetable-tanned suede leather. Now also refers to other tannages sueded or napped on the grain side. **D 1517, D31**

opacifier—a material that imparts or increases the diffuse reflectance of porcelain enamel. **C 286, B08**

opacity—the property of reflecting light diffusely and nonselectively; properly defined in Test Method C 347 under the term *contrast ratio*. **C 286, B08**

opacity, n—the degree of obstruction to the transmission of visible light.

In this sense "opacity" is a relative term, it being considered that given a film sufficiently thin, in paint technology at least, there is no absolutely opaque substance.

D 16, D01

opacity, *n*—a measure of the degree to which the intensity of light is reduced as it passes through a gas, due to absorption and scattering.

D 1356, D22

opacity, *n*—of paper, one hundred times the ratio of the light reflected by a paper specimen when the specimen is backed by a black body of 0.5 % reflectance or less to that when the specimen is backed by a thick stack of the same kind of paper.

D 1968, D06

opacity, *n*—(1) *optical*, the ability of a specimen to prevent the transmission of light; the reciprocal of the transmittance factor.

(2) *paper backing*, the ability of a sheet of paper to hide a surface behind and in contact with it, expressed as the ratio of the reflectance factor R_b when the sheet is backed by a black surface to the reflectance factor R_∞ when it is backed by a pile of sheets of the same kind, and of such number that further addition of sheets does not affect the measured opacity.

(3) *white backing*, the ability of a thin film or sheet of material, such as paint or paper, to hide a surface behind and in contact with it, expressed as the ratio of the reflectance factor R_b when the material is backed by a black surface to the reflectance factor R_w when it is backed by a white surface (usually having a reflectance factor of 0.89).

E 284, E12

opacity—the property of paper that minimizes the show-through of printing from the back side or the next sheet. The ratio of the paper reflectance with a black backing to the paper reflectance with a white backing.

F 149, F05

opacity (printing), *n*—See **opacity (2) paper backing**.

E 284, E12

opacity value, *n*—the calculated value of a material by means of two reflectance measurements, R_1 and R_2 . The first measurement, R_1 , is taken on a sample of a blank material using an infinite pad backing. The second measurement, R_2 , is taken of the same blank material with black backing. The reflectance value of the black backing should not exceed 5 %. The opacity value is calculated according to the following equation:

$$\text{Opacity value} = 1.00 - (R_1 - R_2/R_1) = R_2/R_1$$

F 1294, F05

opal glass—glass with fiery translucence; typically a nearly opaque white glass.

C 162, C14

opaque, *adj*—transmitting no optical radiation.

E 284, E12

opaque body, *n*—body that transmits practically no light.

E 349, E21

opaque glaze—See *opaque glaze* under **glaze**.

C 242, C21

opaque wall—all exposed areas of a wall that enclose conditioned space, except openings for windows, doors and building service systems.

open construction—See **building constructions**.

open-plan workstation—See **building space**.

open system—See **building system**.

operable—See **windows and doors**.

E 631, E06

open—the quality of asbestos with a relatively high specific surface area and degree of fiberization, free from an appreciable portion of crudy material.

D 2946, C17

open area, *n*—the ratio of the total area of the apertures to the total functional area of the screening media, expressed as a percentage.

E 1638, E29

open assembly time, *n*—interval between adhesive application to the adherends and assembly of the adhesive joint.

D 907, D14

open bubble—a surface cavity formed by a gaseous inclusion which was vented to ambient atmosphere during processing.

C 162, C14

open-cavity ice—ice formed in an open cavity or crack in the ground by reverse sublimation of water vapor.

D 7099, D18

open cell, *n*—in carbon and graphite technology, a cell that is not totally enclosed in its walls and hence interconnected with other cells. An open-cell foam is a foam consisting predominantly of open or connected cells.

C 709, D02

open cell, *n*—a cell not totally enclosed by its walls and hence interconnecting with other cells.

C 717, C24

open cell, *n*—in carbon and graphite technology, a cell that is not totally enclosed in its walls and hence interconnected with other cells. An open-cell foam is a foam consisting predominantly of open or connected cells.

D 4175, D02

open cell, *n*—a cell not totally enclosed by its walls, and hence interconnecting with other cells. (See **closed cell**.)

F 1251, F04

open-cell cellular plastic, *n*—a cellular plastic in which there is a predominance of interconnected cells.

D 883, D20

open-cell cellular plastic, *n*—a cellular plastic in which there is a predominance of interconnected cells. (D20)

F 412, F17

open cell foam, *n*—a material comprised predominantly of interconnecting cellular voids.

C 168, C16

open cell material, *n*—a cellular material in which substantially all cells in the mass are open cells.

C 717, C24

open cell sealant backing, *n*—in building construction, a flexible and very compressible fabricated shape (usually cylindrical), without a surface skin, that is composed of open cell material.

C 717, C24

open-circuit potential—the potential of an electrode measured with respect to a reference electrode or another electrode when no current flows to or from it.

G 15, G01

open circuit resistance—minimum allowable resistance as measured between two test points that, if lower than, will indicate an electrical short.

F 2112, F01

open-circuit voltage, *n*—of a photovoltaic device, the voltage potential across the positive and the negative terminals under irradiation when zero current flows into or out of these terminals.

E 1328, E44

open construction—a method by which a building, component, assembly or system is manufactured in such a manner that all portions can be readily inspected on site without disassembly or destruction.

E 631, E06

open crate—See **crate**.

D 996, D10

open cut—an excavation through rock or soil made through a hill or other topographic feature to facilitate the passage of a highway, railroad, or waterway along an alignment that varies in topographic relief. An open cut can be comprised of single slopes or multiple slopes, or multiple slopes and horizontal benches, or both. (ISRM)

D 653, D18

open deep fat fryer—equipment with a deep kettle containing oil or fat for cooking food within a perforated container. See **fryer**.

F 1827, F26

open-end spinning machine, *n*—a textile machine for converting staple fiber into spun yarn by a continuous process in which the individual fibers or groups of fibers are caused to assemble at the open end of the forming yarn. (See **rotor-type open-end spinning machine**.)

D 123, D13

open-end spinning machine, *n*—a textile machine for converting staple fiber into spun yarn by a continuous process in which the individual fibers or groups of fibers are caused to assemble at the open end of the forming yarn. (See also **rotor-type open-end spinning machine**.)

D 3888, D13

open-end yarn, *n*—a continuous strand of fibers, produced directly from sliver or roving, in a single continuous operation, by opening and reassembling them in a spinning element to form the yarn.

D 3888, D13

open-face fabric, *n*—a face or shell fabric constructed with specifically designed open areas to show the substrate when joined to another material.

D 123, D13

open flame sunshine carbon arc, *n*—a light source in which an arc is produced across a pair of copper coated carbon rods filled with rare earth elements intended to produce a specific spectral power distribution. The carbons are open to the atmosphere and may be surrounded by a glass lantern arrangement which acts to modify the spectral power distribution received by the specimens.

G 113, G03

open-graded aggregate, *n*—an aggregate that has a particle size distribution such that when it is compacted, the voids between the

open-graded aggregate, *n*

aggregate particles, expressed as a percentage of the total space occupied by the material, remain relatively large. **D 8, D04**

open grain—See **grain**. **D 9, D07**

opening—for the purpose of Test Method D 4749, openings and apertures shall be regarded as synonymous terms. Dimensions for round and square openings shall be determined as follows: for round holes, dimensions shall refer to the opening diameter; for square holes, dimensions shall refer to the distance between parallel wires. **D 121, D05**

opening device, *n*—in *open-end spinning*, either a drafting system or an opening roller which separates the feed stock into individual fibers or very small tufts prior to their reassembly into yarn. (See **feed unit**.) **D 123, D13**

opening device, *n*—in *open-end spinning*, either a drafting system or an opening roller which separates the feed stock into individual fibers or very small tufts prior to their reassembly into yarn. **D 3888, D13**

opening force—the force available to open the contacts. **B 542, B02**

opening roller, *n*—a component of the opening device in *open-end spinning machines*, a roller covered with pins or teeth or similar device used to separate the feed stock into individual fibers or very small tufts by a continuous combing action. **D 123, D13**

opening roller, *n*—a component of the opening device in *open-end spinning machines*, a roller covered with pins or teeth or similar device used to separate the feed stock into individual fibers or very small tufts by a continuous combing action. (*Syn.* combing roll) **D 3888, D13**

open loop, *n*—a way of electronically interconnecting the components of a system. **F 1457, F05**

open loop, *adj*—refers to a testing mode in which fresh collection medium flows continuously through the collection chamber of the test cell. **F 1494, F23**

open place—See **crack mark**. **D 3990, D13**

open-plan workstation—office workspace for one person, not enclosed by full-height walls. **E 631, E06**

open pore, *n*—a pore communicating with an exterior surface. **B 243, B09**

open porosity—See *open porosity* under **porosity**. **C 242, C21**

open pot—a pot open to the flames and gases of combustion. **C 162, C14**

open pot—a pot wherein the glass surface is not protected from the furnace atmosphere. **C 162, C14**

open seams—unfilled fissures or naturally occurring cracks in stone. **C 119, C18**

open system—a building system, designed to have interchangeability of its **subsystems**, subassemblies, **components**, or building elements with like **subsystems**, subassemblies, **components**, or elements of other systems. **E 631, E06**

open-system freezing—freezing that occurs under conditions in which water can be gained or lost by the system. **D 7099, D18**

open-system pingo—a pingo formed by doming of frozen ground due to the freezing of injected water supplied by groundwater moving downslope through taliks to the site of the pingo, where it moves to the surface. **D 7099, D18**

open talik—a body of unfrozen ground that penetrates the permafrost completely. **D 7099, D18**

open time, *n*—length of time a coating remains wet enough to allow for brushing-in at the laps; also called wet edge time. **D 16, D01**

open water boom—boom intended for use in open waters (see Practice F 625 for environmental descriptors). **F 818, F20**

open wound, *n*—a wound that communicates with the atmosphere by direct exposure. **F 2312, F04**

operating characteristic curve (OC-curve), *n*—in *acceptance sampling*, the curve which has as its abscissa a hypothesized lot average, and which has as its ordinate the probability of accepting the lot, when the plan is used. (See also **Type A operating characteristic curve** and **Type B operating characteristic curve**.) **D 123, D13**

operating conditions, extreme—unusual physical conditions to which a component or system may be exposed and for which it is not designed or intended to withstand, nor is it required to withstand by a local regulatory agency. **E 772, E44**

operating conditions, normal—the usual range of physical conditions (for example, temperature, pressure, wear and tear, weather) for which the component or system was designed. **E 772, E44**

operating cost—the expenses incurred during the normal operation of a building or a building system or component, including labor, materials, utilities, and other related costs. **E 631, E06**

operating cost, *n*—the expenses incurred during the normal operation of a building or a building system or component, including labor, materials, utilities, and other related costs. **E 833, E06**

operating cycle, *n*—an ion-exchange process consisting of a backwash, regeneration, rinse, and service run. **D 1129, D19**

operating humidity, *n*—relative humidity of ambient air which allows operation of an *IR thermometer* within a specified *laboratory error range*. **E 344, E20**

operating humidity range of analyzer—See **analyzer**. **D 1356, D22**

operating humidity range of sample—See **sample**. **D 1356, D22**

operating pressure—the gage hydraulic pressure at which feedwater enters a device. **D 6161, D19**

operating pressure, *n*—the pressure expected under normal operating conditions. **G 126, G04**

operating site, *n*—in waste management, a location or facility where waste is treated, stored, or disposed as part of an on-going operation. **D 5681, D34**

operating temperature, *n*—ambient temperature that allows operation of an *IR thermometer* within specified *laboratory error range*. **E 344, E20**

operating temperature, *n*—the temperature expected under normal operating conditions. **G 126, G04**

operating temperature range of analyzer—See **analyzer**. **D 1356, D22**

operating temperature range of sample—See **sample**. **D 1356, D22**

operational control point, *n*—a set point for equilibrium conditions measured at sensor location(s) in an exposure device. **G 113, G03**

operational control point tolerance, *n*—the permissible deviation from the operational control point including permitted random deviation during equilibrium conditions in an exposure device. **G 113, G03**

operational definition, *n*—a definition that describes the procedure or process by which an entity is made or calculated. **E 1992, E02**

operationally valid standard test, *n*—in *automotive lubricant testing*, a standard test that meets operational validity requirements, where specified. **D 4175, D02**

operational period—See **analyzer**. **D 1356, D22**

operational uniformity, *n*—the range around the operational control point for measured parameters within the intended exposure area within the limits of intended operational range. **G 113, G03**

operator, *n*—a person who normally and regularly carries out a particular test. **D 4175, D02**

operator—person having direct control of equipment or operation. **E 631, E06**

operator—the person having direct control of the starting, stopping, or speed of an amusement ride. **F 747, F24**

operator, *n*—means any person who causes or authorizes the operation of an aircraft, such as the owner, lessee, or bailee of an aircraft. Also, the entity responsible for compliance with airworthiness and continuing airworthiness requirements. **F 2395, F38**

operator maintenance—maintenance tasks of a minor nature, including preventative maintenance, performed by equipment operators at the most convenient time, whether it is before, during, or after operations. **E 2135, E53**

ophthalmic glass—glass used in eyeglasses. **C 162, C14**

opponent-color scales, *n*—scales that denote one color by positive scale values, the neutral axis by zero value, and an approximately complementary color by negative scale values. Common examples

include scales that are positive in the red direction and negative in the green direction (CIE a^* , Hunter a) and scales that are positive in the yellow direction and negative in the blue direction (CIE b^* , Hunter b). E 284, E12

opportunity cost of capital—the rate of return available on the next best available investment of comparable risk.

overall rate of return (ORR)—See **adjusted internal rate of return (AIRR)**. E 631, E06

opportunity cost of capital, n —the rate of return available on the next best available investment of comparable risk. E 833, E06

optic, *adj*—having variations in wall thickness, producing refractive effects. C 162, C14

optic, n —a lens or prism in an optical instrument. C 162, C14

optical axis, n —an imaginary line joining the centers of curvature of the surfaces of lenses or mirrors in an optical system. E 135, E01

optical bleach—see **fluorescent whitening agents (FWA)**.

D 459, D12

optical brightener, n —discouraged term for **fluorescent whitening agent**. E 284, E12

optical brightener—a material often added to paper during its manufacture to improve its brightness or whiteness. These materials can cause erratic reflectance values when used with optical scanners that are sensitive to the short wavelength portions of the spectrum. See **fluorescence**. F 149, F05

optical character reader—an information processing device that accepts prepared forms and converts data from them to computer output media via **optical character recognition**. F 149, F05

optical character recognition (OCR)—**character recognition** that uses optical means to identify graphic characters. F 149, F05

optical crown glass—optical glass with a low dispersion relative to its index of refraction, usually forming the converging element of an optical system. Generally, optical glasses possessing an Abbé value greater than 50. C 162, C14

optical density, n —see **reflectance density, reflection density, transmittance density, transmittance density**. E 284, E12

optical density—the degree of opacity of a translucent medium (darkening of film) expressed as follows:

$$OD = \log(I_o/I)$$

where:

OD = optical density,

I_o = light intensity incident on the film, and

I = light intensity transmitted through the film.

E 1316, E07

optical density—the image intensity or density in terms of or measured by a reflectance densitometer. F 221, F05

optical density—a measure of image (density) by reflectance densitometer. F 335, F05

optical density of smoke, D, n —a measure of the attenuation of a light beam passing through smoke, expressed as the common logarithm of the ratio of the incident flux, I_o , to the transmitted flux, I . ($D = \log_{10}(I_o/I)$). E 176, E05

optical fiber—See **fiber, optical**. C 162, C14

optical fiber, n —a filament-shaped dielectric material that guides radiant energy. E 131, E13

optical flint glass—optical glass with a high dispersion relative to its index of refraction, usually forming the diverging element of an optical system. Generally, optical glasses possessing an Abbé value less than 50. C 162, C14

optical glass—glass of high quality having closely specified optical properties, used in the manufacture of optical systems. C 162, C14

optical glass numerical designation—the numerical designation in common usage is based on the index of refraction for the helium line (n_d) and the Abbé value. The unity factor for the index is dropped (that is, 1.496 becomes 496) and the decimal point for the Abbé value is also dropped (Abbé value 64.4 becomes 644). Thus

a glass with an index of refraction of 1.496 and an Abbé value of 64.4 is specified 496-644 without reference to chemical composition. C 162, C14

optical line pair test pattern—see **line pair test pattern**.

E 1316, E07

optical measuring path length, n —the length of the optical beam over which the atmosphere or emission concentration is measured and averaged. D 1356, D22

optical opacity—an expression for the amount of light absorbed and scattered by a suspension reported as: extinction coefficient, or percent of incident light scattered in 90°, or percent of incident light transmitted at 180° over a standard distance, or all three. D 4410, D19

optical path difference—see **retardation**.

E 131, E13

optical pyrometer—an instrument with the temperature of an object is determined by comparing its brightness at some fixed wavelength with that of a standardized source. E 7, E04

optical retardation—see **retardation**.

E 131, E13

optical scanner—(1) a scanner that uses light for examining patterns. (2) a device that scans optically and usually generates an analog or digital signal. F 149, F05

optical throw, n —the distance from the aperture of a bar code reader to the leading vertical plane of the depth of field. Also, the minimum distance a bar code symbol can be away from a scanner and still be successfully read. F 1294, F05

optical whitening agent—see **fluorescent whitening agents (FWA)**.

D 459, D12

optimal colors, n —object colors having the maximum possible luminance factor for each chromaticity. E 284, E12

optimal decision rules, n —those that restrict the types and proportion of error to those that can be tolerated by the consumers of the polygraph results. Because it is not possible to simultaneously reduce errors of one type (that is, false positives) without increasing errors of the other type, optimal decision rules are central to a judicious and rational process by which the payoff to the consumers of the polygraph decision is greatest, and the cost associated with errors is minimized. Optimal decision rules for investigative and evidentiary polygraphy may be different from one another. E 2035, E52

optimum concentration range, n —in analysis of trace metals, a range, defined by limits expressed in concentration, below which scale expansion must be used and above which curve correction should be considered. D 5681, D34

optimum cure, n —the state of vulcanization at which a desired property value or combination of property values is obtained.

D 1566, D11

optimum energy, n —energy (millijoules/square millimetres) which achieves the best optical print density and consistent, well-defined image; dependent on ribbon thickness, coating formulation, ribbon speed in the printer, and print head temperature. F 1623, F05

optimum exposure—the time-light intensity relationship that produces the most satisfactory print. F 335, F05

optimum frequency—in electromagnetic testing, that frequency which provides the largest signal-to-noise ratio obtainable for the detection of an individual material property. Each property of a given material may have its own optimum frequency. E 1316, E07

optimum moisture content (optimum water content), $OMC, w_o (D)$ —the water content at which a soil can be compacted to a maximum dry unit weight by a given compactive effort.

D 653, D18

oral temperature, t_{bm}, n —posterior sublingual temperature as measured by a *contact thermometer*. E 344, E20

orange-box nail—coated, regular-stock-steel, 1¼ by 0.072-in. nail with flat ⅞-in. head and medium diamond point. F 547, F16

orange peel—a finish resembling the dimpled appearance of an orange peel. B 374, B08

orange peel

orange peel—a pattern of roughness or waviness on a vitreous or glassy surface which resembles the skin of an orange in texture.

C 162, C14

orange peel—a pitted texture of a fired glaze resembling the surface of rough orange peel.

C 242, C21

orange peel—a surface condition characterized by an irregular waviness of the porcelain enamel resembling an orange skin in texture; sometimes considered a defect.

C 286, B08

orange peel—*in protective coatings*, the dimpled appearance of a dried coating film resembling the surface of an orange.

D 4538, D33

orange peel, n—a pattern of roughness somewhat like that of the outer surface of an orange, appearing when the film split pattern is not uniform over the printed surface.

D 6488, D01

orange peel, n—the appearance of irregularity of a surface resembling the skin of an orange.

E 284, E12

orange-peel—uneven surface somewhat resembling an orange peel.

F 412, F17

orbicular cryogenic fabric—a distinct soil micromorphology resulting from the effects of freezing and thawing, in which coarser soil particles form circular to ellipsoidal patterns.

D 7099, D18

orbital energy—XPS, Koopmans energy corrected for intra-atomic relaxation.

E 673, E42

order-disorder transformation—a phase change among two solid solutions having the same crystal structure but in which the atoms of one phase, the disordered one, are randomly distributed and in the other, the different kinds of atoms occur in a regular sequence upon the crystal lattice, that is, in an ordered arrangement.

E 7, E04

order distribution—see **lateral order**.

D 1695, D01

ordered structure—that crystal structure of a solid solution in which the atoms of different elements seek preferred lattice positions.

E 7, E04

order (in X-ray reflection)—the factor *n* in the Bragg equation (see **Bragg equation**). In X-ray reflection from a crystal, the order is an integral number which is the path difference measured in wavelengths between reflections from adjacent planes.

E 7, E04

order of a system—the number of components; for example, a system of binary order is made up of two components.

E 7, E04

order strengthening—a thermal treatment of a cold-worked product at a temperature below its recrystallization temperature causing ordering to occur to obtain an increase in yield strength.

B 846, B05

ordinance, n—a rule or law adopted by local governmental authority.

E 631, E06

organic, adj—being or composed of hydrocarbons or their derivatives, or matter of plant or animal origin.

D 1079, D08

organic chemical, n—a carbon-based compound in which the element carbon is attached to other carbon atom(s), hydrogen, oxygen, or other elements in a chain, ring, or three-dimensional structure.

nonvolatile organic chemical, n—an organic compound with a saturation vapor pressure less than 10^{-8} kPa at 25°C.

polar organic chemical, n—an organic compound that may exhibit a relatively high electric dipole moment or may be readily ionized, typically containing heteroatoms, such as oxygen, sulfur, nitrogen, phosphorus, chlorine, and bromine.

semivolatile organic chemical, n—an organic compound with a saturation vapor pressure between 10^{-2} and 10^{-8} kPa at 25°C.

total volatile organic compounds (TVOC), n—the summed concentration of all the individual volatile organic compounds (VOCs) quantifiable in an air sample by both a precisely specified sampling protocol and a precisely defined analytical method.

volatile organic chemical, n—an organic compound with a saturation vapor pressure greater than 10^{-2} kPa at 25°C.

D 1356, D22

organic clay—a clay with a high organic content.

D 653, D18

organic cryosol—an organic soil having a surface layer containing more than 17 % organic carbon by weight, with permafrost within 1 m below the surface.

D 7099, D18

organic fiber—natural or synthetic organic fiber based upon a carbon chain structure, having a length-to-diameter (or to maximum transverse dimension) ratio of at least 100 to 1.

D 2946, C17

organic fiber content, n—*for asbestos-cement*, the percentage of organic matter expressed as the equivalent percentage by mass of wood cellulose in a dried sample.

D 2946, C17

organic (inorganic) SIMS—the SIMS technique when applied to organic (inorganic) specimens or organic (inorganic) molecules placed on a solid.

E 673, E42

organic silt—a silt with a high organic content.

D 653, D18

organic soil—soil with a high organic content.

D 653, D18

organic terrain—see **peatland**.

D 653, D18

organizational component, n—a portion of an organization with specific tasks and activities that constitutes a part of the total effort and accomplishment of the organization.

D 1356, D22

organoleptic, adj—relating to a property of a sample perceived by the sense organs (obsolete, see **sensory**).

E 253, E18

organosol, n—a suspension of a finely divided polymer in a plasticizer, together with a volatile organic liquid.

D 883, D20

organosol, n—a suspension of a finely divided polymer in a plasticizer together with a volatile organic liquid.

D 1566, D11

organosol, n—a suspension of a finely divided plastic in a plasticizer, together with a volatile organic liquid.

F 1251, F04

orientation, n—*in buttons*, the degree of order and spatial alignment of pearlescent pigment crystals internally or in a coating.

D 123, D13

orientation—the angle made by the crystallites of the cellulose with the fiber axis. This is approximately the same angle as that made by the molecules or the fibrils.

D 1695, D01

orientation, n—*in buttons*, the degree of order and spatial alignment of pearlescent pigment crystals internally or in a coating.

D 5497, D13

orientation—the angular position of a crystal described by the angles which certain crystallographic axes make with the frame of reference. In hardness measurements, the relationship between the direction of the axes of the indenter of a hardness tester and the direction of non-homogeneous properties of the specimen.

E 7, E04

orientation, n—the plane in which the exposed face of the specimen is located during testing.

E 176, E05

orientation, n—the plane in which the exposed face of the specimen is located during testing, either vertical or horizontal facing up.

E 176, E05

orientation, n—the plane in which the exposed face of the specimen is located during testing, which is horizontal facing up for this test.

E 176, E05

orientation, n—the plane in which the exposed face of the specimen is located during testing.

E 176, E05

orientation, n—plane in which the exposed face of the specimen is located during testing, either vertical or horizontally face upwards.

E 176, E05

orientation, n—the plane on which the exposed face of the specimen is located during testing, which is horizontal facing up for this test.

E 176, E05

orientation (of a crystal), n—the angular position of a crystal described by the angles which certain crystallographic axes make with the frame of reference.

C 709, D02

orientation (of a crystal), n—the angular position of a crystal described by the angles which certain crystallographic axes make with the frame of reference.

D 4175, D02

orientation (of a grain), n—the angular position of a grain described by the angles which a defined set of axes of the grain make with the stated frame of reference. Generally used to characterize the

axis of the grain that has the largest physical extent, for example, in a grain of needle coke. **C 709, D02**

orientation (of a grain), *n*—the angular position of a grain described by the angles which a defined set of axes of the grain make with the stated frame of reference. Generally used to characterize the axis of the grain that has the largest physical extent, for example, in a grain of needle coke. **D 4175, D02**

orientation (of an object), *n*—the angular position of an object described by the angles which a defined set of axes or surfaces of the object make with the frame of reference. **C 709, D02**

orientation (of an object), *n*—the angular position of an object described by the angles which a defined set of axes or surfaces of the object make with the frame of reference. **D 4175, D02**

oriented lake—one of a group of lakes possessing a common, preferred, long-axis orientation. **D 7099, D18**

orifice—an opening through which glass flows. In a feeder, an opening in the bottom of the spout formed by the orifice ring. **C 162, C14**

orifice atomizer—see **plain jet atomizer**. **E 1620, E29**

orifice blower door, *n*—a blower door in which airflow rate is determined by means of the pressure drop across an orifice or nozzle. **E 631, E06**

orifice meter, *n*—a flowmeter, employing as the measure of flow rate the difference between the pressures measured on the upstream and downstream sides of the orifice (that is, the pressure differential across the orifice) in the conveying pipe or duct. **D 1356, D22**

orifice ring—that ring that forms the hole through which glass flows in the feeder process. (See also **bushing**.) **C 162, C14**

original—the object to be copied. **F 335, F05**

original crack size, a_o , [L]—the physical crack size at the start of testing. **E 1823, E08**

original length, *n*—of yarns, the length of the yarn under a specified tension. **D 4849, D13**

original source data, *n*—data as received by a center that is a source for an archive. **E 867, E17**

original twist, *n*—the twist in a single or plied yarn component of a plied or cabled yarn as the component was before incorporation into the more complex structure. **D 123, D13**

original twist, *n*—the twist in a single or plied yarn component of a plied or cabled yarn as the component was before incorporation into the more complex structure. **D 4849, D13**

original uncracked ligament, b_o , [L]—distance from the original crack front to the back edge of the specimen, that is:

$$b_o = W - a_o$$

E 1823, E08

O-ring, *n*—See **seal, O-ring**. **D 1566, D11**

O-ring gasket—a solid gasket of circular cross section. **C 822, C13**

orthel—a suborder of gelisol that contains neither large quantities of organic matter (as in histels), nor evidence of extensive mixing due to frost action (as in turbels). **D 7099, D18**

orthochromatic—(1) of, pertaining to, or producing tone values (of light or shade) in a photograph, corresponding to the tones of nature.

(2) photographic use; designating a film made sensitive to green and blue, but not red, light. **E 7, E04**

orthogonal array, *n*—a table of coefficients identifying the levels, or some weight associated with the levels, for each factor to be used in the analysis of specified effects, which are arranged in such a manner that each effect will be independent of the other effects. **E 456, E11**

orthogonal array, *n*—a table of coefficients identifying the levels, or some weight associated with the levels, for each factor to be used in the analysis of specified effects, which are arranged in such a manner that each effect will be independent of the other effects. **E 1325, E11**

orthogonal contrasts, *n*—two contrasts are orthogonal if the contrast coefficients of the two sets satisfy the condition that, when

multiplied in corresponding pairs, the sum of the products is equal to zero. See **contrast** and **contrast analysis**. **E 456, E11**

orthogonal contrasts, *n*—two contrasts are orthogonal if the contrast coefficients of the two sets satisfy the condition that, when multiplied in corresponding pairs, the sum of the products is equal to zero. See **contrast** and **contrast analysis**. **E 1325, E11**

orthogonal trajectory deviation, *n*—the perpendicular deviation or distance from the center of the vehicle to the TGL at the end of a stopping test. **F 538, F09**

orthopedic and surgical felt, *n*—a white, soft, low-density, highly resilient felt. **D 123, D13**

orthopedic and surgical felt, *n*—a white, soft, low density, highly resilient felt. **D 4845, D13**

orthopedic devices—any device of leather, metal or other material included in the construction of a shoe or inserted in a shoe to prevent or correct foot defects and deformities. **F 869, F08**

orthopedic leathers—a general term for the types of leather used in the manufacture of artificial limbs, braces, etc., for orthopedic purpose. The leathers may range from chamois and horsehide glove to case and strap leathers. **D 1517, D31**

orthorhombic—having three mutually perpendicular axes of unequal lengths. **E 7, E04**

orthotic—an accessory inserted in a shoe to prevent or correct foot defects and deformities. **F 869, F08**

orthotropic—having three mutually perpendicular planes of elastic symmetry. **E 631, E06**

orthotropic—having three mutually perpendicular planes of elastic symmetry. **E 1749, E06**

orthotropic material—a material in which a property of interest, at a given point, possesses three mutually perpendicular planes of symmetry, which taken together define the principal material coordinate system. **D 3878, D30**

ortho-xylene—1,2-dimethylbenzene (C_8H_{10}) mol weight 106.16; clear, colorless, flammable liquid; freezing point, $-25.18^\circ C$; boiling point, $144^\circ C$. **D 4790, D16**

OSA-UCS color system, *n*—Optical Society of America Uniform Color Scales color order system based on equality of visual spacing, which uses the opponent-color scales $\pm L$ (lightness), $\pm j$ (yellowness-blueness), and $\pm g$ (greenness-redness). **E 284, E12**

OSA-UCS samples, *n*—current Optical Society of America physical exemplification of the OSA-UCS color system, consisting of about 550 samples displayed on a face-centered-cubic lattice such that each interior sample has 12 nearest neighbors at equal intervals from it. **E 284, E12**

oscillating disc cure meter, *n*—a test device for determining vulcanization parameters, in which a rotationally oscillating disc is embedded in a rubber specimen in a closed heated cavity and the resistance of the rubber to disc rotation measured versus time. **D 1566, D11**

oscillating mirror scanner, *n*—a single beam scanner with a mirror that oscillates in a plane at right angles to the scanner beam which causes the field of view to be swept by the beam. **F 1294, F05**

oscillation—the variation, usually with time, of the magnitude of a quantity with respect to a specified reference when the magnitude is alternately greater and smaller than the reference. **D 653, D18**

osmosis—the spontaneous flow of water from a less concentrated solution to a more concentrated solution through a semipermeable membrane until chemical potential equilibrium is achieved. **D 6161, D19**

osmotic pressure—a measurement of the potential energy difference between solutions on either side of a semipermeable membrane. In reverse osmosis and nanofiltration systems, the applied pressure must exceed the osmotic pressure to produce permeate. **D 6161, D19**

Ostwald coefficient, *n*—the solubility of a gas, expressed as the volume of gas dissolved per volume of liquid when both are in equilibrium at the specified partial pressure of gas and at the specified temperature. **D 4175, D02**

Ostwald color system, *n*—color order system in which colors are specified in terms of the attributes hue, blackness, and whiteness, and are spaced according to the results of spinning-disk mixing of specified amounts of ideal black, white, and maximally chromatic samples. **E 284**, E12

other alkali-insoluble impurities, *n*—*in scoured wool*, the oven-dried, ash-free, alcohol-extractives-free, alkali-insoluble substances other than vegetable matter base, such as skin, cotton or other fibers, paper, string, tag (dung) pieces, and paint pieces, etc. **D 123**, D13

other alkali-insoluble impurities, *n*—*in scoured wool*, oven-dried, ash-free, alcohol-extractives-free, alkali-insoluble substances other than vegetable matter base, such as skin, cotton or other fibers, paper, string, tag (dung) pieces, paint pieces, etc. **D 4845**, D13

ounce—an ounce is equivalent in thickness to 1/64 in. (approximately 0.4 mm). **D 1517**, D31

outaging, *n*—practice of removing a portion of liquid contents from a conventional sampling cylinder after filling to provide expansion room. **D 4175**, D02

outcrop—the exposure of the bedrock at the surface of the ground. (ISRM) **D 653**, D18

outdoor exposure—normal weather conditions, that is, the sun's rays, rain, air, temperature changes, and wind. **F 412**, F17

outdoor-indoor transmission loss, *OITL*—*of a building facade, in a specified frequency band*, ten times the common logarithm of the ratio of the airborne sound power incident on the exterior of the facade to the sound power transmitted by the facade and radiated to the interior. The quantity so obtained is expressed in decibels. **C 634**, E33

outgas, *v*—a process of evaporation or chemical decomposition through which vapors are released from materials. **E 2114**, E06

outgassing, *n*—the emission of occluded gasses from a material by vacuum, heat, or pressure. **C 717**, C24

outgassing—the process by which materials expel gases. **E 772**, E44

outgassing—the evolution of gas from a material in a vacuum. **E 1316**, E07

outlet pressure—see **forepressure**. **E 1316**, E07

outlier, *n*—a result far enough in magnitude from other results to be considered not a part of the set. **D 4175**, D02

outlier—see **outlying observation**. **E 456**, E11

outlying observation, *n*—an observation that appears to deviate markedly in value from other members of the sample in which it appears. **E 456**, E11

out-of-plane measurements [L]—measurements taken on structures that are curved out-of-plane in the *z*-direction (that is, perpendicular to the underlying layer). **E 2444**, E08

out-of-roundness—the allowed difference between the maximum measured diameter and the minimum measured diameter (stated as an absolute deviation). **F 412**, F17

out of specification data, *n*—*in data acquisition*, sampled value of a monitored test parameter that has deviated beyond the procedural limits. **D 4175**, D02

output—See **analyzer**. **D 1356**, D22

output per stroke (OPS), *n*—the amount of product dispensed with one complete actuation when measured in terms of weight (grams) or volume (microliter, milliliters, or cc's). **D 6655**, D10

outside bevel divergent point—staple point with two-plane beveled face on staple outside and along thick leg side; designed to lead staple legs into opposite directions and to result at the same time in their crossing during driving. **F 592**, F16

outside bevel point—bevel point with its beveled face on staple outside. **F 592**, F16

outside diameter, *n*—the maximum diameter of a tire when it is mounted and inflated. **F 538**, F09

outside drive—a lock that is gear-driven by a spindle located outside the lock case on either the end, top, or bottom of the lock case. **F 471**, F12

outside-leg length, *n*—*in body measurements*, the distance from the side waist to the soles of the feet, following the curve of the body. **D 123**, D13

outside seam, *n*—a seam formed in which the completed seam allowance is located on the exterior of the object, usually on the face side of the fabric. (Compare **inside seam**.) **D 123**, D13

outside seam, *n*—*in home sewing*, a seam in which the seam allowance of the completed seam is visible from the face side of the sewn product. (Compare **inside seam**.) **D 4965**, D13

outsole—the bottom sole thickness. The surface of which is exposed to wear. **F 869**, F08

outward clinch—clinch with both staple legs flared outwardly during driving. **F 592**, F16

oval head, oval rivet head—circular head having convex top surface, with its height smaller than its radius. **F 547**, F16

ovality—(%),

$$\frac{(\text{maximum measured diameter} - \text{minimum measured diameter})}{\text{average measured diameter}}$$

× 100
F 412, F17

oven—general purpose equipment, operating in dry heat mode, used primarily for baking and roasting food products. **F 1827**, F26

oven-dried, *adj*—the condition of a material that has been heated under prescribed conditions of temperature and humidity until there is no further significant change in its mass. **D 123**, D13

oven-dried, *adj*—the condition of a material that has been heated under prescribed conditions of temperature and humidity until there is no further significant change in its mass. **D 4845**, D13

oven-dried, *adj*—a descriptive term for a material that has been heated under prescribed conditions of temperature and humidity until there is no further significant change in the mass of the material. **D4920**, D13

oven-dried wool, *n*—wool dried to moisture equilibrium under specified conditions. **D 123**, D13

oven drying loss—the reduction in weight resulting when a substance is heated in an oven under specified conditions. **D 2652**, D28

oven glass—(1) glass suitable for manufacture of articles to be used in baking and roasting foods.

(2) glassware made from oven glass. **C 162**, C14

oven ware—ceramic whiteware for culinary oven use. **C 242**, C21

overaging, *n*—**aging** under conditions of time and temperature greater than those required to obtain maximum change in a certain property, so that the property is altered away from the maximum. **A 941**, A01

overall cleaning, *n*—*for upholstered furniture*, the application of an appropriate cleaning agent to the entire fabric covering, accomplished while the upholstery fabric remains attached to the furniture unit. **D 123**, D13

overall cleaning, *n*—*for upholstered furniture*, the application of an appropriate cleaning agent to the entire fabric covering, accomplished while the upholstery fabric remains attached to the furniture unit. **D 7023**, D13

overall coefficient of heat transfer—See **transmittance, thermal**. **C 168**, C16

overall gas penetration resistance, *n*—the integrity of a totally encapsulating chemical protective suit to resist the inward leakage of gases when exposed to a hazardous chemical environment. **F 1494**, F23

overall height—maximum vertical dimension of boom. **F 818**, F20

overall length—the total length of the individual pipeline system, section, or fitting prior to installation. **F 412**, F17

overall liquid penetration resistance, *n*—the integrity of a chemical protective suit to resist the inward leakage of liquids when exposed to a hazardous chemical environment. **F 1494**, F23

overall magnetization—magnetization of an entire part with a single energizing cycle. **E 1316**, E07

overall precision—See **precision**. **D 1356, D22**

overall profile grade, *n*—as defined in *ANSI X3.182*, the lowest grade received by measurement of the following parameters: edge determination, overall profile reflectance grade, decode and decodability; grades may be denoted by letters (*A* to *F*) or numbers (4.0 to 0). **F 1294, F05**

overall rate of return (ORR), *n*—See **adjusted internal rate of return (AIRR)**. **E 833, E06**

overall serviceability score—See **serviceability score**. **E 1480, E06**

overall width, *n*—the maximum cross-sectional width of a tire, including protective or decorative ribs. **F 538, F09**

overbreak—the quantity of rock that is excavated or breaks out beyond the perimeter specified as the finished excavated tunnel outline. (ISRM) **D 653, D18**

overburden—the loose soil, sand, silt, or clay that overlies bedrock. In some usages it refers to all material overlying the point of interest (tunnel crown), that is, the total cover of soil and rock overlying an underground excavation. (ISRM) **D 653, D18**

overburden load—the load on a horizontal surface underground due to the column of material located vertically above it. (ISRM) **D 653, D18**

overcoating—the act of making a developed electrostatic image permanent by spraying or laminating a protective film or similar layer over the surface. **F 335, F05**

overconsolidated soil deposit—a soil deposit that has been subjected to an effective pressure greater than the present overburden pressure. **D 653, D18**

overconsolidation ratio, OCR—the ratio of preconsolidation vertical stress to the current effective overburden stress. **D 653, D18**

overcure, *n*—a state of vulcanization cure beyond the state of optimum cure. **D 1566, D11**

overdamped-well response—characterized by the water level returning to the static level in an approximately exponential manner following a sudden change in water level (see for comparison **underdamped well response**). **D 653, D18**

overdrawn structure—a condition, sometimes found to exist in very heavily cold-worked rods or wires. (cupping). Cupping is overdrawn material, but the converse is not true. **E 7, E04**

overdrilling—the process of drilling out a well casing and any material placed in the annular space. **D 653, D18**

overdry—the state of a cellulosic material that has been dried to constant mass at a temperature of 100 to 105°C. **D 1695, D01**

overemulsification—excessive emulsifier dwell time which results in the removal of penetrants from some discontinuities. **E 1316, E07**

over-flow drain—a drain for eliminating the excess foam and starch created during the cooking process. **F 1827, F26**

overglaze decoration—See **overglaze decoration** under **decoration**. **C 242, C21**

overhang—See **lip**. **F 592, F16**

overhead, *n*—in *abar code system*, the fixed number of symbol characters required for start, stop, and checking in addition to data carrying characters. As an example, a symbol requiring a start, stop and single check character contains three characters of overhead. **F 1294, F05**

overhead slide gate—any horizontal slide gate supported only from above (see Specification F 1184). **F 552, F14**

overheating, *n*—heating a steel object to such a high temperature that excessive grain growth occurs. **A 941, A01**

overheating—(1) in *ferrous alloys*, heating to an excessively high temperature such that the properties/structure undergo modification. The resulting structure is very coarse-grained. Unlike burning, it may be possible to restore the original properties/structure by further heat treatment or mechanical working, or a combination thereof.
(2) in *aluminum alloys*, overheating produces structures that show areas of resolidified eutectic or other evidence that indicates the metal has been heated within the melting range. **E 7, E04**

over-laminate, *n*—in *reference to code printing*, a coating or material added to protect a printed symbol. **F 1294, F05**

overland flow—rainfall runoff from a surface containing concentrated flow no larger than rill flow. **D 4410, D19**

overlength staple fibers, *n*—manufactured staple fibers that are at least 10 % longer than the nominal or average cut length. **D 123, D13**

overlength staple fibers, , *n*—manufactured staple fibers that are at least 10 % longer than nominal or average cut length. **D 4849, D13**

overload recovery time—an interval of nonlinear operation of an instrument caused by a signal with amplitude in excess of the instrument's linear operating range. **E 1316, E07**

overpacking, *n*—(1) **packaging** that exceeds minimum requirements, (2) additional packaging used to increase protection. **D 996, D10**

overpress—an imperfection; projecting excess glass resulting from imperfect closing of mold joints. **C 162, C14**

overpressed metal connector plate—metal connector plate with teeth, fully penetrating wood member, with tooth side of plate pressed more than one half of plate thickness below surface of wood member; in contrast to underpressed metal connector plate, the surface of which is not in contact with the surface of the wood members.
owner—see **property owner**. **E 631, E06**

over-retting, *v*—in *flax*, indicates that decomposition has caused excessive deterioration of bast fibers. (See **retting** and **underretting**) **D 6798, D13**

overrun—the relation between the liquid volume of the cream mix, and that of the dispensed aerated product. **D 3064, D10**

overshoot, *n* (θ_n)—the amplitude of a deflection of a wind vane as it oscillates about θ_B after release from an initial displacement.
*overshoot ratio, *n* (Ω)*—the ratio of two successive overshoots of a wind vane, as expressed by the following equation:

$$\Omega = \frac{\theta_{(n+1)}}{\theta_n}$$

where θ_n and $\theta_{(n+1)}$ = *n* and *n* + 1 overshoots, respectively. **D 1356, D22**

overshot—See **float**. **D 3990, D13**

oversize bulky waste (OBW)—items whose large size precludes or complicates processing or sampling. **D 5681, D34**

oversize powder, *n*—particles coarser than the maximum permitted by a given particle size specification. **B 243, B09**

overspray—the slip from the spray gun not deposited on the ware. Also, spray application of a light coat of slip to an unfired porcelain enamel. **C 286, B08**

overspray—in *protective coatings*, any material not deposited on the surface being coated. **D 4538, D33**

overstriking, *v*—printing characters over each other, in some cases this is desired, in others it is a defect. **F 1457, F05**

over-tone—see **mass color**. **D 16, D01**

overtone, *n*—any of the conditions occurring in the developing unit when the toner concentration is too high. **F 1457, F05**

overturning moment [*FL*], *n*—of a tire, the component of a tire moment vector tending to rotate a tire about the *X'*-axis, positive clockwise when looking in the positive direction of the *X'*-axis. **F 538, F09**

overvoltage—the irreversible excess of potential required for an electrochemical reaction to proceed actively at a specified electrode, over and above the reversible potential characteristics of that reaction. **B 374, B08**

overvoltage—the change in potential of an electrode from its equilibrium or steady state value when current is applied. **G 15, G01**

overwashing—too long or too vigorous washing, or both, which results in removal of penetrants from some discontinuities. **E 1316, E07**

ovulation thermometer—a thermometer specifically designed for obtaining body temperature for the purpose of determining the date of ovulation or the basal body temperature. **E 344, E20**

Owens process

Owens process—{archaic} a bottle-making process in which the blank or parison mold is filled by suction and subsequently blown.

C 162, C14

owner—the public agency or authority, group, corporation, partnership, or individual that specifies products or services for use on a project that it presently or eventually will own or administrate.

C 822, C13

owner, n—*in pipe laying*, the person, firm, corporation, or government agency entering into contract with the contractor for the installation of pipe and accessories.

C 1154, C17

owner, n—*for pipelaying*, the person, firm, corporation, or government agency entering into contract with the contractor for the installation of asbestos-cement pipe and accessories.

D 2946, C17

owner—generally the fee owner of record of the property.

E 5681, D34

owner, n—one who holds the title and is responsible for funding the project.

E 833, E06

owner—one who has the legal or rightful title to property.

E 2135, E53

oxbow lake—a lake formed when a meander bend is cut off and its ends filled in, thus isolating the lake from the main channel of the stream.

D 4410, D19

oxic, adj—an environment with a sufficient partial pressure of oxygen to support aerobic growth.

D 4175, D02

oxidant compatibility, n—the ability of a substance to coexist at an expected pressure and temperature with both an oxidant and a potential source(s) of ignition within a risk parameter acceptable to the user.

G 126, G04

oxidant index, n—the minimum concentration of an oxidant, such as oxygen, nitrous oxide, or fluorine, expressed as a volume percent, in a mixture of the oxidant with a diluent, such as nitrogen, helium, or carbon dioxide, that will just support sustained combustion of a material initially at given conditions of temperature, pressure, flow conditions, and propagation direction (see *oxygen index*).

G 126, G04

oxidation—a reaction in which electrons are removed from a reactant. Sometimes, more specifically the combination of a reactant with oxygen.

B 374, B08

oxidation, n—*of engine oil*, the reaction of the oil with an electron acceptor, generally oxygen, that can produce deleterious acidic or resinous materials often manifested as sludge formation, varnish formation, viscosity increase, or corrosion, or a combination thereof.

D 4175, D02

oxidation—loss of electrons by a constituent of a chemical reaction. (Also refers to the corrosion of a metal that is exposed to an oxidizing gas at elevated temperatures.)

G 15, G01

oxidation grain size—(1) grain size determined by holding a specimen at a suitably elevated temperature in a mildly oxidizing atmosphere. The specimen is polished before oxidation and etched afterwards.

(2) refers to the method involving heating of polished steel specimen to a specified temperature, followed by quenching and repolishing. The grain boundaries are sharply defined by the presence of iron oxide. Grain size is expressed as an ASTM Number.

E 7, E04

oxidation inhibitor—any substance added to an insulating fluid to improve its resistance to deleterious attack in an oxidizing environment. For example, 2,6-ditertiary-butyl paracresol is sometimes added to petroleum insulating oil to improve its oxidation stability.

D 2864, D27

oxidation life—a measure of the ability of an insulating liquid to resist oxidation under a prescribed set of conditions. Often the changes in color, neutralization number, interfacial tension, initial appearance of sludge, or rate of sludge formation are the criteria used to measure this quality.

D 2864, D27

oxidation of carbon, n—the chemical combination of carbon with oxygen or oxygen-containing compounds.

C 709, D02

oxidation of carbon, n—the chemical combination of carbon with oxygen or oxygen-containing compounds.

D 4175, D02

oxidation-reduction potential, n—the electromotive force developed by a noble metal electrode immersed in the water, referred to the standard hydrogen electrode.

D 1129, D19

oxidation-reduction potential—the electromotive force developed by a noble metal electrode immersed in the water, referred to the standard hydrogen electrode.

D 6161, D19

oxidation stability—see **oxidation life**.

D 2864, D27

oxidative induction time, OIT—an accelerated aging index for relative resistance to oxidative decomposition.

E 1142, E37

oxidatively degradable plastic, n—a degradable plastic in which the degradation results from oxidation.

D 883, D20

oxidatively degradable plastic, n—See **degradable plastic**.

D 883, D20

oxide film replica—See **replica**.

E 7, E04

oxide network, n—continuous or discontinuous oxides that follow prior particle boundaries.

B 243, B09

oxide type inclusions—oxide compounds occurring as non-metallic inclusions in metals usually as a result of deoxidizing additions. In wrought products, that is, steel, they may occur as a “stinger” formation composed of distinct granular or crystalline appearing particles.

E 7, E04

oxidized—darkened or dulled by surface treatment or by the natural oxidizing of metal.

F 547, F16

oxidized coal—see **weathered coal**

D 121, D05

oxidizing agent—a compound that causes oxidation, thereby itself becoming reduced.

B 374, B08

oxidizing agent—a batch ingredient that raises the state of oxidation of the melt.

C 162, C14

oxycelluloses—water-insoluble substances formed by the action of oxidizing agents on cellulose. The chemical nature of oxycelluloses varies with the oxidant used, and the type is indicated by attaching the name of the oxidant adjectivally to “oxycelluloses” as in “hypochlorite oxycelluloses.” Any such mixture is “an oxycellulose” and the word should not be used in the singular without either the definite or indefinite article. In many respects, the phrases “oxidized cellulose” or “partially oxidized cellulose” are preferable.

D 1695, D01

oxygenate, n—an oxygen-containing ashless organic compound, such as an alcohol or ether, which may be used as a fuel or fuel supplement.

D 4175, D02

oxygen compatibility (also oxidant compatibility), n—the ability of a substance to coexist with both oxygen and a potential source(s) of ignition at an expected pressure and temperature with a magnitude of risk acceptable to the user.

G 126, G04

oxygen consumption principle, n—the expression of the relationship between the mass of oxygen consumed during combustion and the heat released.

E 176, E05

oxygen consumption principle, n—the expression of the relationship between the mass of oxygen consumed during combustion and the heat released.

E 176, E05

oxygen demand, n—the amount of oxygen required, under the specified test conditions for the oxidation of waterborne organic and inorganic matter.

D 1129, D19

oxygen demand—the amount of oxygen required for the oxidation of waterborne organic and inorganic matter under the specified test conditions.

D 6161, D19

oxygen depletion, n—*in a fire*, reduction of oxygen (O₂) content of an atmosphere as a result of combustion.

E 176, E05

oxygen-enriched, adj—containing more than 25 mole percent oxygen.

G 126, G04

oxygen-free copper, extra-low phosphorus—oxygen-free copper containing 0.001 to 0.005 % phosphorus. The copper is not readily susceptible to hydrogen embrittlement, as determined in Specification B 379. The copper in the annealed condition has a minimum conductivity of 98.16 % IACS.

B 846, B05

oxygen-free copper, low phosphorus—oxygen-free copper containing 0.005 to 0.12 % phosphorus. The copper is not susceptible to

hydrogen embrittlement, as determined in Specification B 379. The copper in the annealed condition has a minimum conductivity of 90 % IACS.

- deoxidized, phosphorus-arsenical copper
- arsenical, tough-pitch copper
- silver-bearing copper
- sulfur-bearing copper
- deoxidized phosphorus-tellurium copper
- zirconium-bearing copper
- tellurium-bearing copper

NOTE—Coppers listed contain the designated element or elements in amounts as agreed upon between the manufacturer or supplier and the purchaser.

B 846, B05

oxygen-free electronic copper—high-purity, high-conductivity oxygen-free copper normally intended for electronic applications. The copper has high resistance to hydrogen embrittlement, as determined in Specification B 170. The copper in the annealed

condition has a minimum electrical conductivity of 101 % IACS.

B 846, B05

oxygen index, *n*—minimum concentration of oxygen in a mixture of oxygen and nitrogen that will just support flaming combustion of a material under specified conditions.

E 176, E05

oxygen index, *n*—the minimum concentration of oxygen, expressed as a volume percent, in a mixture of oxygen and nitrogen that will just support sustained combustion of a material initially at room temperature under the conditions of Test Method D 2863 (see Test Method D 2863).

G 126, G04

oxygen number, *n*—*for plumage*, a measure of the degree of cleanliness; the amount of oxidizable water soluble and fine suspended matter present in a water extract.

D 123, D13

oxygen number, *n*—*for plumage*, a measure of the degree of cleanliness; the amount of oxidizable water soluble and fine suspended matter present in a water extract.

D 7022, D13

ozone—a very active form of oxygen that is produced by corona, arcing, or ultraviolet rays.

F 819, F18

ozone cutting and checking—cracks produced by ozone in a material under mechanical stress.

F 819, F18

P

P—in *electromagnetics*, symbol for radiant power. **D 4175, D02**
“P”—a letter code. See **upholstery cleaning instructions**.
D 5253, D13
“P”—professionally clean only, an alternate to the **“S”** dry cleaning term although not in customary usage. **D 5253, D13**
P—concentrated load, lbf (or N) **E 631, E06**
P—concentrated load applied at the top edge of the wall at the selected reference displacement, in newtons (pound-force).
E 631, E06
P—effective pair production content. *P* is the percent background exposure caused by pair production in 2 mm of lead. **E 1316, E07**
P—applied load **F 2078, F07**
PA—abbreviation for **program attention**. **F 1457, F05**
PAC—powdered activated carbon or poly-aluminum chloride.
D 6161, D19
PACI—poly-aluminum chloride. **D 6161, D19**
pack—(1) the quantity of ware packed.
(2) the ratio of packed ware to theoretical. **C 162, C14**
pack, n—the final configuration of material with necessary protection afforded for the distribution system.
blister pack, n—encapsulation of an item inside a preformed semi-rigid transparent, or opaque plastic bubble that is affixed to a semi-rigid backing.
exterior pack—a **container, bundle**, or assembly that is sufficient by reason of material, design, and construction to protect its contents during shipment or storage.
intermediate pack—in *packaging*, a **wrap, box, or bundle** that contains two or more unit packs of identical items, and that is in turn enclosed by an outer **shipping container**.
D 996, D10
pack, v—to place material into a container for handling, storage, and transportation. **D 996, D10**
packability, n—for *inflatable restraints*, the compressibility of a folded airbag cushion relative to the space available in an airbag module. **D 6799, D13**
package—(1) *n*, a container providing means of protection and handling to a product; (2) *v*, to design, manufacture, or provide protection to a product; (3) *when referring to a fiber container*, a container not necessarily complying with all the requirements for a “box” in accordance with the *Uniform Freight Classification* and *National Motor Freight Classification*; (4) *when referring to a fiber container*, one of the special authorized containers described in detail in the Classifications in the section titled “Authorized Packages or Shipping Containers,” of the above Freight Classifications.
aerosol package—a package that contains in addition to its contents, a gas under pressure. It is fitted with a valve which enables the contents to be dispensed.
consumer package—a primary container (which may be enclosed in a secondary container) designed to contain, store, and protect from the point of manufacture to the point of use, a product intended for household or individual use. (See *unit package* under **package**.)
industrial package, n—a package used for the transportation or storage of commodities, the contents of which are not meant for retail sale without being repackaged.
intermediate package—a wrap, box, or bundle (that is, a container) that contains two or more unit packages of identical items (also called a *secondary package*).
primary package—a container in direct contact with and enclosing the product along with any required protective material(s).
secondary package, n—a container enclosing one or more primary packages along with any required protective material(s).
unit package—the first tie, wrap, or container applied to a single

item, a quantity of the same item, a set, or an item with all its component parts, that constitutes a complete and identifiable package containing the unit of issue of a product for ultimate use (also called a *primary package*).
D 996, D10

package, v—to prepare goods for distribution by enclosing in a container or covering. (See *Terminology D 996*.) **D 1968, D06**
package—a container providing protection to a product during distribution, storage, retailing, and use. **F 1479, F02**
packaged building—Use **manufactured building** or **precutbuilding**.
E 631, E06
package integrity—the physical capability of a given package to protect its contents with the desired level of protection over a defined period of service; for example, as a barrier to physical, microbiological, or chemical challenges. **F 1327, F02**
package material, n—each separate and distinct material which by itself or in combination with other materials, forms a package component. **D 996, D10**
package or outside package—a package plus its contents.
D 5681, D34
package source reduction, n—the reduction of the weight or volume of the packaging materials used in a package containing an equivalent product. **D 996, D10**
package testing:
bursting strength—the strength of a material in pounds-force per square inch (or kilopascals), measured by the Cady or Mullen tester. (See **Cady test**, and **Mullen test**.)
bursting strength test—a test for measuring the resistance of a material to bursting measured in pounds per square inch (or kilopascals). (See **Mullentester**.)
Cady test—a test for **bursting strength** made on a specific type of machine.
caliper—(1) *n*, thickness (as related to **paperboard**) of a sheet measured under specified procedures expressed in thousandths of an inch (or millimetres). Thousandths of an inch are sometimes termed “points”; (2) *n*, the precision instrument used in the paperboard industry to measure thickness; (3) *v*, to measure with a caliper.
compression test—a test for measuring resistance to external compressive forces. (See **loading**.)
drop test—a test for measuring the durability of an article, or the protection, or the retention properties of a container, or all three by subjecting the packaged product to a free fall from predetermined heights onto a surface with prescribed characteristics.
Elmendorf test—a test for measuring the tearing resistance of tape, paperboard, or other materials.
incline impact (Conbur) test—a test for determining principally the resistance of a packaged product to damage from impacts.
Mullen test—a test for bursting strength made on a specific type of machine.
puncture test—(1) a test for measuring the resistance of board to puncture; (2) the strength of a material, primarily involving tear and stiffness, expressed in units as measured by the puncture tester.
revolving drum test—a test for measuring the protection to contents, or the retention properties of a container, or both, by subjecting the packaged products to rough handling in a standard revolving drum.
testing machine compression—in *package testing*, an imposed force in motion applied at a predetermined rate and condition until a predetermined end point is achieved. **D 996, D10**
package unit, n—in *pipe laying*, several units of pipe bound together for the purpose of being transported and, when desired, unloaded at the job site. **C 1154, C17**
package unit, n—for *pipe laying*, several units of asbestos-cement

- pipe bound together for the purpose of being transported and, when desired, unloaded at the job site. **D 2946, C17**
- packaging, *n***—(1) the technique of preparing goods for distribution; (2) the design criteria, processes, and procedures used to protect material from deterioration and damage from the time manufacturing is completed until ultimate use or disposal; (3) the processes and procedures used to protect an item in a unit package.
- bulk packaging**—(1) a method of containing loose or granular materials for shipping or storage, (2) a method of assembling many items into a **container** for shipment or storage.
- child-resistant packaging**—packaging designed or constructed to be significantly difficult for most children under 5 years of age to open, or to obtain a toxic or harmful amount of the contents within a reasonable time; and not difficult for normal adults to use properly.
- commercial packaging**—the methods and materials used by a supplier to satisfy the requirements of the distribution system.
- foam-in-place packaging**—See **cushioning material**.
- industrial packaging**—packaging of partially manufactured or finished goods for distribution from manufacturer to manufacturer, and to users other than retail customers.
- molded pulp**—a type of **packaging** which has been formed from wet paper pulp to predetermined shape to generally fit one or more individual items. Used as apple trays, egg flats, egg carton. (See **molded shape**.)
- skin packaging**—a process whereby a product placed on a backing material is covered by a closely fitting thermoplastic film bonded to the backing material.
- vacuum packaging**—the technique of **packaging in containers** from which substantially all air has been removed prior to sealing. **D 996, D10**
- packaging, *n***—(See Terminology D 996.) **D 1968, D06**
- packaging**—See Terminology D 996. **D 5077, D10**
- packaging**—a receptacle and any other components or materials (drums, boxes, liners, absorbents, etc.) necessary for the receptacle to perform its containment function in conformance with the minimum packing requirements of 40 CFR 171, 172, 173. **D 5681, D34**
- packaging**—See Practices A 700 for Packaging, Marking, and Loading Methods for Steel Products for Domestic Shipment. **F 547, F16**
- packaging material, *n***—any material intended to contain and protect a raw material, intermediate, API, or product during storage and transport. **E 2363, E55**
- pack cementation**—in **diffusion coatings**, a coating process similar to pack carburizing that involves packing the parts to be coated into a retort with a carefully blended mixture of powders and then exposing the pack under hermetically sealed conditions or in an inert atmosphere to elevated temperatures. **B 374, B08**
- packed distillation column**—a column or tube constructed with internals of ceramic, steel, or fiberglass-type materials to separate one or more volatile liquids by distillation. **E 1705, E48**
- packer**—in **grouting**, a device inserted into a hole in which grout or water is to be injected which acts to prevent return of the grout or water around the injection pipe; usually an expandable device actuated mechanically, hydraulically, or pneumatically. **D 653, D18**
- packer hides**—hides from meatpacking houses. **D 1517, D31**
- packer (monitoring wells)**—a transient or dedicated device placed in a well that isolates or seals a portion of the well, well annulus, or borehole at a specific level. **D 653, D18**
- pack-hardened, pack-carburized**—See **case-hardened**. **F 547, F16**
- packing, *n***—the selection or construction of the **shipping container** and assembling of items or **packages** therein, including any necessary **blocking, bracing, or cushioning**, weatherproofing, exterior **strapping**, and **marking** of shipping container for identification of contents. (Compare **packaging**).
- absorbent packing, *n***—a material included within a **package** to soak up liquids resulting from leakage or liquefaction of contents.
- interior (inner) packing**—material or parts used in supporting, positioning, or cushioning an item in its outer shipping container. (See also **buffer, cushioning material, divider, liner, separator**.)
- saddle, *n***—a form of **interior packing** shaped to fit the article in order to increase the area of contact between the **blocking** and the article.
- shell, (when referring to a fiberboard packaging), *n***—a specific form of inner **packing** consisting of a sheet of **corrugated** or **solid fiberboard** scored and folded to form a joined or unjoined **tube** open at both ends. **D 996, D10**
- packing leather**—see **hydraulic leathers**. **D 1517, D31**
- packing material, *n***—any material in which compacts are embedded during the presintering or sintering operation. **B 243, B09**
- packing (mechanical), *n***—a deformable material used to prevent or control the passage of matter between surfaces that move in relation to each other. **D 1566, D11**
- pac leather**—highly water-resistant leather used by lumbermen, hunters, and others for outdoor wear. **D 1517, D31**
- pad, *n***—(when referring to a **fiberboard container**) a **corrugated** or **solid fiberboard** sheet or other authorized material used for extra protection or for separating tiers or layers of articles when packed for shipment. (Compare **buffer, divider, separator**). See **cushioning material**. **D 996, D10**
- pad character, *n***—See **filler character**. **F 1294, F05**
- pad clean, *v***—clean using an absorbent pad. **D 5253, D13**
- paddle mixer**—a mixer consisting essentially of a trough within which mixing paddles revolve about the horizontal axis, or a pan within which mixing blades revolve about the vertical axis. **D 653, D18**
- paddling, puddling**—{archaic} the rough shaping of a piece of glass in a furnace by means of paddles or tools preparatory to the pressing operation for making optical glass blanks. **C 162, C14**
- page**—a form on which many lines of data may be entered for reading by a page reader. Pages are larger in size than **documents**. **F 149, F05**
- page coverage**—a term used to describe the percentage of printed area to non-printed area on a page within a specified area of the page. **F 335, F05**
- page reader**—an electronic machine capable of reading full pages of printed data. **F 149, F05**
- pail, *n***—a **container**, usually cylindrical, with a handle, available in sizes of about 1 to 12 gal (3 to 50 L). **D 996, D10**
- pail**—a small container, usually with a capacity of 5 U.S. gal (19 L). Pails typically have bungs or spouts, or the entire lid can be removed. **D 5681, D34**
- paint, *n***—in **general**, a pigmented coating. **E 631, E06**
- paint brush, *n***—a paint application tool consisting of a flexible brushing part composed of long filamentary material (brushing material) bound to a handle. **D 16, D01**
- paint brush bristle, *n***—hair of the swine (for example: pig, hog, boar), used in brushing material. **D 16, D01**
- paint brush ferrule, *n***—outer band that joins the brushing material to the handle. **D 16, D01**
- paint brush filament, *n***—a synthetic polymer extrusion used in brushing material. **D 16, D01**
- paint brush head, *n***—brush without the handle. **D 16, D01**
- paint brush length clear, *n***—also called “length out,” the exposed length of the brushing material from the ferrule to the tip end. **D 16, D01**
- paint brush thickness, *n***—measurement of the brushing material across the narrow opening of the ferrule. **D 16, D01**

paint chip sample

paint chip sample—a fragment of a dry paint film removed from the substrate. **E 631, E06**

paint collection container—a sealable rigid walled container. **E 631, E06**

paint collection tray—any clean, dry, lead-free container for use in catching paint scrapings. **E 631, E06**

painted—coated with paint or plastic by dipping or barrel-tumbling. **F 547, F16**

painted debris, n—for **clearance examination**, pieces of construction waste completely or partially coated with paint. **E 1605, E06**

painted element—a painted architectural or building component.

pane, n—use **lite**.

pane—See **windows and doors**. **E 631, E06**

painting history, n—A record of all paint layers that have been applied to a building **component** as determined by either documentation or professional judgement. **E 1605, E06**

paint-lead hazard, n—a source of adverse effects on human health due to the presence of lead in deteriorated paint on all building surfaces or lead in paint on chewable surfaces, friction surfaces resulting in dust lead levels of adjacent horizontal surfaces above regulatory dust-lead values, or impacted surfaces. **E 1605, E06**

paint n, general—a pigmented coating. See **coating**. **D 16, D01**

paint n, specific—a classification sometimes employed to distinguish pigmented drying oil coatings (“paints”) from synthetic enamels and lacquers.

emulsion paint—a paint, the vehicle of which is an emulsion of binder in water. The binder may be oil, oleoresinous varnish, resin, or other emulsifiable binder.

latex paint—a paint containing a stable aqueous dispersion of synthetic resin, produced by emulsion polymerization, as the principal constituent of the binder. Modifying resins may also be present.

oil paint—a paint that contains drying oil or oil varnish as the basic vehicle ingredient.

paste paint—a paint in which the pigment is sufficiently concentrated to permit a substantial reduction with vehicle before use.

water paint—a paint, the vehicle of which is a water emulsion, water dispersion, or ingredients that react chemically with water. **D 16, D01**

paint pad, n—a paint application tool consisting of short filamentary material usually bonded to a flat, resilient backing connected to a handle designed to apply paint by a wiping action. **D 16, D01**

paint residue—dry or chemically softened paint that remains on a surface after initial paint removal. **E 631, E06**

paint roller, n—a complete paint application tool consisting of a roller frame and a roller cover designed to apply paint by a rolling action. **D 16, D01**

paint roller core, n—a structural tube that forms the base of the roller cover to which paint applying material is attached. **D 16, D01**

paint roller cover, n—a tubular sleeve consisting of a paint applying material secured to a core. **D 16, D01**

paint roller cover pile height, n—also called “nap length;” the length of the roller cover paint applying material from pile backing to pile face. **D 16, D01**

paint roller frame, n—a frame and handle assembly designed to hold a roller cover. **D 16, D01**

paint scrapings—waste material consisting of paint removed by wet or dry scraping during an abatement process. **E 631, E06**

paint vb—to apply a thin layer of a coating to a substrate by brush, spray, roller, immersion, or any other suitable means. **D 16, D01**

paired comparison, n—a method in which stimuli are presented in pairs for comparison on the basis of some defined criterion. **E 253, E18**

pair production—a process that corresponds to the creation of an electron-positron pair by the interaction of a gamma ray in the field of a nucleus. The energy of the gamma ray must exceed 1.022 MeV (twice the rest mass of an electron). **E 170, E10**

pair production—the process whereby a gamma photon with energy greater than 1.02 MeV is converted directly into matter in the form of an electron-positron pair. Subsequent annihilation of the positron results in the production of two 0.511 MeV gamma photons. **E 1316, E07**

pair production—the process whereby a gamma photon with energy greater than 1.02 MeV is converted directly into matter in the form of an electron-positron pair. Subsequent annihilation of the positron results in the production of two 0.511 MeV gamma photons. **E 1316, E07**

pajamas, n—a two piece ensemble consisting of a top and a bottom generally used for, but not limited to, nightwear. **D 123, D13**

pajamas, n—a two piece ensemble consisting of a top and a bottom generally used for, but not limited to, nightwear. **D 7022, D13**

palatable, adj—sufficiently pleasant to be consumed. **E 253, E18**

paleosol—an ancient soil or soil horizon that formed on the earth’s surface during the geologic past. **D 7099, D18**

palladium barrier leak detector—a leak detector using hydrogen as the tracer gas and using the principle of hydrogen diffusing through a hot palladium barrier into an evacuated vacuum gage. **E 1316, E07**

pallet, n—horizontal platform device used as a base for assembling, storing, handling, and transporting materials and products in a unit load. (Compare **skid, dolly**.)

expendable pallet—a **pallet** intended to be discarded after a single use.

reusable pallet—a **pallet** intended for more than one shipment (reusable for economic life).

stringer, n—a wooden member to which the face or faces of a **pallet** or the deck of a platform are fastened and running at right angles to the members making up the face or the deck. **D 996, D10**

palletized load—See **load**. **D 996, D10**

palletized unit load—See **load**. **D 996, D10**

pallet nail—bright, stiff-stock or hardened-steel, helically threaded (with medium lead angle) or annularly threaded, 1½ by 0.105 to 4 by 0.177-in. nails with smooth or checkered flat ⅜ to ⅞-in. head and medium or blunt diamond or blunt chisel point. **F 547, F16**

palsa—a peaty permafrost mound possessing a core of alternating layers of segregated ice and peat or mineral soil material. **D 7099, D18**

palsa bog—a poorly-drained lowland underlain by organic-rich sediments, which contains perennially frozen peat bodies (peat plateaux) and occasionally palsas. **D 7099, D18**

panchromatic—sensitive, as a film or plate, to light of all hues. **E 7, E04**

pane, n—See **lite**. **C 717, C24**

panel—cut stone with face dimensions large in relation to its thickness, for placement in a building structure or frame assembly. **C 119, C18**

panel—a sheet of plywood of any construction. **D 1038, D07**

panel, n—a group of assessors chosen to participate in a sensory test. **E 253, E18**

panel, n—in a building, (1) a portion of a surface flush with or recessed from, or sunk below the surrounding area, sometimes set off by distinct molding or other decorative measure. (2) a usually flat and rectangular piece of construction material made to form part of a surface (as of a **wall**, ceiling, or **floor**). (See also **railing systems** and **windows and doors**.)

panelized construction—See **building constructions**.

passive solar energy system—See **building subsystem**.

pattern—see **components pattern**. **E 631, E06**

panel, n—a flat infill element between a top rail, bottom rail, and posts. **E 1481, E06**

panel clamp—a two-piece clamp with carriage bolt and nut, designed to secure prefabricated panels on free standing enclosures. **F 552, F14**

panelist, n—See **assessor**. **E 253, E18**

panelized construction—a building method using **panels** as major elements. **E 631, E06**

panel member, *n*—See **assessor**. **E 253, E18**

panel, *n*—(1) a **face** or **side** of a **box** or **crate**, (2) any flat area between folds, or edges of a **box**, **carton**, or interior part. **D 996, D10**

pan head—flat head with rim having rounded upper edge and squared lower edge, usually slotted. **F 547, F16**

pan mixer—a mixer comprised of a horizontal pan or drum in which mixing is accomplished by means of the rotating pan of fixed or rotating paddles, or both; rotation is about a vertical axis. **D 653, D18**

pans—containers used to hold the food product in the oven capacity: (1) a full-size bake pan is nominally 18 by 26 by 1 in. (457 by 660 by 25 mm), (2) a half size bake pan is nominally 18 by 13 by 1 in. (457 by 330 by 25 mm), and (3) a steam pan is nominally 12 by 20 by 2.5 in. (305 by 508 by 64 mm). **F 1827, F26**

paper:

creped duplex paper—a double sheet composed of two layers of **creped paper** united with asphalt, latex, or other adhesives, generally with 20, 25, or 30-lb paper and 20, 25, or 30 lb of laminating material.

creped paper—paper, usually **kraft** (bleached sulfate) in various basis weights, that has been machined to resemble crepe and thus has stretch. It is used for wrapping purposes and for bag and barrel **liners**.

water-resistant paper—paper that is treated by the addition of materials to provide a degree of resistance to damage or deterioration by water in liquid form.

wet-strength paper—paper that has been treated with chemical additives to aid in the retention of resistance to bursting, tearing, or rupturing when wet. **D 996, D10**

paper acidity, *n*—the extent to which water-soluble materials in paper alter the hydrogen-hydroxyl ion equilibrium of reagent water causing an excess of hydrogen ions, as measured by titrating with a standardized solution of alkali under specified conditions. **D 1968, D06**

paper alkalinity, *n*—the extent to which water-soluble materials in paper alter the hydrogen-hydroxyl ion equilibrium of reagent water causing an excess of hydroxyl ions, as measured by titrating with a standardized solution of acid under specified conditions. **D 1968, D06**

paper bleed, *n*—an optical phenomenon that causes bars to appear larger and spaces to appear narrower than actually printed because of the scattering of incident light rays within the media. **F 1294, F05**

paperboard, *n*—one of the two broad subdivisions of paper (general term, the other being paper as specific term). Paperboard is, in general, heavier and thicker than paper and is constructed primarily for strength properties such as stiffness, tearing resistance and the like. Sheets with thickness greater than 0.010 in. (0.25 mm) (with some exceptions) fall in this class. (See also **containerboard**.)

*boxboard, *n**—a general term designating the grades of **paperboard** used for fabrication of folding and set-up **boxes** (**cartons**). Customarily shipped in sheets.

*chipboard, *n**—a **paperboard** generally made from reclaimed paper stock.

*finish, *n**—in packaging, a term descriptive of the surface of **paperboard** depending on the final machining in manufacture:

(1) *dry finish*—not dampened before going through the calender rolls. The surface is not as dense nor as smooth as water-finished board;

(2) *water finish*—dampened on one (or both) sides in the calendering opening to provide a relatively hard and glossy finish.

*kraft, *n**—a term (derived from a German word meaning strength) applied to pulp, paper, or **paperboard** produced

from virgin wood fibers by the sulphate process.

*linerboard, *n**—(1) **paperboard** used for the flat facings in **corrugated fiberboard**; also paperboard used as the outer plies of solid fiberboard, (2) **containerboard** made of blends of reworked paper fibers usually made on cylinder machines but can be made on Fourdrinier or Inverform machines. It is sometimes called **jute**—a misnomer, since jute fibers are no longer used (See **facings**.) **D 996, D10**

paperboard—one of the two broad subdivisions of paper (general term), the other being paper (specific term). The distinction between paperboard and paper is not sharp but, broadly speaking, paperboard is heavier in basis weight, thicker and more rigid than paper. In general, all sheets 12 points (0.012 in., 3.0 mm) or more in thickness are classified as paperboard. There are a number of exceptions based upon traditional nomenclature. For example, blotting paper, felts, and drawing paper in excess of 12 points are classified as paper while corrugating medium, chipboard, and linerboard less than 12 points are classified as paperboard. Paperboard is made from a wide variety of furnishes on a number of types of machines, principally cylinder and fourdrinier. The board classes are: (1) containerboard, which is used for corrugated boxes; (2) boxboard, which is principally used to make cartons; and (3) all other paperboard. **D 1968, D06**

paperboard blank—a flat piece of **paperboard** that has been cut to size, die-cut, corner cut, scored, printed, or otherwise prepared and ready to be formed or folded and joined, or the flat pieces of parts thereof. **D 996, D10**

paperboard step—a term applied to trays, shells, or platforms positioned inside a **container** to raise one portion of contents higher than others. It may be attached to a lid for the purpose of holding certain articles positioned when the lid is in closed position. **D 996, D10**

paperboard stop—pieces of **boxboard** attached to the inside surface of the ends of a set-up paper box lid to hold the base in proper position when the height of the base is less than the height of the lid. **D 996, D10**

paperboard tube—See **tube**. **D 996, D10**

paper grain—the paper machine direction of paper. **F 149, F05**

paper grain direction—see **paper machine direction**. **F 149, F05**

paper linting, *n*—the picking off of loosely bonded paper surface fibers, or dust, or both, that can accumulate on an offset plate or blanket interfering with print quality. **D 6488, D01**

paper machine direction—the direction of paper grain parallel with the direction of movement on the paper machine. It is also called *grain direction*. The direction at right angles to the paper machine direction is called the *cross-machine direction*, or simply, *cross direction*. **F 149, F05**

papermaker's felt, *n*—a fabric, made from wool or man-made fibers or mixtures of both, fabricated as an endless belt for use on a paper making machine. (See also *felt* and *needled felt*.) **D 123, D13**

papermaker's felt, *n*—a fabric, made from wool or man-made fibers or mixtures of both, fabricated as an endless belt for use on a paper making machine. (See also *felt* and *needled felt*.) **D 4845, D13**

paper manifold set—a business form prepared by interleaving one-time carbon paper and a receiving paper to give the number of parts required for comparison. A standard test set is 8 ½ by 11 in. (21.59 by 27.94 cm) and most frequently contains six plies six bond sheets, usually 12 lb (17 by 22-500) (45 g/m²) and five carbons, usually 8 lb (20 by 30-500) (18.75 g/m²). (F 497) **F 221, F05**

paper manufacturing process, *n*—an operation that begins with the pulping of fibrous and nonfibrous raw materials and ends after the first slitter/winder, with the cutting and trimming of the reel into smaller rolls. In an operation in which the finished product is sheeted directly off the machine, the production of rough sheets constitutes the end of the process. In an operation that involves supercalendering, the end of the process is at the slitter/winder

paper manufacturing process, *n*

following the supercalendar. In an operation that involves off-machine coating, the process ends at the slitter/winder following the coater or the supercalendar associated with the coater.

D 1968, D06

paper mill sludge, *n*—a slurry of solid residues from a paper mill's waste water treatment system containing fibers and other material.

D 1968, D06

paper multiwall-sack—See **bag**.

D 996, D10

paper, OCR—paper used in OCR systems; refer to ANSI X3.62-79.

F 149, F05

paper product, *n*—any item manufactured from paper or paperboard.

D 1968, D06

paper smoothness—the degree of irregularity of the surface of paper determined by the measurement of the flow of air between the paper surface and a plain surface under specified clamping and air pressure. The resistance to air flow increases as the paper goes from rough to smooth. With an instrument measuring the rate of flow, as the paper goes from rough to smooth, the number rating goes down. With an instrument measuring the time for a given volume to flow, as the paper goes from rough to smooth, the number rating increases.

F 149, F05

paper wall covering, *n*—a wall covering with a top layer consisting of paper or an alternative cellulosic-based material, but not consisting of a wood product.

E 176, E05

paper weight—see **basis weight**.

F 149, F05

paperwork—all required site documentation, which may include the manifests, waste profiles, material safety data sheets (MSDS), site forms, sample labels, custody seals, and chain of custody forms.

D 5681, D34

paraffinic oil, *n*—a hydrocarbon process oil, most or all of which is composed of alkanes

D 1566, D11

paraffinic oil—a term applied to mineral insulating oil derived from crudes having substantial contents of naturally occurring *n*-paraffins (wax). Such an oil must be dewaxed and may need the addition of a pour depressant in order to exhibit a low pour point.

D 2864, D27

paraffinic oil—a petroleum oil (derived from paraffin crude oil) whose paraffinic carbon type content is typically greater than 60 %.

E 1519, E35

parallax factor (used in electron stereomicroscopy)—parallax factor (*f*) is the rate of change of elevation with respect to parallax:

$$f = dx/dy = \csc \sigma / 2M \times 10^3 \mu\text{m}/\text{mm}$$

x = elevation

y = parallax, the apparent lateral displacement of an image point.

where σ is the stereo angle and *M* is the final magnification of the image.

E 7, E04

parallel communication, *n*—the transmission system where code for a character is sent over a set of channels, all bits at once, one bit per channel. (See **serial communication**.)

F 1457, F05

parallel-core conductor—see **concentric-lay conductor**. **B 354, B01**

parallel laminate—a laminate in which all the layers of material are oriented approximately parallel with respect to the grain or strongest direction in tension. (See also **cross laminate**)

D 883, D20

parallel laminate, *n*—see **parallel laminate** under **laminate, *n***.

D 907, D14

parallel laminate—a laminate in which all the layers of material are oriented approximately parallel with respect to the grain or strongest direction in tension. (See also **cross laminate**.) (D20)

F 412, F17

paramagnetic material—a material having a relative permeability which is slightly greater than unity, and which is practically independent of the magnetizing force.

A 340, A06

paramagnetic material—a material that has a relative permeability

slightly greater than unity and that is practically independent of the magnetizing force.

E 1316, E07

parameric, *adj*—pertaining to specimens having different spectrophotometric curves that produce approximately the same color sensation under the same illuminating and viewing conditions. (See also **metameric**.)

E 284, E12

paramerism, *n*—phenomenon in which specimens having different spectrophotometric curves produce approximately the same color sensation under the same illuminating and viewing conditions. (See also **metamerism**.)

E 284, E12

paramers, *n*—specimens having different spectrophotometric curves that produce approximately the same color sensation under the same illuminating and viewing conditions. (See also **metamers**.)

E 284, E12

parameter, *n*—*in statistics*, a variable that describes a characteristic of a population or mathematical model.

D 123, D13

parameter—*in statistics*, a constant (usually to be estimated) defining some property of the population frequency distribution, such as the population median or the population standard deviation.

E 1823, E08

parameter (in crystals)—See **lattice parameter**.

E 7, E04

parameter quality, *n*—*in construction planning, design, specification, estimating, and cost analysis*, is a measure of the amount (quality) of work included within a **group element, element, or sub-element**, or any combination thereof, which, using standard metrics, ensures consistent **elemental cost analysis** preparation.

E 833, E06

parametric, *adj*—a term referring to a statistical technique that assumes the nature of the underlying frequency distribution is known.

D 123, D13

parametric release, *n*—a system of release that gives assurance that the product is of the intended quality based on the information collected during the manufacturing process.

E 2363, E55

parametric system, *n*—a system that uses the response of a sensor to produce an output that is correlatable with the selected parameter.

D 1129, D19

parasite—an organism living in or on another living organism, obtaining from it part or all of its nutriment.

E 609, E35

para-xylene—1,4-dimethylbenzene (C₈H₁₀) mol weight 106.16; clear, colorless, flammable liquid; freezing point, 13.26°C; boiling point, 137 to 138°C.

D 4790, D16

parchment—tanned sheepskins. Vellum is practically the same as parchment except it is made from calfskins. In addition to its use as "parchment" for diplomas and records, it is also utilized for banjo and drum heads, lampshades, etc.

D 1517, D31

parent coil or plate, *n*—coil of sheet or a plate that has been processed to final temper as a single unit and may subsequently be cut into two or more smaller coils or into individual sheets or smaller plates to provide the required width and length.

B 881, B07

parent material—material from which a soil has been derived.

D 653, D18

parfocal eyepiece—see **eyepiece, parfocal**.

E 175, E41

parison—a preliminary shape or blank from which a glass article is to be formed.

C 162, C14

parison, *n*—the shaped plastic mass, generally in the form of a tube, used in blow molding. (ISO)

D 883, D20

parison, *n*—the shaped plastic mass, generally in the form of a tube, used in blow molding. (D20, ISO)

F 412, F17

parison mold—See **blank mold**.

C 162, C14

parity, *n*—a system for encoding characters as 'odd' (having an odd number of binary ones in their structure) or 'even' (having an even number of binary ones in their structure), used as a self-checking mechanism in bar codes.

F 1294, F05

parity, *n*—an error checking system in which an extra bit may be added to the character data bits to show whether the number of bits in the character transmitted is even or odd.

F 1457, F05

parity error, *n*—a parity error occurs when the receiving device counts the number of bits in the received character, including the

parity bit, and finds that the number does not agree with the predetermined odd/even requirement. **F 1457, F05**

parkerized—chemically treated to provide iron and steel with dark corrosion-resistant protective coating by boiling in solution of manganese dihydrogen phosphate and subsequently applying coating of paraffin oil. **F 547, F16**

parquet flooring nail—hardened-steel, annularly threaded, 1/8 by 0.062 to 1/4 by 0.072-in. nails with deep countersunk 0.080 to 0.113-in. casing head and diamond or needle point. **F 547, F16**

part, *n*—a single item coming from a compact, either prior to or after machining. **B 899, B02**

part, *n*—in upholstered furniture, one component of a furniture unit, such as a seat, back, pillow, or arm cushion. **D 123, D13**

part, *n*—in upholstered furniture, one component of a furniture unit, such as a seat, back, pillow, or arm cushion. **D 7023, D13**

partial cleavage, *n*—in textiles, a transverse gouge, cut or other cross-wise rent in the fiber. Clearly penetrating at least the cuticle of the fiber. **D 123, D13**

partial cleavage, *n*—in textiles, a transverse gouge, cut or other cross-wise rent in the fiber. Clearly penetrating at least the cuticle of the fiber. **D 4845, D13**

partial discharge—an electrical discharge that only partially bridges the insulation between conductors. It may or may not occur adjacent to a conductor. **D 2864, D27**

partial discharge apparent power loss (P_a), *n*—the summation over a period of time of all corona pulse amplitudes multiplied by the rms test voltage.

$$P_a = I_t V_s$$

where:

P_a = apparent power loss in time interval ($t_1 - t_0$), W,

I_t = average corona current, A, and

V_s = applied rms test voltage, V.

D 1711, D09

partial discharge (corona), *n*—an electrical discharge that only partially bridges the insulation between conductors. **D 1711, D09**

partial discharge (corona) energy (W), *n*—the energy drawn from the test voltage source as the result of an individual discharge. **D 1711, D09**

partial discharge (corona) extinction voltage (CEV), *n*—the highest voltage at which partial discharges above some stated magnitude no longer occur as the applied voltage is gradually decreased from above the inception voltage. **D 1711, D09**

partial discharge (corona) inception voltage (CIV), *n*—the lowest voltage at which continuous partial discharges above some stated magnitude (which may define the limit of permissible background noise) occur as the applied voltage is gradually increased. **D 1711, D09**

partial discharge (corona) level, *n*—the magnitude of the greatest recurrent discharge during an observation of continuous discharges. **D 1711, D09**

partial discharge (corona) power loss (P), *n*—the summation of the energies drawn from the test voltage source by individual discharges occurring over a period of time, divided by that time period.

$$P = \frac{1}{T} \sum_{i=1}^{i=m} Q_i V_i$$

where:

P = discharge power, W,

T = time period, s,

m = number of the final pulse during T , and

$Q_i V_i$ = discharge energy of the i th pulse.

D 1711, D09

partial discharge (corona) pulse rate (n), *n*—the average number of

discharge pulses that occur per second or in some other specified time interval. **D 1711, D09**

partial discharge pulse, *n*—a voltage or current pulse that occurs at some designated location in a circuit as a result of a partial discharge. **D 1711, D09**

partial discharge pulse voltage (V_p), *n*—the terminal pulse voltage resulting from a partial discharge represented as a voltage source suddenly applied in series with the capacitance of the insulation system under test, and that would be detected at the terminals of the system under open-circuit conditions. **D 1711, D09**

partial discharge quantity (terminal corona charge) (Q_t), *n*—the magnitude of an individual discharge in an insulation system expressed in terms of the charge transfer measured at the system terminals. **D 1711, D09**

partial immersion thermometer, *n*—a liquid-in-glass thermometer designed to indicate temperatures correctly when the bulb and a specified part of the stem are exposed to the temperatures being measured. (Compare **complete immersion thermometer** and **total immersion thermometer**.) **E 344, E20**

partially alloyed powder, *n*—a powder in which the alloy addition or additions are metallurgically bonded to an elemental or pre-alloyed powder. **B 243, B09**

partially balanced incomplete block design (PBIB), *n*—an incomplete block design in which each block contains the same number k , of different versions from the t versions of the principal factor. **E 456, E11**

partially balanced incomplete block design (PBIB), *n*—an incomplete block design in which each block contains the same number k , of different versions from the t versions of the principal factor.

NOTE—The arrangement is such that not all pairs of versions occur together in the same number of the blocks; some versions can therefore be compared with greater precision than others. **E 1325, E11**

partially-bonded permafrost—ice-bearing permafrost in which some of the soil particles are not bonded together by ice. **D 7099, D18**

partially nested experiment, *n*—a nested experiment in which several factors may be crossed as in factorial experiments and other factors nested within the crossed combinations. **E 456, E11**

partially nested experiment—a nested experiment in which several factors may be crossed as in factorial experiments and other factors nested within the crossed combinations.

NOTE—It is not unusual to find that experiments consist of both factorial and nested segments. See **nested experiment**. **E 1325, E11**

partially oriented yarn, *n*—filament yarn in which polymer molecules are only partially aligned. **D 123, D13**

partially oriented yarn, *n*—filament yarn in which polymer molecules are only partially aligned. **D 4849, D13**

partially preformed—not fully formed prior to driving. **F 592, F16**

partial pressure—the contribution of one component of a system to the total pressure of its vapor at a specified temperature and gross composition. **E 7, E04**

partial pressure—the pressure caused by a gas, either by itself, or in the presence of other gases. When a second gas is not present, the partial pressure is the same as the total pressure. **E 1316, E07**

partial remedy, *n*—an interim or incomplete solution intended to be consistent with the expected permanent remedy for treatment, control, elimination, or management of risk associated with the release of a contaminant to the environment. **D 5681, D34**

partial replacement disc—a structure intended to restore a portion of the support and motion or a portion thereof, between adjacent vertebral bodies. **F 1582, F04**

partial sensory profile, *n*—a profile comprising certain selected attributes with their intensity values. Examples are flavor profile, odor profile, and texture profile. **E 253, E18**

partial thickness skin wound, *n*—a skin wound with the loss of the epidermis and part of the dermis, but retaining a layer of viable dermal tissue that includes the sources of epidermal cells from

partial thickness skin wound, *n*

which the wound can heal spontaneously by epidermal tissue regeneration. **F 2312, F04**

participant, *n*—in wear testing, any individual that uses a test or control textile during a wear test. **D 123, D13**

particle—a minute quantity or fragment of matter whose size and shape depend on the forces of cohesion. It is usually only a single crystal or a unit of matter with a specific gravity approximating that of a single crystal. **C 242, C21**

particle, *n*—a small discrete mass of solid or liquid matter.

*particle concentration, *n**—concentration expressed in terms of number of particles per unit volume of air or other gas.

*particle fall, *n**—a measurement of air contamination consisting of the mass rate at which solid particles deposit from the atmosphere.

*particle size, *n**—an expression for the size of liquid or solid particles expressed as the average or equivalent diameter.

*particle size distribution, *n**—the relative percentage by mass, surface area, volume, number, or other property of each of the different size fractions of particulate matter. **D 1356, D22**

particle—the aggregate component of a particle board manufactured by mechanical means from wood or other lignocellulosic material (comparable to the aggregate in concrete) including all small subdivisions of wood such as chips, curls, flakes, sawdust, shavings, slivers, strands, wood flour, and wood wool. Particle size may be measured by the screen mesh that permits passage of the particles and another screen upon which they are retained, or by the measured dimensions as for flakes and strands. **D 1554, D07**

particle, *n*—a small discrete mass of solid or liquid matter. **E 1620, E29**

particleboard corestock—common name given to particle board manufactured for use as a core for overlaying. **D 1554, D07**

particleboard panel stock—common name given to particle board manufactured primarily for use as panel material, and in which the surfaces may be treated to obtain decorative effects. **D 1554, D07**

particleboards—a generic term for a composite panel primarily composed of cellulosic materials, generally in the form of discrete pieces or particles, as distinguished from fibers, bonded together with a bonding system, and that may contain additives. **D 1554, D07**

particleboard underlayment—an underlayment grade particleboard made or machined to close thickness tolerances for use as a leveling course and to provide a smooth surface under floor covering materials. **D 1554, D07**

particle concentration—See **particle**. **D 1356, D22**

particle concentration, *n*—a measure of the liquid or solid particle content in a mixture of particles and fluid. The following more specific terms are in use:

(I) **rain density**—the mass of liquid per unit volume of mixture in an actual or simulated rainfield. **G 40, G02**

particle drift deposits—the deposition of chemical particles outside the intended target. **E 1102, E35**

particle fall—See **particle**. **D 1356, D22**

particle fluence, Φ —the quotient of dN by da , where dN is the number of particles incident on a sphere of cross-sectional area da (ICRU).

$$\Phi = \frac{dN}{da}$$

Unit: m^{-2} **E 170, E10**

particle fluence rate, ϕ —the quotient of $d\phi$ by dt , where $d\phi$ is the increment of particle fluence in the time interval dt (ICRU).

$$\phi = \frac{d\Phi}{dt} = \frac{d^2N}{da dt}$$

Unit: $m^{-2} \cdot s^{-1}$ **E 170, E10**

particle fluence spectrum, $\phi(E)$ —the quotient of $d\phi$ by dE , where $d\phi$ is the particle fluence of particles in the interval E to $E + dE$.

$$\phi(E) = \frac{d\Phi}{dE}$$

Unit: $m^{-2} \cdot eV^{-1}$ **E 170, E10**

particle number—the number of particles emitted, transferred or received (ICRU). **E 170, E10**

particle (particulate contaminant), *n*—a piece of matter in a solid state with observable length, width, and thickness. **G 126, G04**

particle shape—a characterization of the shape or configuration of a particle fitting it into any one of ten basic classes, as follows:

Class

A	acicular—needle shaped
B	angular—sharp-edged or having roughly polyhedral shape
C	crystalline—of geometric shape freely developed
D	dendritic—having a branched crystalline shape
E	fibrous—regularly or irregularly threadlike
F	flakey—lamellar, plate-like
G	granular—having an approximately equidimensional but irregular shape
H	irregular—lacking any symmetry
I	nodular—having a rounded irregular shape
J	spherical—globule shaped

C 242, C21

particle sieve diameter—a measure of the size of a sediment particle; the smallest standard sieve opening through which the particle will pass. For an elongated particle, it is a measure of its intermediate axis. **D 4410, D19**

particle size, *n*—the controlling lineal dimension of an individual particle as determined by analysis with sieves or other suitable means. **B 243, B09**

particle size—See **average particle size**. **C 242, C21**

particle size—See **particle**. **D 1356, D22**

particle size—the diameter of solid or liquid particles, expressed in micrometres. **D 3064, D10**

particle size—a linear dimension, usually designated as *diameter*, used to characterize the size of a particle; the dimension may be determined by any of several different techniques, including sedimentation, sieving, micrometric measurement, or direct measurement. **D 4410, D19**

particle size, *n*—the controlling lineal dimension of individual particles (see Terminology C 859). **D 5681, D34**

particle-size analysis—see **grain-size analysis**. **D 653, D18**

particle size distribution, *n*—the percentage by weight, or by number, of each fraction into which a powder sample has been classified with respect to sieve number or microns. (Preferred usage: “particle size distribution by frequency.”) **B 243, B09**

particle-size distribution—a profile of the sizes of particles contained in a material in which the quantities must be expressed on some basis which may be total number, total surface, or total weight or volume of the particles in the material. **C 242, C21**

particle size distribution—the percentage by mass or by number of each fraction into which a powder sample has been classified with respect to sieve number or microns. **C 286, B08**

particle-size distribution—see **gradation, grain-size distribution**. **D 653, D18**

particle size distribution—See **particle**. **D 1356, D22**

particle-size distribution—the relative amount of a sediment sample of a range in specific sizes in terms of percentages by mass finer than a given size, D , often shown on a semilog plot. **D 4410, D19**

particle size distribution, *n*—in sieve analysis, the percentages, by mass or number, of all fractions into which various sizes of particles are classified. **E 1638, E29**

particle-size, intermediate axis—the size of a sediment particle

- determined by direct measurement of the axis normal to a plane representing the longest and shortest axes. **D 4410**, D19
- particle sizing, v** —segregation of granular material into specified particle size ranges. **C 709**, D02
- particle sizing, v** —segregation of granular material into specified particle size ranges. **D 4175**, D02
- particle velocity, u** ; [LT^{-1}]; m/s—a fluctuating velocity superimposed by the presence of sound on the other velocities the particles of the medium may have. In analogy with alternating voltage its magnitude can be expressed in several ways, such as instantaneous particle velocity or peak particle velocity, but the unqualified term means root-mean-square particle velocity. In air, the other velocities are those due to thermal agitation and wind currents. **C 634**, E33
- particulate, *adj***—pertaining to or composed of particles.
personalsample—See **sample**.
- pH, n** —the negative logarithm to the base ten of the conventional hydrogen ion activity. **D 1356**, D22
- particulate, *adj***—of or relating to minute separate particles. **D 4175**, D02
- particulate, n** —a general term used to describe a finely divided solid of organic or inorganic matter. **G 126**, G04
- particulate grout**—any grouting material characterized by undissolved (insoluble) particles in the mix. See also **chemical grout**. **D 653**, D18
- particulate matter, n** —see **powder**. **B 243**, B09
- particulate matter, n** —that nonliquid matter, exclusive of gases, which is heterogeneously dispersed in water. **D 1129**, D19
- particulate reinforced ceramic matrix composite, n** —a ceramic matrix composite in which the reinforcing components are particles of equiaxed or platelet geometry (in contrast to whiskers or short fibers). **C 1145**, C28
- particulate rubber, n** —rubber, vulcanized or unvulcanized, that has been transformed into a collection of particles, with or without a coating of a partitioning agent to prevent agglomeration during production, transportation, or storage (see **buffing rubber, granulated rubber, ground rubber, and powdered rubber**). **D 1566**, D11
- particulate rubber, n** —raw, uncured, compounded or vulcanized rubber that has been transformed by means of a mechanical size reduction process into a collection of particles, with or without a coating of a partitioning agent to prevent agglomeration during production, transportation, or storage (also see definition of **buffing rubber, granulated rubber, ground rubber, and powdered rubber**). **D 5681**, D34
- particulate solid**—synonym for **bulk solid**. **D 653**, D18
- particulate wood fuel**—any wood fuel with a maximum particle volume of 16.39 cm³ (1 in.³) such that the largest dimension is 7.62 cm (3 in.). **E 1705**, E48
- part identifying number (PIN)**—alphanumeric sequence used to code B18 fasteners. The system was developed by ASME Standards Committee B18. **F 1789**, F16
- parting, *vt***—*in fire assay*, separating silver from gold by selectively dissolving the silver in acid. **E 135**, E01
- parting**—the selective corrosion of one or more components of a solid solution alloy. **G 15**, G01
- parting agent**—a material applied to one or both surfaces of a sheet to prevent blocking. **D 1079**, D08
- parting limit**—the minimum concentration of a more noble component in an alloy, above which parting does not occur in a specific environment. **G 15**, G01
- parting line**—line or seam on glassware resulting from the joint of two mold parts. **C 162**, C14
- parting line, n** —another name for **spew line**. **D 1566**, D11
- partition**—See **fiberboard partition**. **D 996**, D10
- partition coefficient**—when, to a polyphase mixture there is added a definite quantity of a new component that is insufficient to bring about a phase change, the proportioning of the new component among the several phases at equilibrium may be expressed by means of a ratio known as a partition coefficient; since the ratio often changes very little over small ranges of variation in the amount of the added component, it is customary simply to refer to the partition coefficient of the added component without reference to the quantity of the addition, provided the latter is small. **E 7**, E04
- partitioning**—the act of movement of contaminants from one soil residence phase to another. **D 653**, D18
- partition tile, n** —tile for use in building interior partitions, subdividing areas into rooms, or similar constructions, and carrying no superimposed loads. **C 43**, C15
- parts per billion (ppb)**—a measure of proportion by weight, equivalent to a unit weight of solute per billion unit weights of solution (approximate $\mu\text{g/L}$ or mg/m^3 in dilute solutions). **D 6161**, D19
- parts per million**—mass unit of any substance in a million mass-units of the water-substance mixture. **D 4410**, D19
- parts per million (ppm)**—a measure of proportion by weight, equivalent to a unit weight of solute per million unit weights of solution (approximate mg/L or g/m^3 in dilute solutions). **D 6161**, D19
- parts per trillion (ppt)**—a measure of proportion by weight, equivalent to a unit weight of solute per trillion unit weights of solution (approximate g/L or $\mu\text{g/m}^3$ in dilute solutions). **D 6161**, D19
- part wool felt, n** —a felt composed of any one of or a combination of new and recycled wool fibers mixed with one or more man-made fibers, vegetable fibers, or animal fibers other than wool. **D 123**, D13
- part wool felt, n** —a felt composed of any one of, or a combination of, new and recycled wool fibers mixed with one or more man-made fibers, vegetable fibers, or animal fibers other than wool. **D 4845**, D13
- party in interest, n** —(see the *Compilation of ASTM Standard Definitions*). **E 1732**, E30
- pascal cubic metres per second ($\text{Pa}\cdot\text{m}^3/\text{s}$)**—the preferred unit of gas flow in the SI system. One $\text{Pa}\cdot\text{m}^3/\text{s}$ is approximately equal to 10 atm cm³/s or, more precisely, 1 $\text{Pa}\cdot\text{m}^3/\text{s} = 9.8692 \text{ atm}\cdot\text{cm}^3/\text{s}$. **E 1316**, E07
- pascal (Pa)**—One pascal is approximately equal to 1×10^{-5} atm or, more precisely, 1 Pa = 0.98692×10^{-5} atm. **E 1316**, E07
- pass**—a treatment step or one of multiple treatment steps producing in a membrane system a product stream in a membrane system. **D 6161**, D19
- passenger car tire, n** —a tire with less than a 457-mm rim diameter for use on cars only. **D 5681**, D34
- passenger car tires, n** —a tire with less than an 18 in. (45.7 cm) rim diameter for use on cars only. **D 5681**, D34
- passenger tire equivalent (PTE), n** —a measurement of mixed passenger and truck tires, where five passenger tires are equal to one truck tire. **D 5681**, D34
- passivating**—a process for creating passivity (q.v.). **B 374**, B08
- passivation**—the changing of the chemically active surface of stainless steel to a much less reactive state. **F 921**, F04
- passivation**—a process to render the surface condition of stainless steel chemically inactive. **F 1078**, F04
- passivation**—process of forming an oxide film on the surface of stainless steel fasteners by chemical treatment, usually nitric acid solution, to improve corrosion resistance of stainless steel fasteners. **F 1789**, F16
- passivation**—the process in metal corrosion by which metals become passive. (See **passive**.) **G 15**, G01
- passivator**—a type of inhibitor which appreciably changes the potential of a metal to a more noble (positive) value. **G 15**, G01
- passive**—the state of the metal surface characterized by low corrosion rates in a potential region that is strongly oxidizing for the metal. **G 15**, G01
- passive-active cell**—a corrosion cell in which the anode is a metal in

passive-active cell

- the active state and the cathode is the same metal in the passive state. **G 15, G01**
- passive construction methods in permafrost**—methods of construction through which the foundation materials are maintained in the frozen state. **D 7099, D18**
- passive earth pressure*—see **earth pressure**. **D 653, D18**
- passive fiber optic chemical sensor, n**—a fiber optic sensor that utilizes the intrinsic spectroscopic properties of the analyte to modulate the optical signal. **E 131, E13**
- passive refrigeration**—a refrigeration system in which cooling is provided by a refrigerant such as liquid nitrogen. **E 1705, E48**
- passive sampling**—the collection of ground-water quality data so as to induce no hydraulic stress on the aquifer. **D 5681, D34**
- passive single-phase thermal pile**—a foundation pile provided with a single-phase natural convection cooling system to remove heat from the ground. **D 7099, D18**
- passive solar energy system*—a **building subsystem** in which solar energy is collected and transferred predominantly by natural means, namely, conduction, convection, radiation, or evaporation. **E 631, E06**
- passive state of plastic equilibrium*—see **plastic equilibrium**. **D 653, D18**
- passive two-phase thermal pile**—a foundation pile provided with a two-phase natural convection cooling system to remove heat from the ground. **D 7099, D18**
- passivity**—the condition of a metal that retards its normal reaction in a specified environment and associated with the assumption of a potential more noble than its normal potential. **B 374, B08**
- pass-over style*—used over counter-height equipment when pass-over configuration (from the cooking side to the serving side) is required. **F 1827, F26**
- pasta cooker**—equipment, including a cooking vessel, in which the cooking medium, water or a water-oil mixture, (see **cooking medium**) is placed to such a depth that the cooking of food is essentially supported by displacement of the cooking medium rather than by the bottom of the vessel. Heat is delivered to the cooking medium by means of an immersed electric element or band wrapped vessel (electric pasta cooker), or by heat transfer from gas burners through either the walls of the pasta cooker or through tubes passing through the cooking fluid (gas pasta cooker). **F 1827, F26**
- paste**—a prepared mixture consisting of a suspension of undissolved solid(s) in a liquid medium sufficiently viscous that it cannot achieve a level surface without application of external force; not a slurry. **C 242, C21**
- paste, n**—an adhesive composition having a characteristic plastic-type consistency, that is, a high order of yield value, such as that prepared by heating a mixture of starch and water and subsequently cooling the hydrolyzed product. (Compare **adhesive, glue, mucilage, and sizing**.) **D 907, D14**
- paste mold**—a mold lined with adherent carbon, used wet for blown ware. **C 162, C14**
- paste paint*—under **paint**, see *paste paint*. **D 16, D01**
- patch, n**—a portion of pavement surface that has been replaced or where additional material has been applied to the pavement after original construction. **E 867, E17**
- patch, n**—a portion of pavement surface which has been replaced or where additional material has been applied to the pavement after original construction. **E 1778, E17**
- patches**—insertions of sound wood or synthetic material in veneer or panels from which defective portions have been removed. **D 1038, D07**
- patching, n**—retouching a portion of a written stroke. **E 2195, E30**
- patching compound, n**—compound used to fill or smooth minor depressions or irregularities in a flooring surface. **F 141, F06**
- patch test**—a test to determine whether a proposed liquid encapsulant is suitable for a particular surface or use that is performed by applying a small area of it to the surface, letting it cure, and testing it for adhesion. **E 1605, E06**
- pate dure (hard paste)**—a French term designating ceramic whitewares fired at relatively high temperatures. **C 242, C21**
- patenting, n**—*inwire making*, heating a medium-carbon or high-carbon steel before wire drawing, or between drafts, to a temperature above the **transformation range**, and then cooling it in air, or a bath of molten lead or salt, to a temperature below Ae_1 . **A 941, A01**
- patent leather**—Any leather with a finish system that produces a high gloss with great depth and clarity. Usually obtained by one or more applications of a high solids coating, but is also made by film lamination. **D 1517, D31**
- pate tendre (soft paste)**—a French term designating ceramic whitewares fired at relatively low temperatures. **C 242, C21**
- path length**—the distance traveled by the laser radiation from the beam splitter to the recording medium. **E 1316, E07**
- path length difference**—the difference in path length between the object beam and the reference beam. **E 1316, E07**
- pathogenic**—disease causing. **E 1705, E48**
- pathogens**—organisms that are capable of causing disease. **F 1600, F20**
- path percolation (line of creep)**—the path that water follows along the surface of contact between the foundation soil or rock and the base of a dam or other structure. **D 653, D18**
- patient**—any human whose temperature is being taken. **E 344, E20**
- pattern*—See **diffraction pattern**. **E 7, E04**
- pattern**—metal, fiberboard, wood or paper forms from the outlines of which are cut the various pieces of the shoe. **F 869, F08**
- patternate, v**—to measure the pattern of a spray. **E 1620, E29**
- patternation, n**—the measurement and characterization of spray patterns. **E 1620, E29**
- patternator, n**—a device designed to patternate sprays. **E 1620, E29**
- patterned ground**—a general term for any ground surface exhibiting a discernibly ordered, more or less symmetrical, structural pattern of ground and, where present, vegetation. **D 7099, D18**
- paved road, n**—two or more lanes, all-weather, maintained, hard surface roads with good driving visibility used for heavy and high-density traffic, in accordance with the U.S. Federal Highway Administration. **F 538, F09**
- pavement, bituminous*—see **bituminous pavement**. **E 867, E17**
- pavement characteristic, n**—a physical feature or property of a pavement surface such as type, roughness, texture, and skid resistance. **E 867, E17**
- pavement condition, n**—a quantitative representation of distress in pavement at a given point in time. **E 867, E17**
- pavement, continuously reinforced concrete (CRCP)*—see **continuously reinforced concrete pavement**. **E 867, E17**
- pavement distress, n**—external indications of pavement defects or deterioration. **E 867, E17**
- pavement distress, n**—external indications of pavement defects or deterioration. **E 1778, E17**
- pavement, jointed concrete (JCP)*—see **jointed concrete pavement**. **E 867, E17**
- pavement macrotexture, n**—the deviations of a pavement surface from a true planar surface with the characteristic dimensions of wavelength and amplitude from 0.5 mm (0.2 in.) up to those that no longer affect tire-pavement interaction. **E 867, E17**
- pavement management section/segment, n**—a contiguous pavement area considered to have uniform construction, maintenance, usage history, and condition. **E 867, E17**
- pavement-micro texture (micro-rugosity), n**—the deviations of a pavement surface from a true planar surface with characteristic dimensions of wavelength and amplitude less than 0.5 mm (0.2 in.). **E 867, E17**

pavement performance, *n*—ability of a pavement to fulfill its purpose over time. E 867, E17

pavement, Portland cement concrete—see **Portland cement concrete pavement**. E 867, E17

pavement pumping—ejection of soil and water mixtures from joints, cracks, and edges of rigid pavements, under the action of traffic. D 653, D18

pavers—the glass-contact refractory blocks used in the bottom of a melter. See **tank block**. C 162, C14

pavers—unglazed porcelain or natural clay tile formed by the dust-pressed method and similar to ceramic mosaics in composition and physical properties but relatively thicker with 6 in.² (39 cm²) or more of facial area. C 242, C21

paving—stone used in an interior pedestrian wearing surface as in patios, walkways, driveways, and the like. (See **flooring**) C 119, C18

paving brick, *n*—brick made to provide the wearing surface of highways, streets, driveways, walkways, patios, and similar applications. See Specifications C 902 and C 1272. C 43, C15

payback method—a technique of economic evaluation that determines the time required for the cumulative benefits from an investment to recover the investment cost and other accrued costs (see **discounted payback period**; **simple payback period**). E 631, E06

payback method, *n*—a technique of economic evaluation that determines the time required for the cumulative benefits from an investment to recover the investment cost and other accrued costs (see **discounted payback period**; **simple payback period**). E 833, E06

Pb—chemical symbol for the element, lead.

Pb-positive/negative—see **lead positive/negative**. E 631, E06

P_c—critical load required to rupture a specimen using a continuous loading rate F 2078, F07

PCB—see **printed circuit board**. F 1457, F05

PCS—See **print contrast signal**. F 149, F05

PDD examination, *n*—a process that encompasses all activities that take place between a PDD examiner and an examinee during a specific series of interactions. These interactions may include the pretest interview, the use of the polygraph to collect physiological data from the examinee while presenting a series of tests, the test data analysis phase, which may be supplemented in a post-test interview phase. E 2035, E52

PDD examiner, *n*—someone who has successfully completed formal education and accredited training in conducting PDD examinations and, if appropriate, is certified or licensed by their agency or state to conduct such examinations. E 2035, E52

PDPA, *n*—phase Doppler particle analyzer. E 1620, E29

pea gravel, *n*—in roofing, small, natural aggregate, 6 to 10 mm (¼ to ⅜ in.) in diameter, screened to comply with Specification C 33, size 8. D 1079, D08

peak, *n*—in constant rate of elongation load-strain testing, the point of maximum load. D 1079, D08

peak, *n*—that part of a DTA or DSC curve which is attributable to the occurrence of a single process. It is normally characterized by a deviation from the established base line, a maximum deflection, and a reestablishment of a base line not necessarily identical to that before the peak. E 1445, E27

peak, *n*—that portion of a heating curve which is attributable to the occurrence of a single process. It is normally characterized by a deviation from the established baseline, a maximum deflection, and a reestablishment of a baseline not necessarily identical to that before the peak. E 1445, E27

peak—in *fatigue loading*, the point where the first derivative of the force-time history changes from positive to negative sign; the point of maximum force in constant amplitude loading. E 1823, E08

peak braking coefficient [*nd*], *n*—of a tire, the maximum value of the braking coefficient that occurs prior to wheel lockup as the braking

torque is progressively increased; this measure is influenced by operating conditions. F 538, F09

peak EGT, *n*—*foroctane rating*, as the mixture is manually leaned from a state rich of stoichiometric, the exhaust gas temperature will increase with the removal of excess fuel. As the mixture is continually leaned, a peak temperature will be attained, after which continued leaning will result in lower exhaust gas temperatures. D 4175, D02

peak force, *n*—*forpile floor coverings*, the force required to separate two or more layers and registered on a chart as a peak, that is, a value exceeding the value immediately preceding and following it. D 123, D13

peak force, *n*—*intear testing of fabrics*, the maximum force required to break one or more yarn components in a woven or knitted fabric specimen, or break the fiber, fiber bonds or fiber interlocks in other manufactured forms. D 123, D13

peak force, *n*—*intear testing of fabrics*, the maximum force required to break one or more yarn components in a woven or knitted fabric specimen, or break the fiber, fiber bonds or fiber interlocks in other manufactured forms. D 4850, D13

peak force, *n*—*forpile floor covering*, the force required to separate two or more layers and registered on a chart as a peak, that is, a value exceeding the value immediately preceding and following it. D 5684, D13

peak load, *n*—maximum force recorded during a strength test. D 907, D14

peak melting point, *n*—in a thermal transfer ribbon, the maximum temperature to which the imaging material should be subjected. F 1623, F05

peak of tension (PTO), *n*—a family of testing procedures, including known solution, searching (probing), and acquaintance tests. There is a body of validation research for the known solution POT. E 2035, E52

peak point (temperature or time), *n*—the temperature or time corresponding to the maximum (or minimum) deflection from the baseline of the independent parameter curve. E 473, E37

peaks—extraneous marks extending from the character outward past the COL. F 149, F05

peak shear strength—maximum shear strength along a failure surface. (ISRM) D 653, D18

peak slip friction number, *n*—the maximum value of the slip friction number. E 867, E17

peak sound pressure level, *L_{PK}* [*nd*], (dB), *n*—ten times the common logarithm of the square of the ratio of the largest absolute value of the instantaneous sound pressure in a stated frequency band during a specified time interval to the reference sound pressure of 20 micropascals. C 634, E33

peak temperature, *n*—the temperature corresponding to the maximum deflection of the DTA or DSC curve. E 1445, E27

peak value (of an impulse voltage wave), *n*—the maximum value of voltage. D 1711, D09

peak width, FWHM—full width at half-maximum peak height above background. E 673, E42

peaned point—point formed like that usually found on rivets. F 547, F16

pearl ash—{archaic} commercial potassium carbonate. C 162, C14

pearlescent, *adj*—exhibiting various colors depending on the angles of illumination and viewing, as observed in mother-of-pearl. E 284, E12

pearlite—a metastable microstructure formed, when local austenite areas attain the eutectoid composition, in alloys of iron and carbon containing greater than 0.025 percent but less than 6.67 percent carbon. The structure is an aggregate consisting of alternate lamellae of ferrite and cementite formed on slow cooling during the eutectoid reaction. In an alloy of given composition, pearlite may be formed isothermally at temperatures below the eutectoid temperature by quenching austenite to a desired temperature (generally above 550°C) and holding for a period of time necessary for transformation to occur. The interlamellar spacing varies

pearlite

directly with the transformation temperature; that is, the higher the temperature the greater the spacing. E 7, E04

pearlite colony—a circumscribed aggregate within which lamellae of corresponding phases have the same orientation. E 7, E04

pearlite nodule—cluster of wedge-shaped pearlite colonies. E 7, E04

pearlitic structure—a microstructure resembling that of the pearlite constituent in steel, therefore, a lamellar type of structure of varying degrees of coarseness. E 7, E04

pearlized, *n*—*in buttons*, the addition of synthetic or natural pearlescent pigments to the button resin formulation or to the formulation used for coating. D 5497, D13

peat—a naturally occurring highly organic substance derived primarily from plant materials. D 653, D18

peat—an unconsolidated, compressible soil consisting of partially decomposed semi-carbonized remains of plants, some animals, and soil material. Peat, found in ancient bogs, can be the first stage in the formation of coal. D 7099, D18

peat hummock—a hummock consisting of peat. D 7099, D18

peatland—areas having peat-forming vegetation on which peat has accumulated or is accumulating. D 653, D18

peatland—peat-covered terrain. D 7099, D18

peat plateau—a generally flat-topped, expanses of peat rising one or more meters above the general surface of a peatland (or, peat bog). In a peat plateau, a layer of permafrost exists. This may penetrate into the peat below and farther, into the underlying mineral soil. D 7099, D18

pebbled grain—an embossed or naturally shrunken leather grain finish resembling a pebbled surface, ranging from fine pebbled Morocco goat to heavy Scotch grain upper leather. D 1517, D31

pebble mill—see **ball mill**. C 286, B08

peccary—a wild boar found in Central and South America. The skin is usually chrome-tanned and shaved to light weight for glove leathers. It is distinguishable from pigskin and carpincho leather by the fact that bristle holes occur in straight-line groups of three. D 1517, D31

pectic substrates—complex polysaccharides containing a large proportion of galacturonic acid units. D 1695, D01

pectins—colorless, amorphous, water-soluble polysaccharides occurring in plant tissues that yield pectic acid and methanol on hydrolysis. D 1695, D01

pedestrian, *n*—a person using legs or leg surrogates (for example, prosthetic limbs, crutches, etc.) as the principal mechanism for locomotion. F 1646, F13

pedestrian gate—a gate, usually comprised of a single leaf, which is used to close a gate opening through which pedestrians are intended to pass. While often referring to a swing gate, the gate may be of any single leaf gate intended for pedestrian use (that is, slide gate or others). See Specifications F 654, F 900, and F 1184. F 552, F14

peelable seal—the opening characteristic of forcibly separating two package substrates, which have been joined together by a sealing process, without tearing the substrates. F 1327, F02

peeler log—a log selected as suitable for cutting into rotary veneer. D 1038, D07

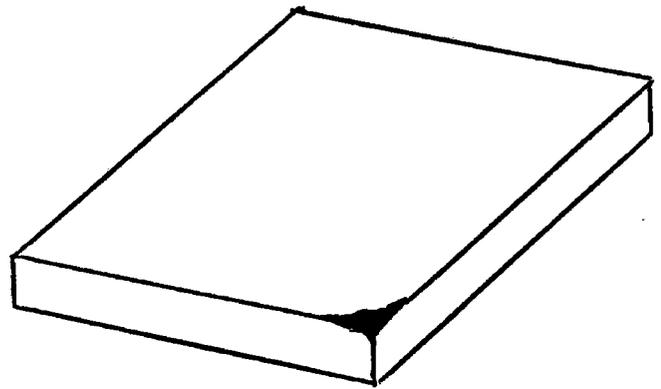
peeling—See **delamination**. A 902, A05

peeling—the detachment or partial detachment of an electrodeposited coating from a basis metal or undercoat. B 374, B08

peeling—See **orange peel**; **shivering**. C 242, C21

peeling—a defect characterized by the spontaneous detachment of pieces of porcelain enamel from cast iron. C 286, B08

peeling—compressive stresses in a fired glaze or other ceramic coating of sufficient magnitude to exceed the strength of adhesion between the glaze and the body.



F 109, C21

peeling resistance of metal connector plate with integral teeth—resistance to consecutive withdrawal of adjacent teeth of metal connector plate from wood member during shear load application starting at the last row of teeth and progressing toward the center of the connection. See **lateral resistance of metal connector plate**. E 631, E06

peel ply—a removable ply molded onto the surface of a laminate to provide a chemically clean surface for bonding or painting after removal. E 631, E06

peel ply—a removable ply molded onto the surface of a laminate to provide a chemically clean surface for bonding or painting after removal. E 1749, E06

peel strength, *n*—the average load per unit width of bondline required to separate progressively a flexible member from a rigid member or another flexible member. D 907, D14

peen-coated, peen-galvanized—See **mechanically plated**. F 547, F16

peening—See **shot peening**. B 374, B08

peen plating—See **mechanical plating**. B 374, B08

peephole—a small opening in a furnace wall for observation purposes. C 162, C14

peerless cut nail—name for small, regular-stock-steel, cut nails with broad flat circular head and sheared long-tapered square point to facilitate clinching. F 547, F16

Pel—picture element. F 1457, F05

pelleted activated carbon—a form of granular activated carbon consisting of cylindrical particles. D 2652, D28

pelletized biomass fuel—see **densified particulate biomass fuels**. E 1705, E48

pellet size distribution, *n*—the percentage, by mass, of carbon black retained on each of a specified series of sieve screens arranged with progressively smaller openings. D 3053, D24

pellicle mirror—a thin transparent membrane used in place of a transparent flat glass disk of a “plane glass illuminator.” E 7, E04

pelt—a raw skin with hair. Usually refers to fur animals. D 1517, D31

Peltier coefficient, *n*—the reversible heat which is absorbed or evolved at a thermocouple junction when unit current passes in unit time. E 344, E20

PEM—abbreviation for **printer emulation module**. F 1457, F05

pencil—rod-like assemblage of asbestos fibers in close-packed parallel orientation, of generally uniform diameter that can be fiberized readily. D 2946, C17

pencil beam—a radiation beam which has little divergence, usually created by collimating an intense source of radiation. E 1316, E07

pencil point—long needle point. F 547, F16

pendulum hardness tester, *n*—a device for measuring the hardness of a dry film, based on the damping time required for a specified decrease in oscillation (swing) amplitude; the shorter the damping time the lower the hardness. D 16, D01

penetrability—a grout property descriptive of its ability to fill a porous mass; primarily a function of lubricity and viscosity.

D 653, D18

penetrameter—alternative term for **image quality indicator**.

E 1316, E07

penetrameter sensitivity—alternative term for **IQI sensitivity**.

E 1316, E07

penetrant—a solution or suspension of dye.

E 1316, E07

penetrant—a material that enhances the ability of an agrichemical to enter a substrate or penetrate a surface.

E 1519, E35

penetrant comparator—an intentionally flawed specimen having separate but adjacent areas for the application of different liquid penetrant materials so that a direct comparison of their relative effectiveness can be obtained.

NOTE—It can also be used to evaluate liquid penetrant techniques, liquid penetrant systems, or test conditions.

E 1316, E07

penetrant, fluorescent—a penetrant that emits visible radiation when excited by black light.

E 1316, E07

penetrant (permeant)—entity from a phase in contact with one of the membrane surfaces that passes through the membrane.

D 6161, D19

penetrant, post emulsifiable—a liquid penetrant that requires the application of a separate emulsifier to render the excess surface penetrant water-washable.

E 1316, E07

penetrant, solvent-removable—a liquid penetrant so formulated that most of the excess surface penetrant can be removed by wiping with a lint-free material, with the remaining surface penetrant traces removable by further wiping with a lint-free material lightly moistened with solvent remover.

E 1316, E07

penetrant, visible—a liquid penetrant that is characterized by an intense color, usually red.

E 1316, E07

penetrant, water-washable—a liquid penetrant with a built-in emulsifier.

E 1316, E07

penetrating agent—a material that increases the penetration of a liquid medium into a porous material.

D 459, D12

penetration, *n*—the depths to which one material extends into or penetrates another.

C 709, D02

penetration, *n*—the consistency of a bituminous material expressed as the distance in tenths of a millimetre (0.1 mm) that a standard needle penetrates vertically a sample of the material under specified conditions of loading, time, and temperature.

D 8, D04

penetration—depth of hole cut in rock by a drill bit. (ISRM)

D 653, D18

penetration, *n*—the entering of an adhesive into an adherend.

D 907, D14

penetration—the consistency of a bituminous material expressed as the distance in tenths of a millimetre (0.1 mm) that a standard needle penetrates vertically a sample of material under specified conditions of loading, time, and temperature. A cone is sometimes used for special purposes instead of a needle.

D 1079, D08

penetration, *n*—of a propellant or of petrolatum, the depth, in tenths of a millimetre, that a standard cone penetrates the sample under prescribed conditions of weight, time, and temperature.

D 4175, D02

penetration, *n*—of petroleum wax, the depth, in tenths of a millimetre, to which a standard needle penetrates into the wax under defined conditions.

D 4175, D02

penetration, *n*—the depths to which one material extends into or penetrates another.

D 4175, D02

penetration depth—the maximum depth in a material from which usable ultrasonic information can be obtained and measured.

E 1316, E07

penetration grouting—filling joints or fractures in rock or pore spaces in soil with a grout without disturbing the formation; this grouting method does not modify the solid formation structure. See also **displacement grouting**.

D 653, D18

penetration macadam, *n*—a pavement layer containing essentially

one-size coarse aggregate, penetrated in place by a heavy application of bituminous material, followed by an application of a smaller size coarse aggregate, and compacted; multiple layers containing still smaller coarse aggregate may be used.

D 8, D04

penetration of petrolatum, *n*—the depth, in tenths of a millimetre, that a standard cone will penetrate the sample under fixed conditions of mass, time, and temperature.

D 4175, D02

penetration resistance curve (Proctor penetration curve)—the curve showing the relationship between: (1) the penetration resistance, and (2) the water content.

D 653, D18

penetration resistance (standard penetration resistance) (Proctor penetration resistance), p_R , N (FL⁻² or Blows L⁻¹)—(a) number of blows of a hammer of specified weight falling a given distance required to produce a given penetration into soil of a pile, casing, or sampling tube.

(b) unit load required to maintain constant rate of penetration into soil of a probe or instrument.

(c) unit load required to produce a specified penetration into soil at a specified rate of a probe or instrument. For a Proctor needle, the specified penetration is 2½ in. (63.5 mm) and the rate is ½ in. (12.7 mm)/s.

D 653, D18

penetration time—same as **dwelt time**.

E 1316, E07

penetrator—See **indenter**.

E 7, E04

penetrometer, *n*—an instrument that measures the consistency or hardness of semiliquid to semisolid materials by measuring the depth to which a specified cone or needle under a given force falls into the material.

D 4175, D02

pen lift, *n*—an interruption in a stroke caused by removing the writing document from the writing surface.

E 2195, E30

Penning gage—see **ionization vacuum gage**.

E 1316, E07

Penn-Vernon process—see synonymous term **Pittsburgh sheet process**.

C 162, C14

penny size, penny weight—denoting length of nail, indicated by “d” (not indication of diameter). Because of standardization of sizes of common nails, sinkers, and cooler nails, penny weight denotes, in addition to length, the head and shank diameter of these nails. For other nail types, sizes are referred to by length and diameter.

F 547, F16

pen position, *n*—the relationship between the writing instrument and the writing surface.

E 2195, E30

pen pressure, *n*—the force with which the writing instrument contacts the paper.

E 2195, E30

pentane insolubles, *n*—in used oil analysis, separated matter resulting when a used oil is dissolved in pentane.

D 4175, D02

penta resin—under **resin, synthetic**, see **penta resin**.

D 16, D01

pentosans—one of the groups of amorphous carbohydrates included under the general term “hemicellulose.” Pentosans yield principally pentoses on acid hydrolysis. The principal pentosan in wood is xylan.

D 1695, D01

peptizer (dry rubber), *n*—a compounding material used in small proportions to accelerate, by chemical action, the softening of rubber under the influence of mechanical action, or heat, or both.

D 1566, D11

percale, *n*—as applied to bed sheeting, a plain weave fabric with not fewer than 180 yarns/in.² (645 mm²).

D 123, D13

percale, *n*—as applied to bed sheeting, a plain weave fabric with not fewer than 180 yarns/in.² (645 mm²).

D 7023, D13

percent active FWA—the absolute concentration of specified FWA in (1) raw materials, or (2) finished product, expressed in terms of specific structure or generic name, when known.

D 459, D12

percentage elongation, *n*—of paper, a mathematical quantity used to express elongation (stretch) as a percentage increase in the length of a paper test specimen at rupture, in comparison to its length at the beginning of a tensile test carried to rupture under specified conditions. See **elongation**.

D 1968, D06

percentage point, *n*

percentage point, *n*—a difference of 1 % of a base quantity.

D 123, D13

percent area, *n*—in testing cotton with the Trash Meter, the ratio of total area of trash on the surface of a sample of cotton to that of the area of the viewing window, expressed in a percentage of the area of the viewing window.

D 123, D13

percent area, *n*—in testing cotton with the Trash Meter, the ratio of total area of trash on the surface of a sample of cotton to that of the area of the viewing window, expressed in a percentage of the area of the viewing window.

D 7139, D13

percent compaction—the ratio, expressed as a percentage, of: (1) dry unit weight of a soil, to (2) maximum unit weight obtained in a laboratory compaction test.

D 653, D18

percent conductivity—the ratio of the resistivity of the International Annealed Copper Standard (IACS) at 20°C to the resistivity of a material at 20°C, expressed in percent. Results are calculated on a weight basis or volume basis and so specified.

B 354, B01

percent consolidation—see **degree of consolidation**.

D 653, D18

percent coverage, *n*—the ratio of the area actually covered by the ink (or print material) to the area of the page times one hundred. (See **image area** and **maximum image area**.)

F 1457, F05

percent elongation, *n*—the increase in length of a specimen expressed as a percentage of the original length.

D 123, D13

percent elongation, *n*—the increase in length of a specimen expressed as a percentage of the original length.

D 6477, D13

percent evaporated, *n*—in batch distillation, the sum of the percent recovered and the percent loss.

D 4175, D02

(2) **percent exhaust (%E)**—the ratio of FWA on the substrate (wt FWA (s)) obtained under specified conditions to the total FWA introduced in the original bath (wt FWA (o)).

D 459, D12

percent fines—amount, expressed as a percentage by weight, of a material in aggregate finer than a given sieve, usually the No. 200 (74 μm) sieve.

D 653, D18

percent hydrolysis-resistant cellulose—the residue after treatment of cellulose with acid under specified conditions, expressed as a percentage of the original.

D 1695, D01

percentile—one of the values in a series dividing the distribution of the variable in the series into 100 groups of equal frequency or size.

C 242, C21

percentile level L_x [*nd*], (dB), *n*—of a time varying level, the level exceeded × percent of the time during the stated measurement period.

C 634, E33

percent linear thermal expansion—the change in length per unit length as temperature is changed from temperature T_1 to temperature T_2 ($T_1 < T_2$), expressed as a percent:

$$P = [(L_2 - L_1)/L_0] \times 100 + A$$

where:

L_0 = sample length at T_0 (between 20 and 30°C),

L_1 = sample length at T_1 ,

L_2 = sample length at T_2 , and

A = instrument correction.

C 242, C21

percent loss, *n*—in batch distillation, 100 minus the percent total recovery.

D 4175, D02

percent nonconforming, *n*—a calculated ratio of nonconforming units to the number of units inspected, the quotient being multiplied by 100.

D 1711, D09

percent nozzle pattern overlap—calculated by subtracting the nozzle spacing from the single nozzle pattern width and then dividing by the nozzle spacing and multiplying the result by one hundred.

E 1102, E35

percent saturation (degree of saturation), $S_r, S_r(D)$ —the ratio, expressed as a percentage, of: (1) the volume of water in a given soil or rock mass, to (2) the total volume of intergranular space (voids).

D 653, D18

percept, *n*—the result of the process of perception.

E 284, E12

perception, *n*—the awareness of a stimulus by way of the senses.

E 253, E18

perception, *n*—See **visual perception**.

E 284, E12

perched ground water—unconfined ground water separated from an underlying body of ground water by an unsaturated zone.

D 653, D18

perched water table—a water table usually of limited area maintained above the normal free water elevation by the presence of an intervening relatively impervious confining stratum.

D 653, D18

perched water table—groundwater separated from an underlying body of groundwater by unsaturated soil or rock. Usually located at a higher elevation than the groundwater table. (ISRM)

D 653, D18

percolation—the movement of gravitational water through soil (see **seepage**).

D 653, D18

percolation—the movement of water through the vadose zone, in contrast to infiltration at the land surface and recharge across a water table.

D 653, D18

percolation—the movement of water downward and radially through subsurface soil layers.

D 7099, D18

percolation layer (drainage course)—a layer of washed gravel or of a manufactured drainage media that allows water to filter through to the drain.

C 717, C24

percussion cone—damage produced by contact stresses generated by mechanical contact of a hard, blunt object with a glass surface.

C 162, C14

percussion drilling—a drilling technique that uses solid or hollow rods for cutting and crushing the rock by repeated blows. (ISRM)

D 653, D18

percussion drilling—a drilling process in which a hole is advanced by using a series of impacts to the drill steel and attached bit; the bit is normally rotated during drilling. See **rotary drilling**.

D 653, D18

pereletok (Russian)—a layer of frozen ground which forms part of the seasonally frozen ground, in areas either free of permafrost or with a lowered permafrost table, which remains frozen through one or several summers, and then thaws.

D 7099, D18

perennially frozen ground—see **permafrost**.

D 7099, D18

perfect gas—see **ideal gas**.

E 1316, E07

perfect reflecting diffuser—ideal reflecting surface that neither absorbs nor transmits light, but reflects diffusely, with the radiance of the reflecting surface being the same for all reflecting angles, regardless of the angular distribution of the incident light.

E 284, E12

perfect transmitting diffuser, *n*—ideal transmitting specimen that neither absorbs nor reflects light, but transmits diffusely, with the radiance of the specimen being the same for all transmitting angles, regardless of the angular distribution of the incident light.

E 284, E12

perforated hardboard—hardboard with closely spaced factory punched or drilled holes.

D 1554, D07

perforated metal connector plate—metal connector plate with prepunched or predrilled holes. Also called *punched metal connector plate*.

performance—See **building performance**. (See also **facility performance**)

performance criterion, of a facility—See **requirement statement**.

E 631, E06

perforation—a slot or hole made in well casing to allow for communication of fluids between the well and the annular space.

D 653, D18

perforations, *n*—in paper, a line of slits scored in a sheet of paper so that it may be easily folded, refolded, and afterwards torn off with ease.

D 1968, D06

performance—See **building performance**. (See also **facility performance**)

E 1480, E06

performance—ability of a boom to contain or deflect oil under a given set of environmental conditions.

F 818, F20

performance check, AE system—see **verification, AE system**.
E 1316, E07

performance criterion, of a facility—See **requirement statement**.
E 1480, E06

performance curve, *n*—for a qualitative chemical spot test kit, this is a plot of the test kit response (positive or negative) versus the lead content in a given sample matrix as determined by quantitative analysis.
E 631, E06

performance parameter—for a particular spot test kit and a particular sample matrix, this is the lead content that yields a known degree of confidence in detecting lead.
E 631, E06

performance properties—design feature(s) manufactured into the fastener to achieve a specific characteristic relative to the fastener application, such as torque-tension.
F 1789, F16

performance property, *n*—*in wear testing*, any chemical or physical property of a fiber, yarn, or fabric that is evaluated during the wear-refurbishing cycles.
D 123, D13

performance property, *n*—a result obtained by conducting a performance test.
D 4439, D35

performance rating, *n*—the rating of a product's performance defined by a standard test method.
F 1773, F08

performance standard, *n*—*in building constructions*, a standard that defines the required **performance** of a building material, element, subsystem, or system.
performance test method of a facility—See **requirement statement**.
E 631, E06

performance statement, *n*—an essential part of a performance standard that addresses a specific attribute in terms of an element in a hierarchy of built elements, and consists of four related parts: objective, criteria, evaluation, and commentary.
E 2151, E06

performance test, *n*—a test which simulates in the laboratory as closely as practicable selected conditions experienced in the field and which can be used in design. (Synonym for **design test**.)
D 4439, D35

performance test, *n*—*in geosynthetics*, a laboratory procedure which simulates selected field conditions which can be used in design.
D 4439, D35

performance test—a test devised to permit observation and measurement of the performance of a system or unit of equipment operating under prescribed load conditions.
D 5681, D34

performance test method of a facility—See **requirement statement**.
E 1480, E06

pergelic soil temperature regime—in United States Department of Agriculture (USDA) classification, these are soils in which the mean annual temperature is less than 0°C (32°F). Ice wedges and lenses are normal in such soils in the United States.
D 7099, D18

periclase grain, *n*—a crystalline magnesium oxide in granular form; this contains at least 85 % magnesia.
C 71, C08

periglacial—the conditions, processes, and landforms associated with cold non-glacial environments.
D 7099, D18

periglacial phenomena—landforms and soil characteristics produced by periglacial processes.
D 7099, D18

periglacial processes—processes associated with frost action in cold, non-glacial environments.
D 7099, D18

period—time interval occupied by one cycle.
D 653, D18

period, *n*—size of the minimum interval of the independent variable after which the same characteristics of a periodic phenomenon recur.
E 349, E21

periodic reverse plating—a method of plating in which the current is reversed periodically. The cycles are usually no longer than a few minutes and may be much less.
B 374, B08

period system efficiency—see **efficiency, period system**.
E 772, E44

peritectic equilibrium—a reversible univariant transformation in which a solid phase, that is stable only at lower temperature,

decomposes into a liquid and a solid phase that are conjugate at higher temperature, or the reverse; for example: $\alpha + L = \beta$, $\alpha + \beta + L = \gamma$, etc.
E 7, E04

peritectoid equilibrium—a reversible univariant transformation in which a solid phase, that is stable only at low temperature, decomposes with rising temperature into two or more conjugate solid phases; for example: $\alpha + \beta = \gamma$, $\alpha + \beta + \gamma = \delta$, etc.
E 7, E04

perlite, *n*—insulation composed of natural perlite ore expanded to form a cellular structure.
C 168, C16

perlite—an aggregate used in lightweight insulating concrete and in preformed perlite insulating board; formed by heating and expanding siliceous volcanic glass.
D 1079, D08

perm, *n*—a unit of measurement of water vapor permeance; a metric perm, or 1 g/24 h·m²·mm Hg. U.S. unit, 1 grain/h·ft²·in. Hg.
C 11, C11

perm, *n*—the mass rate of water vapor flow through one square foot of a material or construction of one grain per hour induced by a vapor pressure gradient between two surfaces of one inch of mercury or in units that equal that flow rate.
C 168, C16

perm, *n*—empirical unit of **water-vapor permeance** (mass flow rate), equal to one grain (avoirdupois) of water vapor per hour flowing through one square foot of a material or construction induced by a vapor-pressure difference of one inch of mercury between the two surfaces.
E 631, E06

permanent set—See **residual deflection**.
E 631, E06

permacrete—an artificial mixture of frozen soil materials cemented by pore ice, which forms a concrete-like construction material for use in cold regions.
D 7099, D18

permafrost—perennially frozen soil.
D 653, D18

permafrost—the thermal condition in which the temperatures in earth materials remain below 0°C (32°F) for at least two consecutive winters and the intervening summer; moisture in the form of water and ground ice may or may not be present.
D 7099, D18

permafrost aggradation—an increase in the thickness and/or area of permafrost through natural or artificial causes as a result of climatic cooling and/or change of terrain conditions such as vegetation succession, filling of lake basins, or human activity.
D 7099, D18

permafrost base—the lower boundary surface of permafrost, above which temperatures are below 0°C (32°F), and below which temperatures are above 0°C (32°F).
D 7099, D18

permafrost boundary—(1) the geographical boundary between the continuous and discontinuous permafrost zones; (2) the margin of a discrete body of permafrost.
D 7099, D18

permafrost degradation—a decrease in thickness and/or areal extent of permafrost because of natural or artificial causes as a result of climatic warming and/or change of terrain conditions such as disturbance or removal of an insulating vegetation layer by fire or human means.
D 7099, D18

permafrost limit—the geographical distal (terminal) boundaries of the circumpolar, or alpine, or altitudinal, continuous and discontinuous permafrost zones.
D 7099, D18

permafrost region—a region in which the temperature of some or all of the ground beneath the layer which freezes and thaws seasonally remains at or below 0°C for at least two consecutive years.
D 7099, D18

permafrost, relict—see **relict permafrost**.
D 7099, D18

permafrost, saline—see **saline permafrost**.
D 7099, D18

permafrost table—the upper boundary surface of permafrost.
D 7099, D18

permafrost thickness—the vertical distance between the permafrost table and the permafrost base.
D 7099, D18

permafrost zone—a major subdivision of a permafrost region.
D 7099, D18

permanence, *n*—resistance to appreciable changes in characteristics with time and environment.
D 907, D14

permanence, *n*—*of paper*, the tendency to resist changes in any or all of its properties with the passage of time.
D 1968, D06

permanent boom

permanent boom—boom intended for long-term or permanent deployment. **F 818, F20**

permanent care label, *n*—as applied to textile products, a care label that remains legible and attached to a textile product throughout its useful life. **D 123, D13**

permanent care label, *n*—as applied to textile products, a care label that remains legible and attached to a textile product throughout its useful life. **D 3136, D13**

permanent deformation, *n*—the net long-term change in a dimension of a specimen after deformation and relaxation under specified conditions. **D 123, D13**

permanent hardness—the total milliequivalents of hardness minus the milliequivalents of bicarbonate alkalinity in a water. See **hardness, alkalinity**. **D 6161, D19**

permanent linear change, *n*—the percent dimensional change in length (based on original length) of a refractory specimen free of externally applied stresses, after being subjected to a prescribed heat treatment. **C 71, C08**

permanent magnet—a magnet that retains a high degree of magnetization virtually unchanged for a long period of time (characteristic of materials with high retentivity). **E 1316, E07**

permanent magnet lens—an electron lens consisting of permanent magnets. **E 7, E04**

permanent mold casting, *n*—a metal object produced by introducing molten metal by gravity or low pressure into a mold constructed of durable material, usually iron or steel, and allowing it to solidify. See also graphite permanent mold casting. **B 899, B02**

permanent plugging—a seal that has a hydraulic conductivity that is equivalent or less than the hydraulic conductivity of the geologic formation. This term is often used with uncased boreholes. **D 653, D18**

permanent set—the amount by which an elastic material fails to return to its original form after deformation. **F 869, F08**

permanent set of test frame—a load-induced permanent displacement from an original position of the test frame. **E 631, E06**

permanent shear stability index (PSSI), *n*—a measure of the irreversible decrease, resulting from shear, in an oil's viscosity contributed by an additive. **D 4175, D02**

permanent strain—the strain remaining in a solid with respect to its initial condition after the application and removal of stress greater than the yield stress (commonly also called "residual" strain). (ISRM) **D 653, D18**

permanganate number—the number of millilitres of 0.1 *N* potassium permanganate solution that is consumed by 1 g of oven-dry pulp under certain specified and carefully controlled conditions. It is an indication of the hardness or bleachability of a pulp. It also is an indirect estimate of lignin content. **D 1695, D01**

permeability, *n*—the rate of passage of a liquid or a gas through a porous material; determined under specified conditions. **B 243, B09**

permeability, *n*—the property of a porous material that permits a fluid (or gas) to pass through it; in construction, commonly refers to water vapor permeability of a sheet material or assembly and is defined as water vapor permeance per unit thickness. Metric unit of measurement, metric perms per centimetre of thickness. See **water vapor transmission, perm, permeance**. **C 11, C11**

permeability—the measure through a material of fluid flow, gas, or liquid. **C 242, C21**

permeability, *n*—a property measured by the rate of passage of a fluid under a pressure gradient through a material. **C 709, D02**

permeability—that property which permits movement of a liquid through the pores and interstices of the concrete. **C 822, C13**

permeability, *n*—the rate of flow of a fluid under a differential pressure through a material. (See also **air permeability, porosity**.) **D 123, D13**

permeability—see **coefficient of permeability**. **D 653, D18**

permeability—the capacity of a rock to conduct liquid or gas. It is measured as the proportionality constant, *k*, between flow velocity, *v*, and hydraulic gradient, *I*; $v = k \cdot I$. (ISRM) **D 653, D18**

permeability, *n*—the permeation rate divided by the pressure gradient of the gas or vapor. For a homogeneous material that obeys Fick's law, the permeability is equal to the product of the diffusion coefficient and the solubility coefficient of the gas or vapor. **D 1566, D11**

permeability, *n*—a property measured by the rate of passage of a fluid under a pressure gradient through a material. **D 4175, D02**

permeability, *n*—in gas diffusion, the flow of gas, through the gas diffuser. **D 4175, D02**

permeability, *n*—in gas diffusion, the rate of a substance that passes through a material (diffuser) under given conditions. **D 4175, D02**

permeability, *n*—the rate of flow of a liquid under a differential pressure through a material. **D 4439, D35**

permeability, *n*—of geotextiles, hydraulic conductivity. **D 4439, D35**

permeability, *n*—the rate of flow of a fluid under a differential pressure through a material **D 4850, D13**

permeability—see **permeance**. **D 6161, D19**

permeability, *n*—the ability of a rock to transmit fluid. **E 957, E44**

permeability—the ratio of flux density produced to magnetizing force (the ease with which a material can become magnetized). **E 1316, E07**

permeability, a-c—a generic term used to express various dynamic relationships between magnetic induction, *B*, and magnetizing force, *H*, for magnetic material subjected to a cyclic excitation by alternating or pulsating current. The values of a-c permeability obtained for a given material depend fundamentally upon the excursion limits of dynamic excitation and induction, the method and conditions of measurement, and also upon such factors as resistivity, thickness of laminations, frequency of excitation, and so forth.

NOTE—The numerical value for any permeability is meaningless unless the corresponding *B* or *H* excitation level is specified. For incremental permeabilities not only must the corresponding d-c *B* or *H* excitation level be specified, but also the dynamic range (ΔB or ΔH).

E 1316, E07

permeability, ac, impedance, incremental, $\mu_{\Delta z}$ —the value of impedance permeability obtained when ac excitation is superimposed on a dc excitation. **A 340, A06**

permeability, ac, inductance, incremental, $\mu_{\Delta L}$ —the value of inductance permeability, μ_L , obtained when the ac excitation is superimposed on a dc excitation. **A 340, A06**

permeability, ac, inductance, μ_L —the value developed from the measured inductive component of the electrical circuit for a material in an *SCM* condition, the permeability is evaluated from the measured inductive component of the electrical circuit representing the magnetic specimen. This circuit is assumed to be composed of paralleled linear inductive and resistive elements, ωL_1 and R_1 . **A 340, A06**

permeability, ac, magnetic—a generic term used to represent a dynamic material property. It is expressed as the ratio of the magnetic induction, *B*, to the magnetic field strength, *H*, that produced the induction. The value of *H* may be calculated from several different component values of the exciting current. (See **magnetic field strength, ac**, and various permeabilities.)

NOTE—The numerical value for any permeability is meaningless unless the corresponding *B* or *H* excitation level is specified. For incremental permeabilities not only the corresponding dc *B* or *H* excitation level must be specified, but also the dynamic excursion limits of dynamic excitation range (ΔB or ΔH).

A 340, A06

permeability, ac, peak, μ_p —the ratio of the measured peak value of magnetic induction to the peak value of the magnetic field strength,

H_p , calculated from the measured peak value of the exciting current. **A 340, A06**

permeability, ac, rms, impedance, μ_z —the ratio of the measured peak value of magnetic induction, B , to the apparent magnetic field strength, H_z , calculated from the rms value of the total exciting current.

NOTE—The value of the current used to compute H_z is obtained by multiplying the measured value of rms exciting current by 1.414. This assumes that the total exciting current is magnetizing current and is sinusoidal. **A 340, A06**

permeability coefficient—parameter defined as a transport flux per unit transmembrane driving force per unit membrane thickness. **D 6161, D19**

permeability coefficient—the steady-state rate of flow of gas through unit area and thickness of a solid barrier per unit pressure differential at a given temperature. **E 1316, E07**

permeability, dc, μ —a generic term used to represent a number of magnetostatic material properties. The value represented is the ratio of the induction, B , to the dc magnetic field strength, H , producing magnetic flux under the specific magnetizing conditions.

NOTE—The magnetic constant Γ_m is a scalar quantity differing in value and uniquely determined by each electromagnetic system of units. In the cgs–emu system of units, Γ_m is 1 gauss/oersted, and in the SI system, $\Gamma_m = 4\pi \times 10^{-7}$ H/m.

NOTE—Relative permeability is a pure number which is the same in all unit systems. The value and dimension of absolute permeability depends on the system of units used.

NOTE—For any ferromagnetic material permeability is a function of the degree of magnetization. However, initial permeability, μ_0 , and maximum permeability, μ_m , are unique values for a given specimen under specified conditions.

NOTE—Except for initial permeability, μ_0 , a numerical value for any of the dc permeabilities is meaningless unless the corresponding B or H excitation level is specified.

NOTE—For the incremental permeabilities, μ_Δ and $\mu_{\Delta i}$, a numerical value is meaningless unless both the corresponding values of mean excitation level (B or H) and the excursion range (ΔB or ΔH) are specified. **A 340, A06**

permeability, d-c—permeability is a general term used to express relationships between magnetic induction, B , and magnetizing force, H , under various conditions of magnetic excitation. These relationships are either (1) absolute permeability, which in general is the quotient of a change in magnetic induction divided by the corresponding change in magnetizing force, or (2) relative permeability, which is the ratio of the absolute permeability to the magnetic constant (γ_m).

NOTE—The magnetic constant γ_m is a scalar quantity differing in value and uniquely determined by each electromagnetic system of units. In the unrationalized cgs system γ_m is 1 gauss/oersted and the mksa rationalized system $\gamma_m = 4\pi \times 10^{-7}$ H/m.

NOTE—Relative permeability is a pure number which is the same in all unit systems. The value and dimension of absolute permeability depends on the system of units employed.

NOTE—For any ferromagnetic material, permeability is a function of the degree of magnetization. However, initial permeability, μ_0 , and maximum permeability, μ_m , are unique values for a given specimen under specified conditions.

NOTE—Except for initial permeability, μ_0 , a numerical value for any of the d-c permeabilities is meaningless unless the corresponding B or H excitation level is specified.

NOTE—For the incremental permeabilities μ_Δ and $\mu_{\Delta i}$, a numerical value is meaningless unless both the corresponding values of mean excitation level (B or H) and the excursion range (ΔB or ΔH) are specified. **E 1316, E07**

permeability, dc, absolute, μ_{abs} —the ratio of the total induction, ΔB , to the dc magnetic field strength, ΔH , which produced it. Also described as:

$$\mu_{\text{abs}} = \Gamma_m + \mu_i = \Gamma_m \mu_r$$

A 340, A06

permeability, dc, reversible, μ_{rev} —the ratio of magnetic induction, ΔB , to the dc magnetic field strength increase, ΔH , when the magnetic field strength is first established at a value, H , then reduced by a small increment H , and then reestablished to the value, H . **A 340, A06**

permeability, differential, μ_d —the ratio of an increment of induction, ΔB , to an increment of magnetic field strength, ΔH , for any point on a dc hysteresis loop. It is also the absolute slope ($\Delta B/\Delta H$) of the curve at any point on the normal magnetizing curve.

NOTE—For a symmetrical series circuit in which each component has the same cross-sectional area, reluctance values add directly giving:

$$\mu_{\text{eff}} = \frac{\ell_1 + \ell_2 + \ell_3 + \dots}{\frac{\ell_1}{\mu_1} + \frac{\ell_2}{\mu_2} + \frac{\ell_3}{\mu_3} + \dots}$$

For a symmetrical parallel circuit in which each component has the same flux path length, permeance values add directly giving:

$$\mu_{\text{eff}} = \frac{\mu_1 A_1 + \mu_2 A_2 + \mu_3 A_3 + \dots}{A_1 + A_2 + A_3 + \dots}$$

A 340, A06

permeability, ideal, μ_α —the ratio of the magnetic induction to the corresponding magnetic field strength after the material has been simultaneously subjected to a value of ac magnetizing field approaching saturation superimposed on a given dc magnetizing field, and the ac magnetizing field has thereafter been gradually reduced to zero. The resulting ideal permeability is thus a function of the incremental field and residual strongly polarized domains that remain after the ac field is reduced to zero.

NOTE—Ideal permeability, sometimes called anhysteretic permeability, is principally significant to feebly magnetic material and to the Rayleigh range of soft magnetic material. **A 340, A06**

permeability, incremental, μ_Δ —the ratio of the change of magnetic induction, B , to the corresponding change in magnetic field strength, H , under dc biasing conditions and when B is not equal to zero. This value is also the slope of a straight line joining the excursion limits of an incremental hysteresis loop.

NOTE—When the change in H is reduced to zero, the incremental permeability, μ_Δ , becomes the reversible permeability, μ_{rev} . **A 340, A06**

permeability, incremental intrinsic, $\mu_{\Delta i}$ —the ratio of the change in the intrinsic induction B_i to the corresponding change in magnetic field strength when the mean induction differs from zero. **A 340, A06**

permeability, initial, μ_0 —the limiting value approached by the normal permeability as the applied magnetic field strength, H , is reduced to zero. The permeability is equal to the slope of the normal induction curve at the origin of linear B and H axes. **A 340, A06**

permeability, initial dynamic, μ_{0d} —the limiting value of each of the various ac permeabilities reached in a magnetic material as the magnetizing current is first raised to a moderate value then is progressively and gradually reduced to a zero value. See **initial inductance**.

NOTE—This same value, μ_{0d} , is also equal to the initial values of both impedance permeability, μ_z , and peak permeability, μ_p . **A 340, A06**

permeability, instantaneous—(Coincident with B_{max}), μ_t —with SCM excitation, the ratio of the maximum induction B_{max} to the instantaneous magnetic field strength, H_t , which is the value of apparent magnetic field strength, H' , determined at the instant when B reaches a maximum. **A 340, A06**

permeability, intrinsic, μ_i —the ratio of the calculated value of intrinsic induction B_i , to the corresponding magnetic field strength, H .

permeability, intrinsic, μ_i

NOTE—See definition of susceptibility.

A 340, A06

permeability intrinsic, n (L^{-3})—a measure of the ease with which a porous medium can transmit a fluid under a potential gradient.

D 653, D18

permeability, maximum, μ_m —the highest value of permeability achieved when the magnetic material is subjected to a symmetrically cyclically magnetized condition.

NOTE—Under dc test conditions the maximum permeability, μ_m , is the highest value of normal permeability μ , developed by the magnetic material.

NOTE—Under ac test conditions, the maximum permeability is the highest value of ac permeability achieved under symmetrically cyclically magnetized conditions and with no biasing magnetic field in the magnetic material.

A 340, A06

permeability, normal, dc, μ —the ratio of any magnetic induction, B , to the corresponding dc magnetic field strength, H , when the magnetic material has been subjected to SCM conditions.

A 340, A06

permeability of refractories, n —the capacity of a refractory for transmitting a fluid (gas or liquid).

C 71, C08

permeability, relative, μ_r —the ratio of the absolute permeability of a material to the magnetic constant Γ_m , giving a pure numeric parameter.

NOTE—In the cgs-em system of units, the relative permeability is numerically the same as the absolute permeability.

A 340, A06

permeability test—a test to determine the movement of a liquid through concrete under a hydraulic or pressure gradient.

C 822, C13

permeability, unoccupied space, μ_u —the permeability of space (vacuum), identical with the magnetic constant, Γ_m .

A 340, A06

permeability, water vapor—See **water vapor permeability**.

C 168, C16

permeable—allowing material to pass through.

D 6161, D19

permeance—the rate of water vapor transmission per unit area at a steady state through a membrane or assembly, expressed in $ng/Pa \cdot s \cdot m^2$ (grain/ft²·h·in. Hg).

D 1079, D08

permeance, n —the permeation rate divided by the pressure differential of a gas or vapor between opposite faces of a solid body.

D 1566, D11

permeance, \mathcal{P} —the reciprocal of the reluctance of a magnetic circuit.

A 340, A06

permeance (pressure normalized flux)—transport flux per unit transmembrane driving force.

D 6161, D19

permeance (water vapor), n —the ratio of the rate of water vapor transmission (WVT) through a material or assembly between its two parallel surfaces to the vapor pressure differential between the surfaces. Metric unit of measurement is the metric perm, 1 g/24 h·m²·mm Hg; U.S. unit, 1 grain/h·ft²·in. Hg. See **water vapor transmission, permeability, perm**.

C 11, C11

permeance, water vapor—See **water vapor permeance**.

C 168, C16

permeate—that portion of the feed stream which passes through a membrane.

D 6161, D19

permeate collector fabric—see **product (permeate) channel spacer**.

D 6161, D19

permeate post-treatment—one or more final conditioning steps to improve permeate quality such as contacting with ion exchange resins to remove trace ions in the permeate.

D 6161, D19

permeation, n —the transmission of a fluid through a porous medium (NEW).

D 4439, D35

permeation grouting—filling joints or fractures in rock or pore spaces in soil with a grout, without disturbing the formation.

D 653, D18

permeation rate, n —the flow rate of a gas or vapor, under specified conditions, through a prescribed area of a solid body, divided by that area.

D 1566, D11

permeator—a reverse osmosis module of the hollow fiber configuration consisting of membrane(s) and pressure vessel.

D 6161, D19

Permissible Exposure Limit—an occupational exposure limit, such as for lead, that is established and enforced by an authority having jurisdiction.

E 1605, E06

permissible exposure limit (PEL), n —an OSHA defined term meaning the limit of OSHA permitted exposure to a specific contaminant as required in the applicable regulation. This limit is an 8-h time weighted average (TWA), determined in the worker's breathing zone, and is expressed in a number of units of measure — see applicable contaminant regulation.

D 1356, D22

permittivity—see **relative permittivity**

D 1711, D09

permittivity, $\kappa(\epsilon)$ —a factor giving the influence of an extensive, isotropic dielectric medium on the forces of attraction or repulsion between two electrified bodies (see Discussion 1 of this definition). It is the product of the "relative permittivity," $\kappa'(\epsilon_r)$, and the "permittivity of free space (vacuum)," $\kappa_0(\epsilon_0)$.

$$\kappa = \kappa' \cdot \kappa_0$$

The SI unit is: farad per metre (F/m);

where:

farad (F) = $s^4 A^2 / m^2 kg$,

s = seconds,

A = amperes,

m = metres, and

kg = kilograms.

D 2864, D27

permittivity, absolute—the same as **permittivity**.

D 2864, D27

permittivity, absolute, ϵ' —the magnitude of the real part of the complex permittivity expressed in F/m.

E 1142, E37

permittivity, complex, ϵ^* —a material property deduced from the ratio of the admittance, Y_p , of a given electrode configuration separated by that material, to the admittance of the identical electrode configuration separated by a vacuum (or air for most practical purposes), Y_v :

$$\epsilon^* = Y_p / Y_v = Y_p / iWC_v = \epsilon' - i\epsilon''$$

where:

ϵ' = absolute permittivity

ϵ'' = loss factor,

C_v = capacitance with vacuum separating the electrodes, and

$i = \sqrt{-1}$.

E 1142, E37

permittivity, high frequency, $\epsilon^{\infty'}$ —the permittivity of a material that is approached asymptotically as the applied frequency is increased to the point at which dipoles can no longer reorient.

E 1142, E37

permittivity, low frequency, $\epsilon^{\infty''}$ —the permittivity of a material that is approached asymptotically as the applied frequency is decreased to the point at which all dipoles can reorient.

E 1142, E37

permittivity of free space (vacuum), $\kappa_0(\epsilon_0)$ —is defined by the following equation derived from wave theory:

$$\kappa_0 = 1/\mu_0 c^2 = 8.854 \times 10^{-12} \text{ farad per metre}$$

where: the magnetic permeability of free space,

$$\mu_0 = 4\pi \times 10^{-7} \text{ henry per metre; 1 henry} = m^2 kg/s^2 A^2$$

and the speed of electromagnetic waves in free space,

$$c = 2.998 \times 10^8 \text{ metres per second.}$$

D 2864, D27

permittivity of free space (vacuum), ϵ_0 —is defined by the following equation derived from wave theory:

$$\epsilon_0 = 1/\mu_0 \cdot c^2 = 8.854 \times 10^{-12} \text{ F/m}$$

where the magnetic permeability of free space, μ_0 , is;

$$\mu_0 = 4\pi \times 10^{-7} \text{ H/m}$$

and the speed of electromagnetic waves in free space, c , is given by;

$$c = 2.998 \times 10^8 \text{ m/s.}$$

E 1142, E37

permittivity, relative, κ' —a material property deduced from the ratio of capacitance of a given configuration of electrodes separated by the material, C_p , to the capacitance of the same electrode configuration separated by a vacuum (or air for most practical purposes), C_v :

$$\kappa' = C_p/C_v = \epsilon'/\epsilon_0$$

$$\kappa'_{vac} = 1$$

Experimentally, the material separating the electrodes must replace the vacuum (or air) at all points where it makes a significant change in capacitance. Relative permittivity is commonly referred to as the dielectric constant. The use of κ' (kappa prime) for relative permittivity, and ϵ' (epsilon prime) for absolute permittivity is recommended and is consistent with the strict definition of terms; however, the scientific literature is not consistent.

E 1142, E37

permittivity, relative complex, $\kappa^*(\epsilon_r^*)$ —the ratio of the admittance, Y , of a given set of electrodes with a material as dielectric to the admittance, Y_v , of the same configuration with vacuum as dielectric:

$$\kappa^* = Y/Y_v = Y/j\omega C_v = \kappa' - j\kappa''$$

where:

κ' = relative permittivity,

κ'' = dielectric loss index, and

C_v = capacitance with vacuum as the dielectric.

D 2864, D27

permittivity, relative, $\kappa'(\epsilon_r)$ —a dimensionless number, dependent upon the nature and condition of the dielectric medium and upon the frequency of the applied electromagnetic field. For a vacuum $\kappa' \equiv 1.0$. For other dielectrics it is the quotient obtained by dividing the equivalent parallel capacitance, C_p , of a given configuration of electrodes with a material as a dielectric by the capacitance, C_v , of the same configuration of electrodes with vacuum (or air for most practical purposes) as the dielectric:

$$\kappa' = C_p/C_v$$

D 2864, D27

permittivity, (Ψ), (T^{-1}), n —of geotextiles, the volumetric flow rate of water per unit cross sectional area per unit head under laminar flow conditions, in the normal direction through a geotextile.

D 4439, D35

peroxide number, n —the milliequivalents of constituents in 1000 g of wax that will oxidize potassium iodide.

D 4175, D02

peroxides—a class of oxygen-containing compounds possessing a peroxy-functional group. Hydrogen peroxide is the lowest member of this series.

D 4790, D16

perpetual resource, n —a resource that is virtually inexhaustible on a human time scale.

E 2114, E06

Persian Morocco—a name given to leather produced with Morocco grain, natural or embossed from hair sheepskin. An ambiguous term, applied in the bag trade to sheepskins and in the book trade mostly to goatskin (as distinguished from "Turkey Morocco"). It should be correctly confined to hair sheepskins.

D 1517, D31

persians—India-tanned hair sheepskins.

D 1517, D31

persistence history, n —documentation of one or more modifications made to a set of data that can be used to trace back the specific

procedures that were applied and when that was done and that becomes part of the processing documentation metadata.

E 867, E17

personal air sample—an air sample that is collected within the personal breathing zone of a worker.

E 1605, E06

personal air samples—air samples that are collected within the personal breathing zone (PBZ) of a person.

E 631, E06

personal air samples—airborne particulates, samples of air collected from within the breathing zone of a person, but outside a respiratory, if worn.

E 631, E06

personal breathing zone (PBZ)—an area within approximately 6 in. of a person's face.

E 631, E06

personal computer, n —an electronic device programmable to carry out a variety of functions and intended primarily for use by one operator at a time.

F 1457, F05

personal protective equipment—equipment for protecting the eyes, face, head, and/or extremities of workers from hazards, including protective clothing, respiratory devices, and protective shields.

NOTE—PPE should be used only where feasible engineering controls, administrative controls, and work practice controls have been applied and have failed to reduce the hazard.

E 1605, E06

pertinent patient information—information obtained from all available resources that relates to the patient's condition and problems. This information must be continuously updated. All information must be recorded and reported.

F 1177, F30

pervaporation—a separation process involving vaporization of one liquid from a mixture of two or more liquids, with the aid of a membrane which functions as a barrier to the liquid phase. The feed and brine streams are both liquid phase and the permeate emerges downstream face of the membrane as a vapor.

D 6161, D19

pest—an organism existing under circumstances that makes it undesirable.

E 609, E35

petalite—a lithium mineral of theoretical composition $\text{Li}_2\text{O} \cdot \text{Al}_2\text{O}_3 \cdot 8\text{SiO}_2$ which transforms on heating to a beta spodumene-silica solid solution product of very low or nil thermal expansion.

C 242, C21

P2 etch—an etchant used for preparing the surface of aluminum alloys for adhesive bonding. (Syn. **sulfoferric etch**.)

packaged building—See **building**.

E 631, E06

P2 etch—an etchant used for preparing the surface of aluminum alloys for adhesive bonding. (Syn. **sulfoferric etch**.)

E 1749, E06

petri plate—a dish designed to contain solid growth medias.

F 1600, F20

petrographic examination—methods of examining nonmetallic matter under suitable microscopes to determine structural relationships and to identify the phases or minerals present. With transparent materials, the determination of the optical properties, such as the indices of refraction and the behavior in transmitted polarized light, serve as means of identification. With opaque materials, the color, hardness, reflectivity, shape and etching behavior in polished sections serve as means of identification. Metallographic applications include examination of particles mechanically or chemically separated from the metal by these methods.

E 7, E04

petroleum coke, n —a solid, carbonaceous residue produced by thermal decomposition of heavy petroleum fractions or cracked stocks, or both.

D 4175, D02

petroleum-coke-base carbon refractory, n —see **carbon refractory, petroleum-coke-base**.

C 71, C08

petroleum color scale, n —a color scale for petroleum products, defined by 16 glass standards of specified luminous transmittance and chromaticity, graduated in steps of 0.5 from 0.5 for the lightest color to 8.0 for the darkest.

E 284, E12

petroleum exclusion—the exclusion from CERCLA liability provided in 42 USC § 9601(14), as interpreted by the courts and EPA: "The term (hazardous substance) does not include petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under

petroleum exclusion

subparagraphs (A) through (F) of this paragraph, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas).” **D 5681, D34**

petroleum oil—oil derived from petroleum; contains a mixture of hydrocarbons that are broadly classified as paraffins, naphthenes, aromatics, or other unsaturates, or combination thereof. **E 1519, E35**

petroleum pitch—a dark brown to black, predominantly aromatic, solid cementitious material obtained by the processing of petroleum, petroleum fractions, or petroleum residuals. **D 1079, D08**

petroleum products—those substances included within the meaning of the petroleum exclusion to CERCLA 42 USC § 9601(14) as interpreted by the courts and EPA, that is: “petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a hazardous substance under subparagraphs (A) through (F) of this paragraph, and the term does not include natural gas, natural gas liquids, liquefied natural gas, or synthetic gas usable for fuel (or mixtures of natural gas and such synthetic gas).” **D 5681, D34**

P_{ex}, n—the maximum explosion pressure (above the pressure in the vessel at the time of ignition) reached during the course of a single deflagration test. **E 1445, E27**

P_{ex,a}, n—the maximum explosion pressure (absolute) reached during the course of a single deflagration test. **E 1445, E27**

P/F, n—the acronym for powder forging. See **powder forging**. **B 243, B09**

pH—the cologarithm (negative logarithm) of the hydrogen ion activity, less precisely, concentration, of a medium, as determined by inhibitors or electrometric means. **B 374, B08**

pH—the negative logarithm of the hydrogen ion concentration, which can be greatly affected by temperature, particularly under alkaline conditions. It is therefore important to measure alkaline earth solutions (AES) at a specific recommended temperature of 25°C. **C 51, C07**

pH, n—in common usage, a measure of the acidity or alkalinity of a solution, on a logarithmic scale, with neutrality represented by a value of 7, with increasing acidity represented by decreasingly smaller values, and with increasing alkalinity represented by increasingly larger values. **D 123, D13**

pH, n—the negative logarithm of the hydrogen-ion activity in an aqueous solution, or, the logarithm of the reciprocal of the hydrogen-ion activity. **D 1129, D19**

pH, n—in common usage, a measure of acidity or alkalinity of a solution, on a logarithmic scale, with neutrality represented by a value of seven, with increasing acidity represented by decreasingly smaller values, and with increasing alkalinity represented by increasingly larger values. **D 4845, D13**

pH—negative logarithm of the effective hydrogen-ion activity, approximately $-\log_{10} [H^+]$ where $[H^+]$ is equivalents per litre concentration. **D 6161, D19**

pH—chemical symbol meaning the (p)otential of (H)ydrogen ion, indicating a measure of acidity or alkalinity of an aqueous solution. **PHA**—see **public housing agency**. **E 631, E06**

pH—defined formally as the negative logarithm to the base 10 of the conventional hydrogen ion activity. The pH of an aqueous solution is derived from E , the electromotive force (emf) of the cell:

reference || solution | glass electrode

(where the double vertical line represents a liquid junction) when the electrodes are immersed in the solution, and E_s , the electromotive force obtained when the electrodes are immersed in a standard solution (whose assigned pH is designated pH(S)), by the following equation:

$$\text{pH} = \text{pH}(\text{S}) + \frac{(E - E_s)F}{(RT \ln 10)}$$

where:

F = faraday, 96 487 C·mol⁻¹,

R = gas constant, 8.314 33 J·K⁻¹·mol⁻¹, and

T = absolute temperature, (t °C + 273.15). **E 1547, E15**

pH—the measurement of the acid concentration of a solution. Range is 0 to 14 (acid to basic), with pH 7 being neutral. **E 1705, E48**

phase—a state of matter, either solid, liquid, or gaseous. **D 6161, D19**

phase—a physically homogeneous, mechanically separable portion of a material system. **E 7, E04**

phase—homogeneous, distinguishable portion of a material system. **E 1142, E37**

phase analysis—an analytical technique that discriminates between variables in a part undergoing electromagnetic testing part by the different phase angle changes that these conditions produce in the test signal. (See also **phase detection**.) **E 1316, E07**

phase angle, n—in general, the angle by which one sine wave leads another; units are either radians or degrees. **D 1566, D11**

phase angle, θ , n—the angle whose cotangent is the dissipation factor, $\text{arccot } \kappa''/\kappa'$ and is also the angular difference in the phase between the sinusoidal alternating voltage applied to a dielectric and the component of the resulting current having the same frequency as the voltage. **D 1711, D09**

phase angle, θ —(1) the angle whose cotangent is the dissipation factor, $\text{arccot } \kappa''/\kappa'$. (2) The angular difference in the phase between the sinusoidal alternating voltage applied to a dielectric and the component of the resulting current have the same frequency as the voltage. **D 2864, D27**

phase angle, δ —the angle between a sinusoidally applied strain and the resultant sinusoidal stress. **D 4092, D20**

phase angle, δ —angle between a sinusoidally applied strain and the resultant sinusoidal stress, (D 4092, D20). **E 1142, E37**

phase angle, Θ —the angular difference in phase between the sinusoidal alternating voltage applied to a dielectric and the component of the resulting current (to ground) having the same frequency as the voltage. **E 1142, E37**

phase angle—the angular equivalent of the time displacement between corresponding points on two sine waves of the same frequency. **E 1316, E07**

phase angle, dielectric—same as **phase angle**. **D 2864, D27**

phase change-type disposable fever thermometer—one-time use instrument utilizing the melting of compounds to measure and indicate an anatomical site temperature. **E 344, E20**

phase change-type fever thermometer—a reusable instrument utilizing the change of state of chemical compositions to measure and indicate an anatomical site temperature. **E 344, E20**

phase contrast microscopy—a special method of controlled illumination, ideally suited for observing thin, transparent objects whose structural details vary only slightly in thickness or refractive index. This can also be applied to the examination of opaque materials to determine surface elevation changes. **E 7, E04**

phase correction—the operation in which the effects of an asymmetrical or chirped interferogram are corrected to eliminate instrumental phase contributions. **E 131, E13**

phased application—the installation of a roofing or waterproofing system during two or more separate time intervals; a roofing system not installed in a continuous operation. **D 1079, D08**

phase defect angle—same as **loss angle**. **D 2864, D27**

phase detection—the derivation of a signal whose amplitude is a function of the phase angle between two alternating currents, one of which is used as a reference. **E 1316, E07**

phase diagram—See **constitutional diagram**. **E 7, E04**

phase diagram—see **constitutional diagram**. **E 1142, E37**

phase difference—difference between phase angles of two waves of same frequency. **D 653, D18**

phase distribution, n—the partitioning of a semivolatle chemical compound between the gaseous (vapor) and the particle-associated phases in the atmosphere. **D 1356, D22**

phase hologram, n—a recording of the variations in light intensity caused by the interference of the reference beam with the object

beam as variations in the thickness or index of refraction of the recording medium. The variations in thickness or index refract coherent light to produce the reconstruction. **E 1316, E07**

Phase I Environmental Site Assessment—the process described in Practice E 1527. **D 5681, D34**

phase modulation—modulation produced by rapid oscillation of one mirror of a scanning interferometer through an amplitude which is smaller than the shortest wavelength in the spectrum to produce an interferogram which is, to a good approximation, the first derivative of the conventional interferogram. **E 131, E13**

phase of periodic quantity—fractional part of period through which independent variable has advanced, measured from an arbitrary origin. **D 653, D18**

phase rule—the maximum number of phases (P) that may coexist at equilibrium is equal to 2, plus the number of components (C) in the mixture, minus the number of degrees of freedom (F); $P + F = C + 2$. **E 7, E04**

phase rule—see **Gibbs Phase Rule**. **E 1142, E37**

phase-sensitive system—a system whose output signal is dependent on the phase relationship between the voltage returned from a pickup or sensing coil and a reference voltage. **E 1316, E07**

phase separation—the formation of coexisting glassy phases as a result of thermal history within an originally homogeneous glass. **C 162, C14**

phase separation, n —the formation of two layers, a lower aqueous constituent and an upper hydrocarbon constituent, separated by either a common boundary or a layer of emulsion. **D 4175, D02**

phase shift—a change in the phase relationship between two alternating quantities of the same frequency. **E 1316, E07**

phasic response, n —a response, typically of short duration, where the level of physiological arousal returns to its pre-arousal state. **E 2035, E52**

pH electrode—an ion-selective electrode, made of glass, that responds to hydrogen ion activity. Wide-range pH electrodes function over the activity range $1 M H^+$ (pH 0) to $10^{-14} M H^+$ (pH 14). pH electrodes may be subject to “acid error” in strongly acidic solutions and are also subject to “alkaline error” caused by response to sodium or other cations in basic solutions. **D 4127, D19**

phenol—hydroxy benzene, carboic acid (C_6H_5OH) mol weight 94.11; colorless acicular crystals or white crystalline mass; characteristic odor; solidification point, $40.85^\circ C$; boiling point, $182^\circ C$. **D 4790, D16**

phenolic compounds, n —hydroxy derivatives of benzene and its condensed nuclei. **D 1129, D19**

phenolic plastic, n —a plastic based on resins made by the condensation of phenols, such as phenol and cresol, with aldehydes. **F 1251, F04**

phenolic plastics, n —plastics based on resins made by the condensation of phenols, such as phenol or cresol, with aldehydes. **D 883, D20**

phenolic resin—a thermosetting condensation product obtained by reacting phenol with an aldehyde. **C 904, C03**

phenolic resin—under **resin, synthetic**, see *phenolic resin*. **D 16, D01**

phenolic resin compound, single-stage—a phenolic material in which the resin, because of its reactive groups, is capable of further polymerization by application of heat. (See also **phenolic resin compound, two-stage**). **D 883, D20**

phenolic resin compound, two-stage—a phenolic material in which the resin is essentially not reactive at normal storage temperatures, but contains a reactive additive which causes further polymerization upon the application of heat. **D 883, D20**

Phillips (Penning) vacuum gage—a sensitive cold cathode ionization gage in which the electron path length, and therefore the number of ionizing collisions, is increased by means of a magnetic field. Also known as a cold-cathode discharge gage. **E 7, E04**

Phillips ionization gage—see **ionization vacuum gage**. **E 1316, E07**

phloem—inner bark; the principal tissue concerned with the translocation of elaborate foodstuffs. A synonym is “bast.” **D 9, D07**

pH/mV meter—an instrument that measures and displays the voltage developed between a sensing electrode and a reference electrode placed in a solution, and can convert the voltage developed by a pH electrode to a corresponding pH value. **D 4127, D19**

phosphate-coated, phosphatized—chemically treated to provide iron and steel with gray protective ferric-phosphate coating; to provide increased nail holding power by surface roughening. **F 547, F16**

phosphatized, *adj*—pertains to chemical treatment, in a phosphate solution, of uncoated and metallic coated sheet to prepare the surface for painting without further treatment except normal cleaning. (Syn. **phosphated, phosphate coated**) **A 902, A05**

phosphor—any substance that can be stimulated to emit light by incident radiation. **E 1316, E07**

phosphorescence—the emission of radiant energy from an atom, molecule, or ion resulting from absorption of a photon and a subsequent transition to the ground state with a change in total spin quantum number (see also **intersystem crossing**). **E 131, E13**

phosphorescence, n —photoluminescence that continues after excitation ceases. **E 284, E12**

photocell, photodetector, photodiode, phototube, n —See **detector**. **E 284, E12**

photocell/photoelectric cell/photo-sensor, n —a solid-state, photo-sensitive, electronic device in which use is made of the variation of current-voltage characteristics as a function of incident radiation (light). **F 1294, F05**

photochemical reaction, n —any chemical reaction that is initiated as a result of absorption of light. **D 1356, D22**

photochemical smog, n —a type of air pollution resulting from photochemical reactions. **D 1356, D22**

photochromism, n —a reversible change in color of a specimen due to exposure to light (or other radiant flux) without appreciable heating of the specimen. **E 284, E12**

photoconductor—a material that exhibits increased electrical conductivity when exposed to light. **F 335, F05**

photodegradable, *adj*—capable of undergoing a significant loss of properties that can be measured by standardized tests after exposure to representative amounts of sunlight. **D 996, D10**

photodegradable plastic, n —a degradable plastic in which the degradation results from the action of natural daylight. **D 883, D20**

photodegradable plastic, n —See **degradable plastic**. **D 883, D20**

photodegradation, n —photochemically induced changes in the condition of the material. **G 113, G03**

photodiode array (linear) (PDA), n —a group of very small photodiodes, arranged in a line, that detects photon energy (light) from the radiation that strikes a surface and measures the amount of reflected light as electrical pulses. **F 1294, F05**

photodiode array (matrix) (PDA), n —an area photodiode array, having a two-dimensional configuration. **F 1294, F05**

photoelectric colorimeter, n —color-stimulus-measuring instrument using photoelectric detectors in which source-filter-detector response characteristics are adjusted so that the instruments read directly the tristimulus values or related quantities. **D 2946, C17**

photoelectric cross-section—the probability that an incident photon traversing a material will produce a photoelectron from a given subshell, expressed as an area unit per event. **E 673, E42**

photoelectric effect—a dipole interaction involving the interaction of photons with bound electrons in atoms, molecules, and solids, resulting in production of photoelectrons and excited ions. **E 673, E42**

photoelectron satellite peaks—See **photoelectron X-ray satellite peaks**, and **shakeup lines or shakeup satellites**. **E 673, E42**

photoelectron X-ray satellite peaks—photoelectron peaks in a spectrum resulting from photoemission induced by characteristic

photoelectron X-ray satellite peaks

- minor X-ray lines associated with the X-ray spectrum of the anode material. **E 673, E42**
- photoelectron X-ray satellite subtraction**—the removal of photoelectron X-ray satellite peaks from a spectrum. **E 673, E42**
- photoemission**—the emission of electrons from atoms or molecules caused by photoelectric effects. **E 673, E42**
- photo fluorography**—a photograph of the image formed on a fluorescent screen. **E 1316, E07**
- photographic density**—See **density**. **E 7, E04**
- photoluminescence, *n***—luminescence produced by the absorption of radiant flux; distinguished from ordinary reflection by a time delay and, usually, a shift toward longer wavelengths. See **fluorescence** and **phosphorescence**. **E 284, E12**
- photomicrograph**—a micrograph made by photographic means. **E 7, E04**
- photometer**—a device so designed that it furnishes the ratio, or a function of the ratio, of the radiant power of two electromagnetic beams. These two beams may be separated in time, space, or both. **E 131, E13**
- photometer, *n***—an instrument for measuring light. **E 284, E12**
- photometer, *n***—instrument used for measuring photometric quantities. **E 349, E21**
- photometer**—an instrument for measuring photometric quantities, such as luminous intensity or luminous flux. See **Terminology C 859**. **E 772, E44**
- photometer, *n***—a device that measures the intensity and brightness of a light beam. **F 1294, F05**
- photometric, *adj***—pertaining to measurement of quantities in which radiation is evaluated according to the spectral luminous efficiency function $V(\lambda)$. **E 284, E12**
- photometric linearity**—the ability of a photometric system to yield a linear relationship between the radiant power incident on its detector and some measurable quantity provided by the system. **E 131, E13**
- photometry, *n***—the measurement of quantities associated with light, that is, radiation evaluated according to its visual effect, by weighting with the CIE spectral luminous efficiency function $V(\lambda)$. **E 284, E12**
- photometry, *n***—measurement of quantities referring to radiation, evaluated according to the visual effect which it produces, as based on certain conventions. **E 349, E21**
- photomicrograph**—a micrograph made by photographic means. **E 7, E04**
- photopic, *adj***—(1) pertaining to vision at sufficiently high levels of illumination that only the retinal cones are stimulated.
(2) pertaining to detectors with spectral responsivity weighted according to the CIE spectral luminous efficiency function $V(\lambda)$. **E 284, E12**
- photosedimentation**—a technique of fine particle measurement wherein the size and number (or volume) of particles in a sedimenting suspension are determined by the effect of the presence of sedimenting particles on the intensity of a beam of light or X-ray or laser beam transmitted through the suspension as a function of settling time of the particles. **C 242, C21**
- photostimulable luminescence**—the physical phenomenon of phosphors absorbing incident ionizing radiation, storing the energy in quasi-stable states and emitting luminescent radiation proportional to the absorbed energy when stimulated by radiation of a different wavelength. **E 1316, E07**
- photostimulable luminescent phosphor**—a phosphor capable of storing a latent radiological image which upon laser stimulation will generate luminescence proportional to the radiation intensity. **E 1316, E07**
- photovoltaic array, *n***—an assembly of panels or modules, together with support structure and other components (if used), to form a complete dc power-producing unit. **E 1328, E44**
- photovoltaic cell, *n***—the basic device that generates electricity by the photovoltaic effect when exposed to radiant energy such as sunlight. **E 1328, E44**
- photovoltaic cell area, *n***—the total frontal area of the cell including the area covered by the grids and contacts. **E 1328, E44**
- photovoltaic device, *n***—any photovoltaic cell or collection of cells (module, panel, or array) under consideration. **E 1328, E44**
- photovoltaic module, *n***—a single package containing two or more electrically interconnected photovoltaic cells, including a frame or integral mounting points, and means for electrical connection; which make it suitable for field installation without additional modification. **E 1328, E44**
- photovoltaic module area, *n***—the rectangular area that touches the extreme outside edges of the module. **E 1328, E44**
- photovoltaic panel, *n***—a number of modules which are electrically connected and mechanically integrated, and designed to provide a field-installable unit. **E 1328, E44**
- photovoltaic reference cell, *n***—a photovoltaic cell whose short-circuit current is calibrated against the total irradiance of a reference spectral irradiance distribution. See also **reference cell calibration constant**. **E 1328, E44**
- photozone counter**—a stream counter in which the interrogation zone is monitored for changes in a light signal because of the presence of a particle. **C 242, C21**
- pH, *pH* (D)**—an index of the acidity or alkalinity of a soil in terms of the logarithm of the reciprocal of the hydrogen ion concentration. **D 653, D18**
- Phragmen method**—See **focusing camera**. **E 7, E04**
- phreatic eruption, *n***—an explosion of the surface of the earth that results from a sudden increase in the volume of groundwater when it flashes to steam due to contact with hot rocks. **E 957, E44**
- phreatic line**—the trace of the phreatic surface in any selected plane of reference. **D 653, D18**
- phreatic line**—see **line of seepage**. **D 653, D18**
- phreatic surface**—see **free water elevation**. **D 653, D18**
- phreatic water**—see **free water**. **D 653, D18**
- phthalic anhydride**—anhydride of phthalic acid ($C_8H_4O_3$) mol weight 148.11; white lustrous needles; odorless; solidification point, 130.8°C; boiling point, 295°C; sublimes. **D 4790, D16**
- phthalic anhydride-1308, refined**—phthalic anhydride with impurities limited to ultra trace amounts as indicated by a solidification point of 130.8°C minimum refined to improve color characteristics. Refer to Specification D 2403 for complete specifications. **D 4790, D16**
- pH unit**—a tenfold change in hydrogen ion activity, expressed as the negative logarithm of the hydrogen ion activity. Thus a solution of pH 7 is $10^{-7}M$ in hydrogen ion activity, and a pH 8 solution is $10^{-8}M$. The lower the solution pH, the more acid the solution. Occasionally, ion levels are expressed in pX units. Thus $pNa = 3.5$ is equivalent to $10^{-3.5}M Na^+$, or $3.0 \times 10^{-4}M$. **D 4127, D19**
- physical adsorption (van der Waals adsorption)**—the binding of an adsorbate to the surface of a solid at energies approximating those of condensation. **D 2652, D28**
- physical-chemical parameters, *n***—values for physical or chemical properties of a permeant or polymer, or both, such as solubility parameters, molecular weight, vapor pressure, and so forth. **F 1494, F23**
- physical crack extension, Δa_p [L]**—an increase in physical crack size.
$$\Delta a_p = a_p - a_0$$
E 1823, E08
- physical crack size, a_p [L]**—the distance from a reference plane to the observed crack front. This distance may represent an average of several measurements along the crack front. The reference plane depends on the specimen form, and normally is taken to be either the boundary, or a plane containing either the force line or the centerline of a specimen or plate. The reference plane is defined prior to specimen deformation. **E 1823, E08**
- physical inventory**—The verification of the existence, location, and

- quantity of property items. The process may involve verifying additional property information. **E 2135, E53**
- physical objective aperture*—See **aperture, electron**. **E 7, E04**
- physical properties**—those properties inherent in the raw material which remain unchanged or exhibit only slight alteration in the fastener following manufacture. **F 1789, F16**
- physical protection** (protection physique)—barriers that will delay or deter someone attempting unauthorized physical access to assets at a specific location. **E 631, E06**
- physical protection** (protection physique)—barriers that will delay or deter someone attempting unauthorized physical access to assets at a specific location. **E 1480, E06**
- physical stability**—*in asbestos-cement products*, the ability of the product to maintain its physical dimensions and properties when in contact with liquid, gaseous, or solid media normally encountered in its service environment. **D 2946, C17**
- physical standard, n**—stable specimen having a value of a physical quantity assigned by accurate measurements under specified conditions, usually in a standards laboratory. **E 284, E12**
- physiological site offset, μ_p , n**—difference in degrees of measured temperature between two body sites derived from the representative study samples. **E 344, E20**
- physiology, n**—the branch of biology dealing with the functions and vital processes of living organisms or their parts and organs. **E 2035, E52**
- phytobland oil**—a highly refined paraffinic material with a minimum unsulfonated residue of 92 % v/v. **E 1519, E35**
- P_f —crack initiation load for a given loading and environmental condition using an incrementally increasing load under displacement control **F 2078, F07**
- piano leather**—a name covering highly specialized leathers used for various purposes in the manufacture of pianos, both manual and mechanical. The leathers are made of selected skivers, full-grain sheepskins, or deerskins. **D 1517, D31**
- pick, n**—an individual filling yarn. **D 123, D13**
- pick, n**—an individual filling yarn of a fabric. **D 1566, D11**
- pick, n**—*in paper*, a defect that occurs in paper when its surface or the coating on its surface (or both) lifts from the paper's surface. **D 1968, D06**
- pick, n**—*in woven fabric*, an individual filling yarn (single or ply) or cord source. **D 4850, D13**
- pick, n**—an individual filling yarn. **E 631, E06**
- picket*—See **railing systems**.
- pick count, n**—*in woven fabrics*, the number of filling yarns per unit fabric length. **D 123, D13**
- pick count, n**—*in braided rope*, the number of strands rotating in one direction in one cycle length. **D 123, D13**
- pick count, n**—*in woven fabrics*, the number of individual filling yarns per inch of fabric regardless of whether they are comprised of single or plied components. **D 4850, D13**
- picker leather**—leathers used for pickers in textile machinery, and having a wide range of properties. Some are hard rawhide buffalo leathers, others glycerin-treated rawhide and still others belting leather. **D 1517, D31**
- picket, n**—one of a series of closely spaced upright infill members located between top rail or handrail and bottom rail of a railing system. (Syn. *baluster, baluster bar*)
- picket casting*—See **railing systems**. **E 631, E06**
- picket, n**—synonym for **baluster, baluster bar**. **E 1481, E06**
- picket**—a helically formed steel wire interwoven in the manufacture of chain link fabric or used for field splicing rolls of fabric into continuous chain link mesh from terminal post to terminal post. **F 552, F14**
- picket casting**—an ornamental cast element attached to a picket. Also, cast element designed to attach picket to top and bottom rails.
- picket railing system*—See **railing systems**. **E 631, E06**
- picket fence code, n**—a bar code printed so that individual bars are vertical (perpendicular to the horizon); the bars look like pickets in a fence. See the reverse, **verticalbar code** or **ladder code**. **F 1294, F05**
- picket railing system**—a system consisting of posts, pickets, top rail, and bottom rail. **E 631, E06**
- picking, n**—a rolling up in the lap (see *lap*) when the previously applied paint film is in a semisolid (gel-like) state of drying, causing a tacky resistance to the brush or roller and resulting in an unsightly nonuniform appearance in the final dried film. **D 16, D01**
- picking, n**—the removal of material (fiber, filler or coating) from the paper surface or underlying ink film during printing. **D 6488, D01**
- pickle**—an acid solution used to remove oxides or other compounds from the surface of a metal by chemical or electrochemical action. **B 374, B08**
- pickle**—to treat unhaird hides with a solution of salt and acid in order to prepare them for mineral tannage or for temporary preservation until they reach the tannery. **D 1517, D31**
- pickle basket**—a basket fabricated from corrosion-resistant material to hold ware during pickling. **C 286, B08**
- pickle pills**—small gelatin capsules containing chemicals used for testing the strength of pickling solutions. **C 286, B08**
- pickling**—the removal of oxides or other compounds from a metal surface by means of a pickle. **B 374, B08**
- pickling**—the chemical process of preparing the metal surface for porcelain enameling. **C 286, B08**
- pick off, n**—the undesirable removal of a previously printed ink film in subsequent units of the press due to insufficient drying of the ink. **D 6488, D01**
- pick out mark, n**—a fillingwise band or bar characterized by a chafed or fuzzy appearance. **D 123, D13**
- pick-out mark, n**—a fillingwise band or bar characterized by a chafed or fuzzy appearance. **D 3990, D13**
- pick-out place*—See **temple mark**. **D 3990, D13**
- pick-up**—the amount of slip retained per unit area on dipped ware. **C 286, B08**
- pick-up roll, n**—the part of a spreading device that runs in a bath or reservoir of adhesive. **D 907, D14**
- picosiemens per metre, n**—the unit of electrical conductivity is also called a conductivity unit (CU). A siemen is the SI definition of reciprocal ohm sometimes called mho.
- $$1 \text{ pS/m} = 1 \times 10^{-12} \Omega^{-1} \text{ m}^{-1} = 1 \text{ cu} = 1 \text{ picomho/m}$$
- D 4175, D02**
- picture element, n**—in pictures or displays which are made up of tiny dots, each dot is a picture element. **F 1457, F05**
- picture framing, n**—a perimeter thickness or color difference (usually darker) relative to the rest of the painted surface. **D 16, D01**
- picture framing**—a rectangular pattern of ridges in a membrane over insulation or deck joints. **D 1079, D08**
- piece boundary, n**—a collection of lines that define the shape of a piece. **D 6963, D13**
- piece information, n**—information that is piece specific. **D 6963, D13**
- piece system attributes, n**—information provided in the transfer file that is piece specific. **D 6963, D13**
- piece system text, n**—information provided in the transfer file that is piece specific. **D 6963, D13**
- piece, test, n*—see **specimen**, the preferred term. **D 1566, D11**
- piecing, n**—a thick place in a spun yarn caused by poor splicing. **D 123, D13**
- piecing, n**—a thick place in a spun yarn caused by poor splicing. **D 3990, D13**
- pie disk, n**—*in tire X-ray testing*, a circular disk of a specified diameter having six pie-shaped sections, each containing cords of different materials; it is used for demonstrating the discernment capability of an X-ray imaging system. **F 538, F09**
- piezoelectric vibratory atomizer**—a vibratory atomizer in which a

piezoelectric vibratory atomizer

piezoelectric transducer transmits high-frequency oscillations to a liquid, creating relatively uniform drops whose size is a function of the frequency of oscillation. **E 1620, E29**

piezometer—a device used to measure head at a point in the subsurface. **D 653, D18**

piezometric line (equipotential line)—line along which water will rise to the same elevation in piezometric tubes. **D 653, D18**

piezometric surface—the surface at which water will stand in a series of piezometers. **D 653, D18**

piezometric surface—an imaginary surface that everywhere coincides with the static level of the water in the aquifer. (ISRM) **D 653, D18**

pig, n—an oblong or square mass of metal that has been cast while still molten into a mold that gives the metal its particular shape; most commonly used for lead and tin in weights that can be handled manually. **B 899, B02**

pig—a shaped object on which to rest a blowpipe or punty during the gathering operation. **C 162, C14**

pig iron, n—the high carbon iron product obtained by the reduction of iron ores, typically in a blast furnace or an electric furnace, and cast into uniform shapes (pigs) having physical and chemical characteristics suitable for end use as foundry melting stock. **A 644, A04**

pigment, n—the fine solid particles used in the preparation of paint or printing ink and substantially insoluble in the vehicle. Asphaltic materials are not pigments except when they contain substances substantially insoluble in the vehicle in which they are used. **D 16, D01**

pigment, n—an insoluble compounding material used to impart color. **D 1566, D11**

pigment—water-insoluble solid coloring matter pulverized to a fine particle size for asbestos-cement. **D 2946, C17**

pigment—a substance, generally in the form of fine particles, that is substantially insoluble in the matrix and is used because of its color or decorative properties. **D 3878, D30**

pigment bleed, n—a condition in which some of the ink pigment is dispersed in the dampening solution and deposits on the non-image area of the plate and then prints as a light background tint. **D 6488, D01**

pigment-finished leather—leather finished with compounds containing opaque pigments which more or less conceal the grain pattern. Split leathers are often finished with pigments and embossed to simulate a grain. **D 1517, D31**

pigment volume, n—the percent by volume of pigment in the nonvolatile portion of a paint or printing ink, as calculated from bulking value and composition data. The letters PV are commonly used as an abbreviation. **D 16, D01**

P_{ignition}, n—the absolute pressure at the time of ignition. **E 1445, E27**

ΔP_{ignitor}, n—the pressure rise in the chamber due to the ignitor by itself. **E 1445, E27**

pigskin—a surface defect characterized by a texture similar to that of pigskin. **C 286, B08**

pigskin—leather made from the skin of pigs or hogs. In the glove leather trade, the term pigskin includes peccary and carpincho. **D 1517, D31**

pike pole (maritime), n—a long, slender, hooked pole used by boaters to retrieve line, objects, and so forth from water. Also known as a *boat hook*. **F 1490, F32**

pilate, v—a deprecated term. See the preferred term, **pile lift**. **D 5253, D13**

pile—relatively slender structural element that is driven, or otherwise introduced, into the soil, usually for the purpose of providing vertical or lateral support. **D 9, D07**

pile, n—*for pile yarn floor covering*, the texture surfaces composed of many tuft legs bound to a backing fabric in an orderly and repetitive array. **D 123, D13**

pile, n—*in pile fabric*, the raised loops or tufts (cut loops) that form all

or part of the fabric surface. (See also **cut pile floor covering** and **looped pile floor covering**.) **D 123, D13**

pile—relatively slender structural element which is driven, or otherwise introduced, into the soil, usually for the purpose of providing vertical or lateral support. **D 653, D18**

pile, n—*in pile fabric*, the raised loops or tufts (cut loops) that form all or part of the fabric surface. (See also **cut pile floor covering** and **looped pile floor covering**.) **D 4850, D13**

pile, n—*for pile yarn floor covering*, the textured surface composed of many tuft legs bound to a backing fabric in an orderly and repetitive array. **D 5684, D13**

pile floor covering, n—a pile fabric intended for use as a floor covering. The pile may be in the form of cut loops or loops, or both. Both the cut loops and the loops may vary in height. **D 123, D13**

pile height, n—*in determination of tuft height*, a measurement that uses a small graduated ruler inserted until it touches the backing to measure the pile from the top surface of the primary backing to the top of the tuft. **D 123, D13**

pile height, n—*in determination of tuft height*, a measurement that uses a small graduated ruler inserted until it touches the backing to measure the pile from the top surface of the primary backing to the top of the tuft. **D 5684, D13**

pile lay, n—*in floor covering*, the direction in which most of the pile fibers lean in the original, uncrushed carpet. **D 123, D13**

pile lay, n—the direction in which most of the pile fibers lean in the original, uncrushed carpet. **D 5684, D13**

pile lift, v—raise the pile on a textile floor covering. **D 5253, D13**

pile lifting, n—the process of raising the pile on a textile. **D 123, D13**

pile lofting, n—See the preferred term, **pile lift**. **D 5253, D13**

pile retention, n—*in corduroy*, the degree to which cut-pile yarns are held secure and intact during wear. **D 123, D13**

pile retention, n—*in corduroy*, the degree to which cut-pile yarns are held secure and intact during wear. **D 4850, D13**

pile reversal, n—a persistent change in the direction of pile lay in certain areas, resulting in an apparent visual difference of shade. (Syn. **watermarking, pooling, shading**) **D 123, D13**

pile reversal, n—a persistent change in the direction of pile lay in certain areas, resulting in an apparent visual difference of shade. (Syn. **watermarking, pooling, shading**). **D 5684, D13**

pile thickness, n—*in pile yarn floor covering*, the difference in the unextended height of the tuft elements above the backing measured as the difference between two parallel plates exerting a specified compression on the pile and backing and on the backing with the pile removed. **D 123, D13**

pile thickness, n—*in pile yarn floor covering*, the difference in the unextended height of the tuft elements above the backing measured as the difference between two parallel plates exerting a specified compression on the pile and backing and on the backing with the pile removed. **D 5684, D13**

pileup—EIA, counts in a backscattering spectrum arising from two separate events that occur so closely in time that the signals are not resolved by the detection system and cause counts to be recorded in erroneous channels. **E 673, E42**

pile yarn floor covering, n—a textile product in which yarn or yarn segments are attached intermittently to a backing fabric to project above the backing fabric and form pile, in the form of cut loops or loops, or both, with the yarn entering the backing fabric substantially perpendicular to the plane of the backing fabric. (Syn. **cut pile, cut pile floor covering, cut-loop pile, level pile, loop pile, loop pile floor covering, multilevel pile**) **D 123, D13**

pile yarn floor covering, n—a textile product in which yarn or yarn segments are attached intermittently to a backing fabric to project above the backing fabric and form a pile, in the form of cut loops or loops, or both, with the yarn entering the backing fabric substantially perpendicular to the plane of the backing fabric. See **cut pile, cut pile floor covering, cut-loop pile, level pile, loop pile, loop pile floor covering, multilevel pile**. **D 5684, D13**

pile yarn mass, *n*—for *back coated pile yarn floor covering*, the mass per unit area of pile yarn. **D 123**, D13

pile yarn mass, *n*—for *backcoated pile yarn floor covering*, the mass per unit area of pile yarn. **D 5684**, D13

pill, *n*—a buildup of paper, ink or coating on the offset blanket, plate or rollers in such a quantity that it interferes with print quality. **D 6488**, D01

pill, *n*—a build up of paper or ink on the plate. **D 6488**, D01

pill, *n*—the build up of ink or other materials on the gravure cylinder or impression cylinder. **D 6488**, D01

Pilkington process—a process for making flat glass in which the glass continuously pours from a tank onto a spout and thence between forming rolls and is subsequently annealed as one continuous sheet. **C 162**, C14

pillar—in-situ rock between two or more underground openings: crown pillars; barrier pillars; rib pillars; sill pillars; chain pillars; etc. (ISRM) **D 653**, D18

pill, *n*—resistance to the formation of pills on the surface of a textile fabric. **D 123**, D13

pill, *n*—resistance to the formation of pills on the surface of a textile fabric. **D 4850**, D13

pills, *n*—bunches or balls of tangled fibers which are held to the surface of a fabric by one or more fibers. (Compare **fuzz ball**.) **D 123**, D13

pills, *n*—bunches or balls of tangled fibers which are held to the surface of a fabric by one or more fibers. (Compare **fuzz ball**) **D 3990**, D13

pills, *n*—bunches or balls of tangled fibers which are held to the surface of a fabric by one or more fibers. (Compare **fuzz ball**.) **D 4850**, D13

pilot—plain-shank section between point and threaded portion of shank. **F 547**, F16

pilot, *n*—person who has final authority and responsibility for the operation and safety of flight. See also 14 CFR Part 1 for “pilot-in-command.” Sometimes called the UAV controller, ASTM reserves the term controller for air traffic services provider. **F 2395**, F38

pilot drift (pioneer tunnel)—a drift or tunnel first excavated as a smaller section than the dimensions of the main tunnel. A pilot drift or tunnel is usually used to investigate rock conditions in advance of the main tunnel, to permit installation of bracing before the principal mass of rock is removed, or to serve as a drainage tunnel. (ISRM) **D 653**, D18

piloted airblast nozzle—an airblast nozzle combined with a lower capacity pressure nozzle. **E 1620**, E29

piloted ignition, *n*—ignition of combustible gases or vapors by a pilot source of ignition (compare **spontaneous ignition, unpiloted ignition**). **E 176**, E05

pilot energy rate—average rate of energy consumption (Btu/h or kW) by the equipment's continuous, $E_{pilot\ rate}$

$$E_{pilot\ rate} = \frac{E_{pilot} \times 60}{t_{pilot}}$$

where:

$E_{pilot\ rate}$ = pilot energy rate,

E_{pilot} = pilot energy consumption during the test period, Btu, kWu or kJ, and

t_{pilot} = length of pilot of test period, min. **F 1827**, F26

pilot point—point of threaded nail with plain portion of shank between top of point and threaded portion of shank. **F 547**, F16

pilot source of ignition, *n*—a discrete source of energy, such as, for example, a flame, spark, electrical arc, or glowing wire (compare **pilotedignition, unpiloted ignition**). **E 176**, E05

PIM—see **powder injectionmolding**. **B 243**, B09

pimple—a small solid bump or protrusion on the pipe surface. **C 896**, C04

pimple, *n*—an imperfection, a small, protuberance of varied shape on the surface of a plastic product. **D 883**, D20

pimple, *n*—small, sharp, or conical elevation on the surface of a plastic. **F 412**, F17

pin—small headless nail. **F 547**, F16

pin-and-collar specimen, *n*—an assembly of a metal pin bonded inside a metal collar, used to measure the shear strength of an adhesive. **D 907**, D14

pinch, *n*—for *sampling*, as much fiber as can be taken up between the tips of the index finger and thumb. **D 2946**, C17

pin cushion distortion—See **distortion**. **E 7**, E04

pineapple, *n*—a finial in the form of a pineapple. **E 631**, E06

pineapple, *n*—a finial in the form of a pineapple. **E 1481**, E06

pine needle oil, *n*—an essential oil of typical fragrance obtained by steam distillation of the leaves (needles) of certain species of pine. **D 804**, D01

pinenes, *n*—bicyclic terpene hydrocarbons, the principal constituent of all turpentines and existing therein in two isomeric forms, alpha-pinene and beta-pinene. **D 804**, D01

pine oil, *n*—a colorless to amber colored volatile oil with characteristic pinaceous odor, consisting principally of isomeric tertiary and secondary cyclic terpene alcohols, with variable quantities of terpene hydrocarbons, ethers, ketones, phenols, and phenolic ethers, the amount and character of which depend on the source and method of manufacture. **D 804**, D01

pine tar, *n*—A product of the destructive distillation of pine wood. **D 804**, D01

pingo—a perennial frost mound consisting of a core of massive ice, produced primarily by injection of water, and covered with soil and vegetation. **D 7099**, D18

pingo ice—massive ice which forms the core of a pingo. **D 7099**, D18

pingo remnant—a collapsed pingo. **D 7099**, D18

pingo scar—a pingo remnant in a contemporary non-permafrost environment. **D 7099**, D18

pinhole, *n*—in *fabrics*, a very small hole, approximately the size of the cross section of a pin. **D 123**, D13

pinhole—a tiny hole in a film, foil, or laminate comparable in size to one made by a pin. **D 1079**, D08

pin hole, *n*—in *fabrics*, a very small hole, approximately the size of the cross section of a pin. **D 3990**, D13

pinhole—in *protectivecoatings*, minute holes through a coat or coats that expose an underlying coat or the substrate. **D 4538**, D33

pinhole—an opening in the carbon tissue that permits the coating to seep through to the uncoated side. **F 221**, F05

pinhole eyepiece—an eyepiece, or a cap to place over an eyepiece, which has a small central aperture instead of an eye lens. Used in adjusting or aligning microscopes. **E 7**, E04

pinhole ocular—See **pinhole eyepiece**. **E 7**, E04

pinhole, pinholing—a porcelain enamel surface defect caused by gas evolution and characterized by a small hole resembling a pin prick that may extend to the base metal. **C 286**, B08

pinholes—small holes occurring as imperfections which penetrate entirely through the copper foil. **B 846**, B05

pinholes—imperfections in the surface of a ceramic body or glaze resembling pin pricks. **C 242**, C21

pinholes, *n*—small pore-like flaws in a coating that extend entirely through the applied film and have the general appearance of pin pricks when viewed by reflected light. **D 16**, D01

pinholes—small pore-like flaws in a coating that extend entirely through the applied film and have the general appearance of pin pricks when viewed by reflected light (see Terminology D 16). **D 4538**, D33

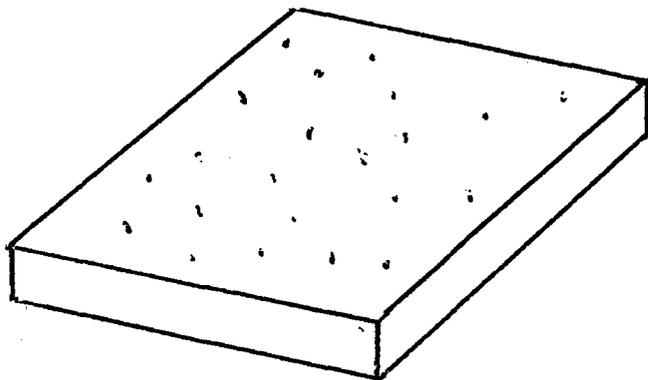
pinholes, *n*—small voids in the printed area caused by the failure of ink to form a continuous ink film. **D 6488**, D01

pinholes—very small holes; sometimes found as a type of porosity in a casting because of microshrinkage or of gas evolution during

pinholes

solidification; or, in wrought products, due to removal of inclusions or microconstituents during macroetching of transverse sections. In photography, a very small circular aperture. E 7, E04

pinholes—imperfections in the surface of a ceramic glaze resembling pin pricks.



F 109, C21

pinhole system—a group of two or more pinholes arranged to define a beam. E 7, E04

pinholing, n—the presence of a series of fine holes or voids in a film. D 16, D01

pinholing, n—the appearance of fine voids in the print area caused by nonuniform wetting of the substrate or some other mechanical problem. D 6488, D01

pinked seam-finish, n—a finish for the raw edges of the seam allowances of a plain seam, which produces a zigzagged cut raw edge. (Compare **stitched and pinked seam-finish**.) D 123, D13

pinked seam finish, n—in home sewing, a seam finish in which a zigzagged or scalloped cut edge is produced. (Compare **stitched and pinked seam finish**.) D 4965, D13

pink noise—noise with a continuous frequency spectrum and with equal power per constant percentage bandwidth. For example, equal power in any one-third octave band. C 634, E33

pin lock slider, n—a slider that incorporates a projection on the pull that fits between adjacent interlocking elements of a zipper when a pin lock slider is in the locked position. D 123, D13

pin lock slider, n—a slider that incorporates a projection on the pull that fits between adjacent interlocking elements of a zipper when a pin lock slider is in the locked position. D 2050, D13

pin mark, n—a series of holes near the edge parallel with the lengthwise direction of a fabric caused by the holding device on a pin tenter frame. (See also **clip mark**.) D 123, D13

pin mark, n—a series of holes near the edge parallel with the lengthwise direction of a fabric caused by the holding device on a pin tenter frame. (See also **clip mark**.) D 3990, D13

pin mark or point mark—a visible imprint on the back of ware left by processing tools; sometimes synonymous with burning tool mark. C 286, B08

pin, retainer—See **retainer pin**. D 2050, D13

pin seal—natural grain sealskin tanned for fancy leather. Imitations on other skins should be described as “pin-grain sheepskin,” “pin-grain goatskin,” etc. D 1517, D31

pin, separable—See **separable pin**. D 2050, D13

pinle atomizer—an impact atomizer in which a liquid jet is directed against a fixed axisymmetric surface. (See also **variable-orifice poppet nozzle**.) E 1620, E29

pipe, n—tube in standardized combination of outside diameter and wall thickness, commonly designated by “Nominal Pipe Sizes” and “ANSI Schedule Numbers.”

drawn pipe, n—pipe brought to final dimensions by drawing through a die.

extruded pipe, n—pipe formed by hot extruding.

seamless pipe, n—extruded or drawn pipe which does not contain any line junctures resulting from the method of manufacture.

structural pipe, n—pipe commonly used for structural purposes. B 881, B07

pipe, n—a tubular metal product, cast or wrought, of dimensions that conform to those referred to commercially as standard pipe sizes. B 899, B02

pipe—a tube or elongated hollow concrete structure intended to transmit flow between locations. C 822, C13

pipe—See **vitrified clay pipe**. C 896, C04

pipe, n—as related to heating, ventilating, or air conditioning systems, a cylindrical conduit for the conveyance of liquids or semi-solids. E 176, E05

pipe, n—a tubular conduit for transport of fluids or finely divided solids; also, a hollow structural member or safety barrier; a hollow product of round cross section.

pipe railing system—See **railing system**. E 631, E06

pipe, n—hollow round section of metal or other material, the size of which is usually designated by nominal size, in inches (millimeters), as influenced by inside diameter and wall thickness.

E 1481, E06

pipe body—the clay material or mixture of clay materials from which vitrified clay pipe is made. C 896, C04

pipe bursting—process by which existing pipelines are broken by mechanical fracturing from either inside or outside with the remains being pushed into the surrounding soil while simultaneously inserting a new pipeline of equal or larger diameter.

C 896, C04

pipe diameter—the inside diameter of a concrete pipe. C 822, C13

pipe insulation, n—insulation in a form suitable for application to cylindrical surfaces. C 168, C16

pipe insulation supplementary materials, n—as related to fire testing, components, including tapes and sealants used for transverse joints as well as fitting covers that are intermittently spaced, as needed, within the pipe insulation system, as well as adhesives used to bond the insulation to the pipe substrate and that do not cover the pipe continuously for an extended length. E 176, E05

pipe insulation system, n—as related to fire testing, system intended to insulate and cover, continuously for an extended length, the outside surface of a pipe; the system shall have an insulation core, with or without a covering or vapor retarder facing which includes longitudinal closure systems (if used) and perhaps other pipe insulation supplementary materials such as adhesives, fasteners, or tapes (if used). E 176, E05

pipeline—pipe sections joined together. C 822, C13

pipeline—pipes joined to provide a conduit through which fluids flow. C 896, C04

pipe nipple—a short length of pipe with male threads at both ends. B 846, B05

pipe railing system—a railing system fabricated of pipe or round tubing. E 631, E06

pipe railing system—a railing system fabricated of pipe or round tubing. E 1481, E06

pipe, seamless—seamless tube conforming to the particular dimensions commercially known as “standard pipe sizes.” B 846, B05

pipe section—a single pipe. C 822, C13

pipe spigot—portion of a pipe or fitting which fits into a bell or socket of a preceding pipe or fitting. F 412, F17

pipe, threadless—a seamless copper tube of standard pipe outside diameters conforming to particular dimensions commercially known as threadless pipe (TP). B 846, B05

pipe zone backfill—backfill in the area of the pipe, may be specified for depth and compaction. F 412, F17

pipng—the progressive removal of soil particles from a mass by percolating water, leading to the development of channels.

D 653, D18

pipng, n—a system of pipes. E 631, E06

pipy—see **flanky**.

Pirani gage—see **thermal conductivity vacuum gage**. E 1316, E07

pirani vacuum gage—a thermal conductivity or hot-wire gage in which the temperature of an electrically heated fine wire varies as the thermal conductivity of the residual gas. The wire has a high temperature coefficient of electrical resistance and the change in resistance is usually measured in a bridge circuit. (See **thermocouple vacuum gage**.) E 7, E04

piscicide—a chemical used to kill, control, or cause other adverse effects on fish. E 609, E35

piston, *n*—a sliding component that helps pressurize the product during actuation along with transfer of the product from the body to the exit orifice in the actuator. D 6655, D10

pit—a small depression or cavity produced in a metal surface during electrodeposition or by corrosion. B 374, B08

pit—a defect similar to a dimple but slightly smaller. C 286, B08

pit—an excavation in the surface of the earth from which ore is obtained as in large open pit mining or as an excavation made for test purposes, that is, a testpit. (ISRM) D 653, D18

pit, *n*—an imperfection, a small crater in the surface of the plastic, with its width of approximately the same order of magnitude as its depth. D 883, D20

pit—tiny depression or hole on the grain surface of leather, due to natural causes or manufacturing. D 1517, D31

pit—a shallow depression or crater in which all surfaces are visible by normal (20/20) vision under 200 fc of illumination.



F 109, C21

pit, *n*—small crater in the surface of the plastic, with its width approximately the same order of magnitude as its depth. (D20)

F 412, F17

pit, *n*—in *plastics*, an imperfection, a small crater in the surface, the depth and width of which are approximately the same order of magnitude. F 1251, F04

pitch, *n*—in *cooling tower fill*, the wave length of corrugated products. C 1154, C17

pitch, *n*—black or dark-brown solid cementitious material which gradually liquefies when heated and which is obtained as residua in the partial evaporation or fractional distillation of tar. D 8, D04

pitch—a term applied to the resin occurring in the wood of certain conifers. D 9, D07

pitch, *n*—for *wovenpile floor covering*, the number of binding sites in 27 in. (686 mm) of width. D 123, D13

pitch—see tall oil pitch. D 804, D01

pitch—See **incline**; **coal-tar pitch**; or **petroleum pitch**. D 1079, D08

pitch—the distance from center point to center point of adjacent crests of an asbestos-cement product of corrugated or grooved cross-section. D 2946, C17

pitch, *n*—for *coolingtower fill*, the wave length of corrugated products. D 2946, C17

pitch, *n*—for *wovenpile floor covering*, the number of binding sites in 686 mm (27 in.) of width. D 5684, D13

pitch, *n*—an inclination or slope measured in degrees, or percent, or by the ratio of rise and run. E 631, E06

pitch—the distance between one character reference point and the corresponding point on the next adjacent character. F 149, F05

pitch angle, (rad or degree), *n*—in *a vehicle*, the angle between its X-axis and the ground plane. F 538, F09

pitch-bonded basic brick, *n*—unburned basic refractory shapes bonded with pitch; if subsequently heat-treated sufficiently to minimize softening of the bond on reheating, they are referred to as *tempered*. C 71, C08

pitch diameter—for all practical purposes, the diameter of the smooth shank prior to threading. F 547, F16

pitch-impregnated basic brick, *n*—burned basic refractory shapes impregnated with pitch after firing. C 71, C08

pitch line—line parallel to nail axis located at distance equal to one-half of pitch diameter from nail axis. F 547, F16

pitch pocket—an opening extending parallel to the annual growth rings containing, or that has contained, pitch, either solid or liquid. D 9, D07

pitch pocket—a flanged, open-bottomed metal container placed around a column or other roof-penetration, and filled with hot bitumen or flashing cement to seal the joint. D 1079, D08

pitch polishing—polishing operation in which pitch rather than felt is the resilient carrier for the polishing agent. C 162, C14

pitch seam—a shake or check filled with pitch. D 9, D07

pitch streak—a well-defined accumulation of pitch in a more or less regular streak in the wood of certain conifers. D 9, D07

pith—the small, soft tissue occurring in the structural center of a tree trunk, branch, twig, or log. D 9, D07

pith fleck—a narrow streak, resembling pith on the surface of a piece; usually brownish, up to several inches in length; resulting from burrowing of larvae in the growing tissues of the tree. D 9, D07

pit, *n*, (PT^s)—as used in *fractography*, a surface-distributed cavity created on the specimen/component due to an interaction/reaction between the material and the testing/service environment, for example, corrosion, oxidation. C 1145, C28

piton, ice, *n*—a device designed to be hammered into ice to provide a belay or protection anchor. F 1773, F08

piton, rock, *n*—a device designed to be driven by a hammer into a crack in rock to provide a belay or protection anchor. F 1773, F08

pits—small holes having jagged edges, occurring as imperfections which do not penetrate entirely through the copper foil. B 846, B05

pits—small depressions, voids or pinholes in stone, especially on a finished surface. C 119, C18

pits, ponds, or lagoons—man-made or natural depressions in a ground surface that are likely to hold liquids or sludge containing hazardous substances or petroleum products. The likelihood of such liquids or sludge being present is determined by evidence of factors associated with the pit, pond, or lagoon, including, but not limited to, discolored water, distressed vegetation, or the presence of an obvious wastewater discharge. D 5681, D34

pitting, *n*—small defects in the surface of the photoreceptor that produce spots or voids on the printout. F 1457, F05

pitting—corrosion of a metal surface, confined to a point or small area, that takes the form of cavities. G 15, G01

pitting, *n*—in *tribology*, a form of wear characterized by the presence of surface cavities the formation of which is attributed to processes such as fatigue, local adhesion, or cavitation. G 40, G02

pitting factor—ratio of the depth of the deepest pit resulting from corrosion divided by the average penetration as calculated from weight loss. G 15, G01

Pittsburgh sheet process—the method of making sheet glass by drawing vertically upward from a free bath surface wherein definition of draw is established by a submerged refractory member. C 162, C14

pixel—The smallest addressable element in an electronic image. E 1316, E07

pixel—picture element. F 1457, F05

pixel, display size—the dimensions of the smallest picture element comprising the displayed image, given in terms of the imaged object's dimensions being represented by the element. E 1316, E07

pixel (picture element)—smallest spatial unit of an image. E 7, E04

pixel size—the length and width of a pixel. E 1316, E07

pizza oven—See *conveyor oven* or *deck oven*. F 1827, F26

placement, *n*—the process of placing and consolidating concrete; a

placement, n

quantity of concrete placed and finished during a continuous operation; also inappropriately called pouring. **C 717, C24**

placket, n—*in garment construction*, a finished garment opening that is usually dependent on mechanical devices called closures to secure the opening. **F 1494, F23**

Plackett-Burman designs, n—a set of screening designs using orthogonal arrays that permit evaluation of the linear effects of up to $n = t - 1$ factors in a study of t , treatment combinations. **E 456, E11**

Plackett-Burman designs, n—a set of screening designs using orthogonal arrays that permit evaluation of the linear effects of up to $n = t - 1$ factors in a study of t , treatment combinations. **E 1325, E11**

plaid reference line(s), n—used for alignment of pattern pieces on plaid material during marker making. **D 6963, D13**

plain—{archaic} relatively free of gaseous inclusions. **C 162, C14**

plain braid, n—*in rope*, a braided construction in which one strand of one direction of rotation about the axis of the rope passes over one strand of the opposite direction. (See **braided rope**.) **D 123, D13**

plain conductor—a conductor made up of one or more plain wires of the same metal. **B 354, B01**

plain jet atomizer—a pressure atomizer comprising a simple orifice designed to produce an unstable liquid jet. **E 1620, E29**

plain orifice atomizer—see **plain jet atomizer**. **E 1620, E29**

plain paper copying—a form of indirect electrophotographic copying in which the electrostatic image of the original is first formed on a photoconductor element, then developed with a toner, and finally transferred onto a plain sheet of paper where it is fixed (see also Terminology F 1156). **F 335, F05**

plainsawn—A synonym for *flat grain*. **D 9, D07**

plain seam, n—a seam formed by a single joining line. (Ant. **complex seam**.) **D 123, D13**

plain seam, n—*inhome sewing*, a seam formed by a single line of stitching. (Ant. **complex seam**.) **D 4965, D13**

plain-shank—term applied to nail without shank deformations, disregarding grip-marks. **F 547, F16**

plain steel—bright steel. **F 547, F16**

plain washer—fastener accessory that accepts a bolt or screw through its center hole and provides a surface to distribute bearing stress. It also serves to provide a surface for head or nut rotation during tightening. **F 1789, F16**

plain weave, n—a fabric pattern in which each yarn of the filling passes alternately over and under a yarn of warp and each yarn of the warp passes alternately over and under a yarn of the filling. **D 123, D13**

plain weave, n—a fabric pattern in which each yarn of the filling passes alternately over and under a yarn of warp and each yarn of the warp passes alternately over and under a yarn of the filling. **D 4850, D13**

plain wire—wire consisting of one metal only. **B 354, B01**

plaited rope, n—rope made from eight strands arranged in four pairs in which one strand is placed adjacent to a second in each pair and in which each strand of each pair has been twisted in one direction while each strand in each alternate pair has been twisted in the opposite direction and the four pairs of strands are intertwined maypole fashion in a manner such that each pair of strands passes over and under adjacent pair of strands. **D 123, D13**

planar grinding—the first step in a preparation procedure used to bring all specimens into the same plane of polish. It is unique to semi or fully automatic preparation equipment that utilize specimen holders. **E 7, E04**

Planckian locus, n—locus in a chromaticity diagram that represents the chromaticities of the radiation of Planckian radiators at different temperatures. **E 284, E12**

Planckian radiator, n—See **full radiator**. **E 284, E12**

plane, adj—having a flat, smooth surface with no significant variations such as elevations or depressions. **E 284, E12**

plane bed—a sedimentary stream bed without elevations or depressions larger than the maximum size of the bed material. **D 4410, D19**

plane (crystal)—an idiomorphic face of a crystal. Any atom-containing plane in a crystal. **E 7, E04**

planed-to-caliper hardboard—hardboard that is machined to a close thickness tolerance. **D 1554, D07**

plane, focal—a plane through the focal point perpendicular to the principal axis of a lens or mirror. **E 175, E41**

plane glass illuminator—a thin transparent flat glass disk interposed in a microscope or a lens imaging system for the purpose of directing light to the object without causing a reduction of the useful aperture of the lens system. **E 7, E04**

plane of weakness—surface or narrow zone with a (shear or tensile) strength lower than that of the surrounding material. (ISRM) **D 653, D18**

plane of working—the plane of maximum area extension. **E 7, E04**

plane-strain (chevron-notch) fracture toughness, K_{IVM} [FL^{-3/2}]—determined similarly to K_{IV} or K_{IVj} using the same specimen, or specimen geometries, but using a simpler analysis based on the maximum test force. Unloading-reloading cycles are not required in a test to determine K_{IVM} . **E 1823, E08**

plane-strain (chevron-notch) fracture toughness, K_{IV} or K_{IVj} [FL^{-3/2}]—under conditions of crack-tip plane strain in a chevron-notched specimen: K_{IV} relates to extension resistance with respect to a slowly advancing steady-state crack. K_{IVj} relates to crack extension resistance with respect to a sporadically advancing crack. **E 1823, E08**

plane-strain crack-arrest fracture toughness, K_{Ia} [FL^{-3/2}]—the value of crack-arrest fracture toughness, K_{Ia} , for a crack that arrests under conditions of crack-front plane-strain. **E 1823, E08**

plane-strain fracture toughness, K_{Ic} [FL^{-3/2}], J_{Ic} [FL⁻¹]—the crack-extension resistance under conditions of crack-tip plane strain. **E 1823, E08**

plane-stress fracture toughness, K_c [FL^{-3/2}]—crack-extension resistance under conditions that do not approach crack-tip plane strain to the degree required by an empirical criterion. **E 1823, E08**

plane stress (strain)—a state of stress (strain) in a solid body in which all stress (strain) components normal to a certain plane are zero. (ISRM) **D 653, D18**

planetary permafrost—permafrost occurring on any of the planetary bodies. **D 7099, D18**

plane wave—wave in which fronts are parallel to plane normal to direction of propagation. **D 653, D18**

planimetric method—See **Jeffries' method**. **E 7, E04**

plank—See **lumber**. **D 996, D10**

plank, n—a form of resilient floor covering having an aspect ratio greater than 2:1. **F 141, F06**

plans and specifications, n—*in pipe laying*, documents prepared by the engineer or owner, or both, stipulating work to be done and materials to be used which, combined with other contract documents and Guide C 966, form the basis for a comprehensive contract between the owner and the contractor. **C 1154, C17**

plans and specifications, n—*for pipe laying*, documents prepared by the engineer or owner, or both, stipulating work to be done and materials to be used which, combined with other contract documents and Guide C 966, form the basis for a comprehensive contract between the owner and the contractor. **D 2946, C17**

plantar—pertaining to the sole of the foot. **F 869, F08**

plant capacity—manufacture of product per unit time, expressed as m³/day, m³/h, GPD, MGD. **D 6161, D19**

plant mix, cold-laid, n—a mixture of cut-back asphalt, bituminous emulsion, or tar and mineral aggregate prepared in a central bituminous mixing plant and spread and compacted at the job-site when the mixture is at or near ambient temperature. **D 8, D04**

plant mix, hot-laid bituminous emulsion mixtures, n—a mixture of emulsion and heated mineral aggregate usually prepared in a

- conventional asphalt plant or drum mixer and spread and compacted at the job site at a temperature above ambient. **D 8**, D04
- plant tests**—the quality assurance tests performed prior to delivery as a basis of acceptance. **C 822**, C13
- plaque**—a round, clear area in a layer of host cells caused by virus growth and resultant killing or lysis of the cells. **E 1705**, E48
- plaque, n —as invirology**, a visible, clear area, which is theoretically the result of the infection and lysis of host cells by a single viable virus. **F 1494**, F23
- plaque forming unit (PFU), n** —a virus particle capable of producing plaques by infecting and lysing bacteria in a lawn in top agar. **F 1494**, F23
- plasma**—a partially or totally ionized gas or vapor. **B 542**, B02
- plasmids**—independently-replicating extrachromosomal genetic material. **F 1600**, F20
- plasmon loss lines**—peaks in an electron spectrum that are due to certain characteristic energy losses of electrons emitted from the specimen. These losses occur as a result of the excitation of collective oscillations among the valence band electrons. **E 673**, E42
- plaster**—see **gypsum plaster, gypsum neat plaster**. **C 11**, C11
- plaster**—{archaic} partially dehydrated gypsum used with water for bedding plates of glass to tables during the grinding and polishing of plate glass. **C 162**, C14
- plaster, n —hydraulic cement**, a mixture of hydraulic cement, fine aggregate and water that hardens; used for coating surfaces, such as ceilings, walls and partitions. **C 219**, C01
- plaster-base finish, n** —the surface texture intended for the direct application of plaster. **C 43**, C15
- plaster-base nail, plasterboard nail, plaster-boardnail**—See **gypsum-lath nail, wood-lathnail**. **F 547**, F16
- plaster bond, n** —the adhesion between plaster coats or between plaster and substrate. **C 11**, C11
- plastic**—a descriptive term applied to a material that exhibits the property of plasticity or stickiness, where plasticity is the ability of a material to undergo substantial deformation without fracturing. **C 242**, C21
- plastic**—(1) capable of being deformed continuously and permanently in any direction without rupture, under a stress exceeding the yield value. (2) made of, consisting of or pertaining to plastics. (3) a material containing as an essential ingredient an organic substance of large molecular mass, which is solid in its finished state and, at some stage in its manufacture or in its processing into finished articles, can be shaped by flow. **D 1695**, D01
- plastic, n** —any of numerous polymeric materials that are usually thermoplastic or thermosetting, of high molecular weight and that can be molded, cast extruded, drawn, laminated, or otherwise fabricated into objects, powders, beads, films, filaments, fibers, or other shapes (*Webster Modified*). **F 1251**, F04
- plastic, n** —a material that contains, as an essential ingredient, one or more organic polymeric substances of large molecular weight, is solid in its finished state, and, at some stage in its manufacture of processing into finished articles, can be shaped by flow. **F 1494**, F23
- plastic cement, n** —a hydraulic cement to which one or more plasticizing agents (but not more than 12 % by volume) have been added during intergrinding or blending to increase the workability and molding qualities of the resultant cement paste, mortar, or plaster. **C 11**, C11
- plastic cement, n** —a hydraulic cement used in plaster or stucco. **C 219**, C01
- plastic cement**—See **flashing cement**. **D 1079**, D08
- plastic coated**—covered fully or partially with polymer to provide ease of driving, increased holding power, or corrosion resistance, or a combination of these. **F 547**, F16
- plastic conduit**—plastic pipe or tubing used as an enclosure for electrical wiring. **F 412**, F17
- plastic deformation**—see **plastic flow**. **D 653**, D18
- plastic deformation**—permanent distortion of a material under the action of applied stresses. **F 1789**, F16
- plastic equilibrium**—state of stress within a soil or rock mass or a portion thereof, which has been deformed to such an extent that its ultimate shearing resistance is mobilized.
- active state of plastic equilibrium**—plastic equilibrium obtained by an expansion of a mass.
- passive state of plastic equilibrium**—plastic equilibrium obtained by a compression of a mass. **D 653**, D18
- plastic flow (plastic deformation)**—the deformation of a plastic material beyond the point of recovery, accompanied by continuing deformation with no further increase in stress. **D 653**, D18
- plastic foam, n** —See **cellular plastic** (the preferred terminology). **D 883**, D20
- plastic frozen ground**—fine-grained soil in which only a portion of the pore water has turned into ice. **D 7099**, D18
- plasticity, n** —the property of freshly mixed cement paste, mortar, or plaster which determines its workability and molding qualities. **C 11**, C11
- plasticity**—a comparative physical property of a standard consistency lime putty to resist the loss of plastic state workability when subjected to pressure against the suction of an absorptive surface as measured by the Emley Plasticimeter. **C 51**, C07
- plasticity**—the property of a soil or rock which allows it to be deformed beyond the point of recovery without cracking or appreciable volume change. **D 653**, D18
- plasticity**—property of a material to continue to deform indefinitely while sustaining a constant stress. (ISRM) **D 653**, D18
- plasticity, n** —a property of a material that allows the material to be deformed continuously and permanently without rupture upon the application of a force that exceeds the yield value of the material. **D 907**, D14
- plasticity, n** —a characteristic of unvulcanized rubber indicated by the degree of retention of deformation after removal of the deforming force. **D 1566**, D11
- plasticity**—a property of a material that allows it to be deformed continuously and permanently without rupture upon the application of a force that exceeds the yield value of the material. (D 907, D14) **F 869**, F08
- plasticity**—ability of the metal to undergo permanent deformation without rupture. **F 1789**, F16
- plasticity index, I_p , PI , I_w (D)**—numerical difference between the liquid limit and the plastic limit. **D 653**, D18
- Plasticity Retention Index (PRI), n** —for natural rubber, the ratio of a “plasticity number” measured after air-oven ageing, under specified conditions, to a “plasticity number” measured before ageing. **D 1566**, D11
- plasticizer, n** —a substance added to paint, varnish, or lacquer to impart flexibility. **D 16**, D01
- plasticizer**—in grouting, a material that increases the plasticity of a grout, cement paste, or mortar. **D 653**, D18
- plasticizer, n** —a substance incorporated in a material to increase its workability, flexibility, or distensibility. **D 883**, D20
- plasticizer, n** —a substance of low or negligible volatility that lowers the softening range and increases workability, flexibility or extensibility. **D 907**, D14
- plasticizer, n** —a compounding material used to enhance the deformability of a polymeric compound. **D 1566**, D11
- plasticizer, n** —a substance incorporated in a material to increase its workability, flexibility, or distensibility. (D20) **F 412**, F17
- plasticizer, n** —a substance incorporated into a material to increase its workability, flexibility, or distensibility of the material. **F 1251**, F04
- plastic limit, w_p , PL , P_w (D)**—(a) the water content corresponding to an arbitrary limit between the plastic and the semisolid states of consistency of a soil. (b) water content at which a soil will just

plastic limit, w_p , PL , P_w (D)

begin to crumble when rolled into a thread approximately $\frac{1}{8}$ in. (3.2 mm) in diameter. **D 653, D18**

plastic or bond fireclay, n—see **fireclay, plastic or bond**. **C 71, C08**

plastic pipe—a hollow cylinder of a plastic material in which the wall thicknesses are usually small when compared to the diameter and in which the inside and outside walls are essentially concentric. **D 883, D20**

plastic pipe—a hollow cylinder of a plastic material in which the wall thicknesses are usually small when compared to the diameter and in which the inside and outside walls are essentially concentric. (D20) **F 412, F17**

plastic pressing—See wet pressing under **pressing**. **C 242, C21**

plastic refractory, n—a refractory material, tempered with water, that can be extruded and that has suitable workability to be pounded into place to form a monolithic structure. **C 71, C08**

plastic replica—See **replica**. **E 7, E04**

plastic(s), n—a material that contains as an essential ingredient one or more organic polymeric substances of large molecular weight, is solid in its finished state, and, at some stage in its manufacture or processing into finished articles, can be shaped by flow. **D 883, D20**

plastic(s), n—a material that contains as an essential ingredient one or more organic polymeric substances of large molecular weight, is solid in its finished state, and, at some stage in its manufacture or processing into finished articles, can be shaped by flow.

NOTE—Rubber, textiles, adhesives, and paint, which may in some cases meet this definition, are not considered plastics. See ASTM definitions of these terms.

NOTE—The above definition may be used as a separate meaning to the definitions contained in the dictionary for the adjective “plastic.”

NOTE—The plural form may be used as an adjective to refer to two or more plastic materials, for example, plastics industry. However, when the intent is to distinguish “plastic products” from “wood products” or “glass products,” the singular form should be used. As a general rule, if the adjective is to restrict the noun modified with respect to the type of material, “plastic” should be used; if the adjective is to indicate that more than one type of plastic material is or may be involved, “plastics” is permissible. (D20) **F 412, F17**

plastic soil—a soil that exhibits plasticity. **D 653, D18**

plastic state (plastic range)—the range of consistency within which a soil or rock exhibits plastic properties. **D 653, D18**

plastic true strain, ϵ_p , n—the inelastic component of true strain. **E 6, E28**

plastic tubing, n—(1) a particular size of plastic pipe in which the outside diameter is essentially the same as the corresponding size of copper tubing.

(2) small diameter flexible pipe. (See **plastic pipe**.) **D 883, D20**

plastic tubing, n—a particular size of smooth wall plastic pipe in which the outside diameter is essentially the same as the corresponding size of copper tubing. **F 412, F17**

plastic-zone adjustment, r_y [L]—an addition to the physical crack size to account for plastic crack-tip deformation enclosed by a linear-elastic stress field. **E 1823, E08**

plastisol—a suspension of a finely divided resin in a plasticizer, that can be converted to a continuous film by the application of heat. Distinct from baking enamels etc., in that substantially all the original mixture becomes a part of the film; there is no significant evaporation of solvent. The films are usually much thicker than obtainable from coatings which depend on the evaporation of a volatile solvent. **B 374, B08**

plastisol, n—a liquid suspension of a finely divided PVC polymer or copolymer in a plasticizer. **D 883, D20**

plastisol, n—a suspension of a finely divided polymer in a plasticizer. **D 1566, D11**

plastisol, n—a liquid suspension of a finely divided PVC polymer or copolymer in a plasticizer. **F 1251, F04**

plastometer, n—an instrument for measuring the plasticity of a material. **D 1566, D11**

plate—as in *inch-pound specifications*, a wrought flat product over 0.188-in. thick and over 12-in. wide, in straight lengths or coils (rolls). **B 846, B05**

plate—as in *SI specifications*, a wrought flat product over 5-mm thick and over 300-mm wide, in straight lengths or coils (rolls). **B 846, B05**

plate:

Alclad plate, n—composite plate product comprised of an aluminum-alloy core having on both surfaces a metallurgically bonded aluminum or aluminum-alloy cladding that is anodic to the core, thus electrolytically protecting the core against corrosion.

mill finish plate, n—plate having a non-uniform finish which may vary from piece to piece and within a piece, and which may not be entirely free of stains or oil.

tread plate, n—plate or sheet having a raised, figured pattern on one surface to provide improved traction. **B 881, B07**

plate, n—a flat-rolled metal product of same minimum thickness and width arbitrarily dependent on the type of metal. **B 899, B02**

plate, n—a flat, rolled sheet having a width and length much greater than thickness. (If of steel, having dimensions of 0.180 in. (4.6 mm) or greater in thickness, and greater than 8.0 in. (203 mm) in width.) **E 631, E06**

plate, n—abbreviated term for **metal connector plate**. **E 631, E06**

plate—an image vehicle, usually permanent and reusable for use on printing presses. **F 335, F05**

plate, n—as in *microbiology*, a Petri dish containing culture medium. **F 1494, F23**

plate, n—a longitudinal element asymmetrical in the transverse plane and designed to resist tension, compression, bending, and torsion. **F 1582, F04**

plate-as-rolled, n—the quantity of plate product rolled at one time, either from an individual slab or directly from an ingot. **A 941, A01**

plateau, vulcanization, n—vulcanization during which the value of a desired property proceeds to a maximum or minimum and then remains essentially constant for a substantial period after the initial change. **D 1566, D11**

plate binding, n—the refusal of part of a lithographic plate to produce an image due to loss of ink receptivity. **D 6488, D01**

plate cassette—See **cassette**. **E 7, E04**

plate chamber—the chamber within the vacuum system of an electron microscope in which is placed the plate cassette. **E 7, E04**

plate-clinched point—pointed end of nail, having been driven through member against anvil plate, bent sideways. **F 547, F16**

plated—See **electroplated**. **F 547, F16**

plate distillation column—column constructed with perforated plates to separate one or more volatile liquids by distillation. **E 1705, E48**

plate glass—flat glass formed by a rolling process, ground and polished on both sides, with surfaces essentially plane and parallel. **C 162, C14**

plate hole—opening in metal connector plate resulting from punching integral plate projection(s) from, or nail hole in, connector plate during its fabrication. See **nail hole**. **E 631, E06**

plate-mark—any imperfection in a pressed plastic sheet resulting from the surface of the pressing plate. **D 883, D20**

platen—a plate of metal, especially one that exerts or receives pressure, as in a press used for gluing plywood. **D 1038, D07**

plates, n—flat particles of metal powder having considerable thickness. **B 243, B09**

plate scumming, n—the deposit of ink on the non-image area of the plate that can be in the form of minute particles or larger continuous solids. **D 6488, D01**

plate shear—a term describing the stresses associated with shear distortion of planes parallel to the edge plane of a sandwich

- construction or core material when loaded in shear parallel to the plane of the facings (see Test Method C 273). **E 631, E06**
- plate shear**—a term describing the stresses associated with shear distortion of planes parallel to the edge plane of a sandwich construction or core material when loaded in shear parallel to the plane of the facings (see Test Method C 273). **E 1749, E06**
- plate swelling**, *n*—an enlargement of rubber or polymer plates due to contact with an incompatible ink, coating, or wash up solvent. **D 6488, D01**
- plate tinting**, *n*—the existence of a weak coloration from the fountain solution onto the non-image area of the plate. **D 6488, D01**
- plate wave**—see **Lamb wave**. **E 1316, E07**
- plate wear**, *n*—a physical abrading away of the non-image or image area, or both, of the plate. **D 6488, D01**
- plate wear blinding**, *n*—the failure of the litho plate to print due to erosion in the image area. **D 6488, D01**
- plating**—pressing leather with a heated metal plate, usually smooth, under high pressure. **D 1517, D31**
- plating**—deposition of an adherent metal onto the surface of the base metal of the fastener. A specific process should be specified; that is, electroplating, hot dip galvanizing, mechanical deposition, etc. **F 1789, F16**
- plating range**—the current density range over which a satisfactory electroplate can be deposited. **B 374, B08**
- platinum-cobalt color**—color measured in reference to color standards prepared with solutions of cobalt chloride and potassium chloroplatinate. Color standards are identical with the description given in APHA publications and is referred to as “**APHA Color**”. **D 4790, D16**
- platinum-cobalt color scale**, *n*—a color scale for clear, light-yellow liquids, defined by specified dilutions of a platinum-cobalt stock solution, ranging from 5 for the lightest color to 500 for the darkest. **E 284, E12**
- platinum 27 (Pt-27)**, *n*—the platinum standard to which the National Bureau of Standards referred thermoelectric measurements prior to 1973. **E 344, E20**
- platinum 67 (Pt-67)**, *n*—the platinum standard used by the National Bureau of Standards after 1972 as the reference to which thermoelectric measurements are referred. **E 344, E20**
- pleat**, *n*—three layers of fabric involving two folds or reversals of direction; the back fold may be replaced by a seam. **D 123, D13**
- pleat**, *n*—three layers of fabric involving two folds or reversals of direction; the back fold may be replaced by a seam. **D 4850, D13**
- plied yarn**—See *plied yarn* under **yarn**. **D 3878, D30**
- plied yarn duck**, *n*—duck fabric with plied yarns in both warp and filling. (See **flat duck**.) **D 123, D13**
- plied yarn duck**, *n*—duck fabric with plied yarns in both warp and filling. (See **flat duck**.) **D 4850, D13**
- plier**—portable stapler with attached clincher for placing staples away from edges of work. **F 592, F16**
- PLOQ**, *n*—pooled limit of quantitation. **D 4175, D02**
- plowing**, *n*—*in tiretesting*, a type of uncontrollability defined by a loss of steering control with no substantial vehicle yaw; the vehicle moves on a trajectory that is dictated by vehicle dynamics as determined by velocity, mass, and the available traction at each tire. **F 538, F09**
- plowing**, *n*—*in tribology*, the formation of grooves by plastic deformation of the softer of two surfaces in relative motion. **G 40, G02**
- plow layer**—the depth typically reached by a plow or other commonly used earth turning device used in agriculture. This depth is commonly one to two feet (0.3 to 0.61 m) below land surface. **D 653, D18**
- plucked**—a machined surface with occasional pits, obtained by rough planing the stone surface, thus breaking or “**plucking**” out small particles. **C 119, C18**
- plug**—See **closure**. **D 996, D10**
- plugging**, *n*—the restriction of a flow path due to the accumulation of material along the flow path boundaries. **D 4175, D02**
- plugging compound**—a putty-like mixture of inorganic materials used to fill holes in iron castings to ensure an even surface for porcelain enameling. **C 286, B08**
- plugging factor**—see **fouling factor** and **SDI**. **D 6161, D19**
- plugging material**—a material that has a hydraulic conductivity equal to or less than that of the geologic formation(s) to be sealed. Typical materials include portland cement and bentonite. **D 653, D18**
- plugs**—straight-sided insertions of sound wood or synthetic material replacing defective portions of veneers. They usually are held in place by friction until veneers are bonded into plywood. **D 1038, D07**
- plumage**, *n*—the outgrowth of fowl, consisting of feathers and down (waterfowl) or feathers only (nonwaterfowl). **D 123, D13**
- plumage**, *n*—the outgrowth of fowl, consisting of feathers and down (waterfowl) or feathers only (nonwaterfowl). **D 7022, D13**
- plumules**, *n*—downy waterfowl plumage with underdeveloped soft and flaccid quill with barbs indistinguishable from those of down. **D 123, D13**
- plumules**, *n*—downy waterfowl plumage with underdeveloped soft and flaccid quill with barbs indistinguishable from those of down. **D 7022, D13**
- plunger**—the reciprocating metal part that forces glass into the contours of a mold, or which, in a blank mold, forms the initial cavity for subsequent blowing. (See also **needle**.) **C 162, C14**
- plunger**, *n*—*in tiretesting*, a cylindrical rod with a hemispherical end. **F 538, F09**
- plunging water jet barrier**—special purpose barrier created by a series of coherent streams of water directed vertically downward into a body of water. **F 818, F20**
- plus sieve**, *n*—the portion of a powder sample retained on a standard sieve of specified number. (See **minus sieve**.) **B 243, B09**
- ply**—a single layer of membrane reinforcement in the bituminous membrane waterproofing system. **C 717, C24**
- ply**, *n*—(1) any of the several layers of solid **fiberboard**; (2) any of the layers in plywood or laminated **paperboard**; (3) any of the walls of a **multiwall bag**. (See also **veneer**.) **D 996, D10**
- ply**—a single sheet of veneer, or several strips laid with adjoining edges, that may or may not be glued, which forms one veneer lamina in a glued plywood panel. (See also **layer**.) **D 1038, D07**
- ply**—a layer of felt in a built-up roofing membrane; a four-ply membrane has at least four plies of felt at any vertical cross section cut through the membrane. **D 1079, D08**
- ply**—(in laminar composites) the constituent single layer as used in fabricating, or occurring within a composite structure. **D 3878, D30**
- ply**, *n*—*in a tire*, a layer of rubber-coated parallel cords. **F 538, F09**
- ply coordinate axes**—a set of Cartesian coordinates two of which lie within the plane of the ply, one axis of which is parallel to the principal fiber direction and the other axis perpendicular to the principal fiber direction (the third axis is through the ply’s thickness). **D 3878, D30**
- ply count**, *n*—*in laminated composite materials*, the number of plies or laminae used to construct the composite. **D 3878, D30**
- plying cement**—any bituminous material used for adhering layers of felts, fabrics, or mats to structural surfaces and to each other. **D 1079, D08**
- ply orientation**—the acute angle (theta) including 90° between a reference direction and the ply principal axis. The ply orientation is positive if measured counterclockwise from the reference direction and negative if measured clockwise. **D 3878, D30**
- plyout**—a single wrap of ribbon extending out of its normal position in relation to the core or the next wrap. **F 221, F05**
- ply principal axis**—the ply coordinate axis that coincides with the

ply principal axis

direction of maximum inplane Young's modulus. For balanced weave fabric either warp or fill direction may be chosen.

D 3878, D30

ply rating, *n*—the term is used to identify a given tire with its maximum recommended load when used in a specific type of service, giving an index of tire strength, not necessarily representing the number of cord plies in the tire.

F 538, F09

plywood, *n*—see *plywood* under **wood laminate**.

D 907, D14

plywood—usually a crossbanded assembly made of layers of veneer or veneer in combination with a lumber core or other wood-based panel material joined with an adhesive. Plywood generally is constructed of an odd number of layers with grain of adjacent layers perpendicular to one another. Outer layers and all odd-numbered layers generally have the grain direction oriented parallel to the long dimension of the panel.

D 1038, D07

plywood box—See **box**.

D 996, D10

P/M, *n*—the acronym representing powder metallurgy. Used as **P/M Part, P/M Product, P/M Process**, and so forth.

B 243, B09

P_{max} , *n*—the maximum pressure (above pressure in the vessel at the time of ignition) reached during the course of a deflagration for the optimum concentration of the dust tested. P_{max} is determined by a series of tests over a large range of concentrations. It is reported in bar.

E 1445, E27

PM cycle—see **preventative maintenance cycle**.

F 1457, F05

P/M forging, *n*—see **powder forging**.

B 243, B09

P/M part, *n*—see **powder metallurgy part**.

B 243, B09

pneumatic atomizer—a device wherein the movement of gas or vapor is the primary source of energy utilized to produce a spray.

E 1620, E29

pneumatic tire, *n*—a hollow tire that becomes load-bearing upon inflation with air, or other gas, to a pressure above atmosphere.

D 123, D13

pneumatic tire, *n*—a hollow tire that becomes load-bearing upon inflation with air, or other gas, to a pressure above atmospheric.

D 6477, D13

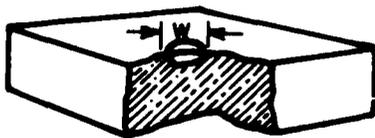
pneumatic tires, *n*—a tire that depends on the compressed air it holds to carry the load. It differs from a solid tire in which the tire itself carries the load.

D 5681, D34

POA—see **printer output area**.

F 1457, F05

pock—a partially closed surface cavity.



where:

w = width.

F 109, C21

pocket, *n*—in *zippers*, the cavity of an element designed to receive the head.

D 123, D13

pocket, *n*—the cavity of an element designed to receive the head.

D 2050, D13

pocket, *n*—an opening in a structure to accept a construction member.

E 631, E06

pocket-shaped—as applied to chamois skins, a skin trimmed in the form of a rectangle with the two corners at one end rounded.

D 1517, D31

point—a thin, flat, triangular or diamond-shaped piece of zinc used to hold glass in wood sash by driving it into the wood.

C 717, C24

point, *n*—a term used to describe the thickness of **paperboard**, a point being one thousandth of an inch. (See **caliper**.)

D 996, D10

point—end of shank opposite head, usually tapered; formed during manufacture of nail to facilitate driving.

F 547, F16

point, *n*—portion of the needle intended to initiate tissue penetration.

F 1840, F04

point analyzer, *n*—See also **analyzer**.

monitoring path, *n*—the actual path over which an atmospheric or an emission compound concentration is measured and averaged.

monitoring path length, *n*—the length of the monitoring path over which the average atmosphere or emission compound concentration is measured and averaged using an open path analyzer.

D 1356, D22

point bar—one or a series of low ridges, usually of coarse sediment, deposited on the inner (convex) side of a river bend.

D 4410, D19

point bars—see **burning bars, points, or tools**.

C 286, B08

point configuration, *n*—the shape of the point. Some common point configurations include, but are not limited to: taper, trocar, blunt, spatulated, conventional cutting edge, reverse cutting edge, cutting taper, and side cutting needle.

F 1840, F04

pointed—provided with sharp point.

F 547, F16

pointed blade—See **pointed clincher**.

F 592, F16

pointed clincher—blade clincher with sharp point to facilitate piercing of corrugated board.

F 592, F16

point estimate—the estimate of a parameter given by a single statistic, for example, sample average (see **sample average**) (**arithmetic average**).

E 1823, E08

point focus collector—see **collector, point focus**.

E 772, E44

point-integrated sample—a sample of water-sediment mixture collected at a relatively fixed point in accordance with the technique of point integration. A point-integrated sample is discharge weighted. However, because the sample is obtained from a single point, the concentration of any component of the mixture that is transported exactly at stream velocity can be considered as either a spatial or a discharge-weighted concentration. Samples collected with instruments that instantaneously capture a quantity of water-sediment mixture are not true point-integrated samples. (See **point sample**.)

D 4410, D19

point-integrating sediment sampler—an instrument capable of collecting a water-sediment mixture isokinetically for a specified period of time by opening and closing under water; an instrument suitable for performing point integration.

D 4410, D19

point integration—a method of sampling at a relatively fixed point whereby the water-sediment mixture is withdrawn isokinetically for a specified period of time.

D 4410, D19

pointless—See **sheared-square point**.

F 547, F16

point projection X-ray microscopy—a method of producing enlarged images by means of X rays. The specimen is placed close to a point source of X rays and the magnification achieved is the ratio of source-image to source-object distance. Resolution depends primarily on the diameter of the source.

E 175, E41

point reflector, *n*—reflector subtending a very small solid angle at the observer's eye, so that the observer cannot readily distinguish its size or shape.

E 284, E12

point sample—sample of water-sediment mixture taken at a single point, either with an instantaneous or a point-integrating sampler.

D 4410, D19

points, conjugate—the pair of points on the principal axis of a mirror or lens so located that light emitted from either point will be focused at the other. Related points in the object and image are located optically so that one is the image of the other.

E 175, E41

point size, *n*—a measurement of the height of a type font, where a point is approximately $\frac{1}{2}$ in. or 0.353 mm.

F 1457, F05

point source—a source whose linear dimensions are very small compared with the distance from the source to the region of observation.

NOTE—The irradiance varies inversely with the square of the distance; a unique property of point sources.

E 1316, E07

point source, *n*—a single, stationary location or fixed facility from which pollutants are discharged; any single identifiable source of pollution.

E 2114, E06

point value, *n*—for *asbestos*, an index of commercial value of asbestos fiber used in asbestos-cement products.

D 2946, C17

point weight—See **felt mill ream**.

D 1079, D08

Poiseuille flow—the particular case of laminar viscous flow through a long pipe of circular cross section.

E 1316, E07

Poisson distribution, n —the distribution which has as its probability function:

$$P(r) = e^{-\mu} \mu^r / r!$$

where:

$P(r)$ = probability of obtaining exactly r occurrences of an event in one unit, such as a unit of time or area,

μ = both mean and variance of distribution, and

e = base of natural logarithms.

D 123, D13

Poisson's ratio, n —the negative of the ratio of transverse strain to the corresponding axial strain resulting from a uniformly distributed axial stress below the proportional limit of the material.

C 1145, C28

Poisson's ratio, ν —the absolute value of the ratio of transverse strain to the corresponding axial strain resulting from uniformly distributed axial stress below the proportional limit of the material.

D 4092, D20

Poisson's ratio—the absolute value of the ratio between linear strain changes, perpendicular to and in the direction of a given uniaxial stress change, respectively.

D 7099, D18

Poisson's ratio, μ , n —the negative of the ratio of transverse strain to the corresponding axial strain resulting from an axial stress below the proportional limit of the material.

E 6, E28

Poisson's ratio, (ν)—ratio between linear strain changes perpendicular to and in the direction of a given uniaxial stress change.

D 653, D18

polar—see **polarizing element**.

E 175, E41

polar-aromatics, n —a polar aromatic hydrocarbon fraction that is adsorbed on an adsorbing medium from a paraffinic solvent during percolation and then desorbed with a chlorinated hydrocarbon solvent such as trichloroethylene.

D 8, D04

polarimeter, Senarmount (Friedel)—See **Senarmount (Friedel) polarimeter**.

C 162, C14

polariscope—an optical device consisting of a light source, mutually perpendicular polarizing elements, and generally equipped with one or more retardation plates for qualitative observations of relative optical retardation by color differentiation.

C 162, C14

polarizability—the inability of an electrode to reproduce a reading after a minute electrical current has been passed through the membrane. Glass pH electrodes are especially prone to polarization errors caused by small currents flowing from the pH meter input circuit and from static electrical charges built up as the electrodes are removed from the sample solution, or when the electrodes are wiped.

D 4127, D19

polarization—the change in the potential of an electrode during electrolysis, such that the potential of an anode always becomes more noble and that of a cathode less noble than their respective static potentials. Equal to the difference between the static potential and the dynamic potential.

B 374, B08

polarization—see **concentrationpolarization**.

D 6161, D19

polarization—for plane polarized beams the plane of polarization is taken as the electric vector. For elliptically or partially polarized beams, polarization must be handled by use of the Stokes parameters, which is rather complex and must be handled in the text. The direction of polarization of a plane polarized beam is taken as the angle between the plane of polarization and the plane of incidence or of reflection or transmission. For other than parallel or perpendicular polarization, the subject is most easily handled in the text.

E 772, E44

polarization—the change from the open-circuit electrode potential as the result of the passage of current.

G 15, G01

polarization admittance—the reciprocal of polarization resistance (di/dE).

G 15, G01

polarization energy—see **screening energy**.

E 673, E42

polarization, parallel, \parallel —with the plane of polarization parallel to the plane of incidence, reflectance, or transmittance.

E 772, E44

polarization, perpendicular, \perp —with the plane of polarization perpendicular to the plane of incidence, reflectance, or transmittance.

E 772, E44

polarization resistance—the slope (dE/di) at the corrosion potential of a potential (E)—current density (i) curve. (It is inversely proportional to the corrosion current density when the polarization resistance technique is applicable.)

G 15, G01

polarized light illumination—a method of illumination in which the incident light is plane polarized before it impinges on the specimen.

E 7, E04

polarizer—a substance or a means that produces or increases polarization.

B 374, B08

polarizer—a Nicol prism, polarizing film, or similar device into which normal light passes and from which polarized light emerges.

E 7, E04

polarizing element—a general term for a device for producing or analyzing plane polarized light. It may be a Nicol prism, some other form of calcite prism, a reflecting surface, or a polarizing

E 175, E41

pole—a timber in the round, often to support power or telephone lines.

D 9, D07

pole—the area on a magnetized part from which the magnetic field is leaving or returning into the part.

E 1316, E07

pole-barn nail—bright or galvanized, stiff-stock or hardened-steel, helically threaded, 2½ to 9-in. nails with flat head and medium diamond point. (See **threaded nail**.)

F 547, F16

pole figure (for crystalline aggregates)—a graphical representation of the crystal orientations present in an aggregate.

E 7, E04

polepiece, n —in reinforced plastics, the supporting part of the mandrel used in filament winding, usually on one of the axes of rotation.

D 883, D20

pole piece—a part of a magnetic electron lens made of a magnetically permeable material for the purpose of concentrating and shaping the magnetic field within the lens.

E 7, E04

pole piece spacer—the central part of a magnetic electron lens pole piece assembly made of nonmagnetic material for the purpose of rigidly defining the separation of the pole pieces of a lens. The length of the spacer affects the strength and shape of the magnetic field in the lens.

E 7, E04

polish—a temporary coating that enhances the appearance and may protect the substrate to which it is applied.

D 2825, D21

polished—a highly-reflective surface, produced by mechanical abrasion and buffing.

C 119, C18

polished—See **tumbled**.

F 547, F16

polished aggregate, n —exposed aggregate worn sufficiently smooth to affect frictional characteristics.

E 867, E17

polished aggregate, n —exposed aggregate worn sufficiently smooth to affect frictional characteristics.

E 1778, E17

polished finish—a surface that has high luster and strong reflection of incident light.

C 119, C18

polished plate glass—See **plate glass**.

C 162, C14

polished wire glass—wire glass, ground and polished on both sides.

C 162, C14

polishing—the smoothing of a metal surface by means of the action of abrasive particles attached by adhesive to the surface of wheels or endless belts usually driven at a high speed.

B 374, B08

polishing—a mechanical, chemical, or electrolytic process or combination thereof used to prepare a smooth reflective surface suitable for microstructure examination, free of artifacts or damage introduced during prior sectioning or grinding.

E 7, E04

poll, n —an electronic method the cluster controller uses to sequentially select each connected device.

F 1457, F05

pollution—the condition caused by the presence of substances of

pollution

such character and in such quantities that the quality of the environment is impaired. **D 4410, D19**

polyaddition—See **addition polymerization**. **D 883, D20**

polyamide plastics—See **nylon plastics**. **D 883, D20**

polyarylate, n—See **aromatic polyester**. **D 883, D20**

polyaryletherketone, n—a polymer in which aryl groups are connected by one or more ether as well as one or more Ketone linkages. **D 883, D20**

polyatomic ion—a charged multi-atom species. **E 673, E42**

polybutene oil—a family of branched-chain polyolefins made by the polymerization of a mixture of iso- and normal butenes. The products are colorless, viscous liquids and are used as cable oils and in capacitors because they are good dielectrics, impermeable to water vapor and gas, and resistant to oxidation. Other synonyms for polybutene are polybutylene, polyisobutylene, and polyisobutene. **D 2864, D27**

polybutylene, n—a polymer prepared by the polymerization of butene as the sole monomer. (See **polybutylene plastics** and **butylene plastics**.) **D 883, D20**

polybutylene, n—a polymer prepared by the polymerization of butene as the sole monomer. (D20) **F 412, F17**

polybutylene, n—a polymer prepared by the polymerization of butene as the sole monomer. (See also **polybutylene plastic** and **butylene plastic**.)

polybutylene plastic, plastic based on polymers made with butene as essentially the sole monomer. **F 1251, F04**

polybutylene plastics, n—plastics based on polymers made with butene as essentially the sole monomer. **D 883, D20**

polybutylene plastics, n—plastics based on polymers with butene as essentially the sole monomer. (D20) **F 412, F17**

polycarbonate, n—a polyester polymer in which the repeating structural unit in the chain is of the carbonate type. **D 883, D20**

polycarbonate, n—a polymer in which the repeating structural unit in the chain is a carbonic acid ester of Bisphenol A. **F 1251, F04**

polycarbonate plastics—polyester plastics based on polymers in which the repeating structural units in the chains are essentially all of the carbonate type. **D 883, D20**

polychlorinated biphenyl (PCB), n—PCB's belong to a broad family of organic chemicals known as chlorinated hydrocarbons and are produced by attaching one or more chlorine atoms to a biphenyl molecule. **D 2864, D27**

polychromator, n—a device for simultaneously isolating several rays of monochromatic radiation from a beam of polychromatic radiation. **E 135, E01**

polychrome decoration—See **polychrome decoration** under **decoration**. **C 242, C21**

polycondensation—See **condensation polymerization**. **D 883, D20**

polycondensation, n—see **condensation**. **D 907, D14**

polycrystalline—characteristic of an aggregate composed of more than one, and usually of a large number, of crystals. **E 7, E04**

polycrystalline fiber, n—a continuous polycrystalline filament of heat insulating material whose composition is alumina, boria, and silica in an approximate ratio of 3:1:2, respectively. **E 344, E20**

polydicyclopentadiene plastic, n—a crosslinked thermoset polymer formed by the ring-opening metathesis polymerization of dicyclopentadiene. **D 883, D20**

polyelectrolyte—synthetic (or natural) molecules, containing multiple ionic groups, used as coagulants and flocculants; available as anionic, cationic and nonionic. **D 6161, D19**

polyester, n—a polymer in which the repeated structural unit in the chain is of the ester type. (ISO) **D 883, D20**

polyester, n—a polymer in which the repeated structural unit in the chain is of the ester type. **F 1251, F04**

polyester plastics—synonymous with **alkyd plastics**. **D 883, D20**

polyester resin—a condensation product resulting from a chemical reaction between a dicarboxylic acid and a dihydroxy alcohol or by the polymerization of a hydroxy carboxylic acid. **C 904, C03**

polyether, n—a polymer in which the repeated structural unit in the chain is of the ether type. **D 883, D20**

polyether, n—a polymer in which the repeated structural unit in the chain is of the ether type. **F 1251, F04**

polyethylene, n—a polymer prepared by the polymerization of ethylene as the sole monomer. (See **polyethylene plastics** and **ethylene plastics**.) **D 883, D20**

polyethylene, n—a polymer prepared by the polymerization of ethylene as the sole monomer. (D20) **F 412, F17**

polyethylene—a polymer prepared by the polymerization of ethylene as the sole monomer. (D 883, D20) **F 869, F08**

polyethylene, n—a polymer prepared by the polymerization of ethylene as the sole monomer. (See also **polyethylene plastic** and **ethylene plastic**.) **F 1251, F04**

polyethylene plastic—a plastic based on polymers made with ethylene as essentially the sole monomer. **F 1251, F04**

polyethylene plastics—plastics based on polymers made with ethylene as essentially the sole monomer. **D 883, D20**

polyethylene plastics—plastics based on polymers made with ethylene as essentially the sole monomer. (D20) **F 412, F17**

polyethylene terephthalate, n—a polymer derived from terephthalic acid and ethylene glycol by condensation polymerization. **F 1251, F04**

polygon—a type of patterned ground consisting of a closed, roughly equi-dimensional, figure bounded by several sides, commonly more-or-less straight, but some, or all, of which may be irregularly curved. A polygon may be either a "low center" or a "high center," depending on whether its center is lower or higher than its margins. **D 7099, D18**

polygonal pattern—a pattern of numerous multi-sided, roughly equi-dimensional figures, bounded by more-or-less straight lines. **D 7099, D18**

polygonal peat plateau—a peat plateau with ice wedge polygons. **D 7099, D18**

polygon trough—the narrow depression surrounding a high-center polygon. **D 7099, D18**

polygraph examiner, n—a term used synonymously with PDD examiner. In the evolution of terminology within this discipline, the term "Polygraph Examiners" replaced the antiquated appellation "Lie Detector Operator" (see definition of **PDD examiner**). **E 2035, E52**

polygraph instrument, n—a diagnostic instrument used during a PDD examination, which is capable of simultaneously monitoring, recording, and measuring at a minimum, respiratory, electrodermal, and cardiovascular activity as a response to auditory or visual stimuli. **E 2035, E52**

polygraphy, n—see definition of **PDD**. **E 2035, E52**

polyisocyanurate foam, n—a cellular thermal insulation produced by the polymerization of polyisocyanates in the presence of polyhydroxyl compounds, catalysts, cell stabilizers, and blowing agents. See Specification C 591. **D 1079, D08**

polyisocyanurate foam board, n—a thermal insulation composed of polyisocyanurate foam with adhered facers. Commonly called *iso* or *isoboard*. See Specification C 1289. **D 1079, D08**

polymer, n—a macromolecular material formed by the chemical combination of monomers having either the same or different chemical composition. **D 123, D13**

polymer, n—a substance consisting of molecules characterized by the repetition (neglecting ends, branch junctions and other minor irregularities) of one or more types of monomeric units. (IUPAC) **D 883, D20**

polymer, n—a compound formed by the reaction of simple molecules having functional groups which permit their combination to proceed to higher molecular weights under suitable conditions. **D 907, D14**

polymer, n—a substance consisting of molecules characterized by the

repetition (neglecting ends, branch junctions, and other minor irregularities) of one or more types of monomeric units.

D 1566, D11

polymer, *n*—a macromolecular material formed by the chemical combination of monomers having either the same or different chemical composition.

D 4466, D13

polymer, *n*—a substance consisting of molecules characterized by the repetition (neglecting ends, branch junctions, and other minor irregularities) of one or more types of monomeric units. (IUPAC, D20)

F 412, F17

polymer, *n*—a substance consisting of molecules characterized by the repetition (neglecting ends, branch junctions, and other minor irregularities) of one or more types of monomeric units. (See **copolymer.**)

F 1251, F04

polymer, *n*—a substance consisting of molecules characterized by repetition (neglecting ends, branches, junctions, and other minor irregularities) of one or more chemically bonded types of monomeric units.

F 1494, F23

polymer coating—a term used to describe color coatings such as PVC (poly(vinyl chloride)), polyester, and clear coatings such as polyurethane and acrylic urethane (see Specifications F 668, F 934, and F 1234).

F 552, F14

polymeric poured (seamless) floors, *n*—a floor surfacing material composed of polymeric materials applied to the substrate in liquid form alone or in combination with mineral or plastic aggregates, desiccants, or fillers.

F 141, F06

polymerization—a chemical reaction in which the molecules of monomers are linked together to form polymers. (See also **polycondensation** and **polyaddition.**)

D 883, D20

polymerization, *n*—a chemical reaction in which the molecules of a monomer(s) are linked together in repeating units to form larger molecules.

D 907, D14

polymerization, *n*—formation of a polymer by the chemical reaction of monomers.

D 1566, D11

polymerization—a chemical reaction in which monomers are linked together to form polymers. (See also **polycondensation** and **polyaddition.**)

F 1251, F04

polymerized rosin, *n*—rosin that has been treated by chemical or physical means, or both, in a manner so as to cause a union of a part of the rosin acids to form dimers to such an extent that the average molecular weight of such rosin will be measurably greater than that of the original rosin. Also known as “dimerized rosin.”

D 804, D01

polymer network, *n*—a three-dimensional reticulate structure formed by chemical or physical linking of polymer chains.

D 1566, D11

polymer(s)—a large molecule formed by the chemical union of reactive units called monomers.

D 4790, D16

polymers—a substance consisting of molecules characterized by the repetition of one or more types of monomeric units.

D 6161, D19

polymer sheet, *n*—a continuous polymeric planar structure.

F 1494, F23

polymer technique—the examination technique in which a polymer is used as the particle suspension vehicle.

E 1316, E07

polymethylmethacrylimide (PMMI), *n*—a thermoplastic polymer formed from a reaction of poly(methyl methacrylate) and monomethyl amine.

D 883, D20

polymorphic substance—an element, or compound, capable of stable existence in different temperature and pressure ranges in two, or more, different crystalline states.

E 7, E04

polymorphic substance—element, or compound, capable of stable existence in different temperature and pressure ranges in two, or more, different crystalline forms.

E 1142, E37

polynary separator, *n*—a device that separates a single input feed stream into three or more output product streams.

D 5681, D34

polynary system—See **multicomponent system.**

E 7, E04

polyol, *n*—an alcohol having many hydroxyl groups, also known as a polyhydric alcohol or polyalcohol.

D 883, D20

polyolefin, *n*—any long-chain synthetic polymer composed of at least

85 % by weight of ethylene, propylene, or other olefin units (monomers), except amorphous (non-crystalline) polyolefin qualifying under Rubber 1, as defined by the Federal Trade Commission. (Compare Olefin)

D 123, D13

polyolefin, *n*—a polymer prepared by the polymerization of an olefin(s) as the sole monomer(s). (See **polyolefin plastics** and **olefinplastics.**)

D 883, D20

polyolefin, *n*—any long-chain synthetic polymer composed of at least 85 % by weight of ethylene, propylene, or other olefin units (monomers), except amorphous (non-crystalline) polyolefin qualifying under Rubber 1, as defined by the Federal Trade Commission. (Compare Olefin)

D 4849, D13

polyolefin, *n*—a polymer prepared by the polymerization of an olefin(s) as essentially the sole monomer(s). (D20)

F 412, F17

polyolefin, *n*—a polymer prepared by the polymerization of an olefin(s) as the sole monomer(s). (See also **polyolefin plastic, olefin plastic.**)

F 1251, F04

polyolefin-material cleanliness, *n*—the degree to which a polymer melt is free of filterable particles which remain insoluble in the melt under the specified test condition.

D 123, D13

polyolefin-material cleanliness, *n*—the degree to which a polymer melt is free of filterable particles which remain insoluble in the melt under the specified test condition.

D 4849, D13

polyolefin monofilament, *n*—as used in this specification D 3218, a flat single filament of the slit-film type, which can function as a yarn in commercial textile operations.

D 123, D13

polyolefin monofilament, *n*—as used in specification D 3218, a flat single filament of the slit-film type, which can function as a yarn in commercial textile operations.

D 4849, D13

polyolefin plastic—a plastic based on polymers made with an olefin(s) as essentially the sole monomer(s).

F 1251, F04

polyolefin plastics, *n*—plastics based on polymers made with an olefin(s) as essentially the sole monomer(s).

D 883, D20

polyolefin plastics, *n*—plastics based on polymers made with an olefin(s) as essentially the sole monomer(s). (D20)

F 412, F17

polyoxymethylene, *n*—a polymer in which the repeated structural unit in the chain is oxymethylene.

D 883, D20

polyoxymethylene, *n*—a polymer in which the repeated structural unit in the chain is oxymethylene.

F 1251, F04

polyoxymethylene plastics, *n*—acetal plastics based on polymers in which oxymethylene is essentially the sole repeated structural unit in the chains. (ISO) (See also **acetal plastics.**)

D 883, D20

polyphthalamide (PPA), *n*—a polyamide in which residues of terephthalic acid or isophthalic acid or a combination of the two comprise at least 60 molar percentage of the dicarboxylic acid part of the repeating structural units in the polymer chain.

D 883, D20

polypropylene, *n*—a polymer prepared by the polymerization of propylene as the sole monomer. (See **polypropylene plastics** and **propylene plastics.**)

D 883, D20

polypropylene, *n*—a polymer prepared by the polymerization of propylene as the sole monomer. (D20)

F 412, F17

polypropylene, *n*—a polymer prepared by the polymerization of propylene as the sole monomer. (See also **polypropylene plastic, propylene plastic.**)

F 1251, F04

polypropylene plastics—plastics based on polymers made with propylene as essentially the sole monomer.

D 883, D20

polypropylene plastics—plastics based on polymers made with polypropylene as essentially the sole monomer. (D20)

F 412, F17

polystyrene, *n*—a polymer prepared by the polymerization of styrene as the sole monomer. (See **styrene plastics.**)

D 883, D20

polystyrene—a plastic based on a resin made by polymerization of styrene as the sole monomer. For use as a standard in colorimetry, the polystyrene shall contain no internal or external additives.

D 4790, D16

polystyrene, *n*—a polymer prepared by the polymerization of styrene as the sole monomer. (D20)

F 412, F17

polystyrene, *n*—a polymer prepared by the polymerization of styrene as the sole monomer. (See also **styrene plastic.**)

F 1251, F04

polyterephthalate, n

polyterephthalate, n—a thermoplastic polyester in which the terephthalate group is one of the repeating structural unit in the polymer chain. **D 883, D20**

polyterephthalate, n—a thermoplastic polyester in which the terephthalate group is a repeated structural unit in the polymer chain. **F 1251, F04**

polyterephthalate plastics—a thermoplastic polyester in which the terephthalate group is a repeated structural unit in the chain, the terephthalate being in greater amount than other dicarboxylates which may be present. **D 883, D20**

polyterpene resin, n—a resin produced by the polymerization of terpene fractions or mixtures of terpenes obtained from naval stores, or paper pulp production, or citrus juice production, or combinations thereof. **D 6440, D01**

polyurethane, n—a polymer prepared by the reaction of an organic diisocyanate with compounds containing hydroxyl groups. **D 883, D20**

polyuronides—polysaccharides containing uronic acid groups. **D 1695, D01**

poly(vinyl acetate), n—a polymer prepared by the polymerization of vinyl acetate as the sole monomer. **D 883, D20**

poly(vinyl acetate)—a polymer prepared by the polymerization of vinyl acetate as the sole monomer. (D20) **F 412, F17**

poly(vinyl acetate), n—a polymer prepared by the polymerization of vinyl acetate as the sole monomer. **F 1251, F04**

polyvinyl acetate emulsion adhesive, n—a latex adhesive in which the polymeric portion comprises polyvinyl acetate, copolymers based mainly on polyvinyl acetate, or a mixture of these, and which may contain modifiers and secondary binders to provide specific properties. **D 907, D14**

poly(vinyl alcohol)—polymers prepared by the essentially complete hydrolysis of polyvinyl esters. **D 883, D20**

poly(vinyl alcohol), n—a polymer prepared by the essentially complete hydrolysis of polyvinyl ester. **F 1251, F04**

poly(vinyl chloride)—a polymer prepared by the polymerization of vinyl chloride as the sole monomer (vinyl chloride content in monomer not less than 99 %). **D 883, D20**

poly(vinyl chloride)—a polymer prepared by the polymerization of vinyl chloride as the sole monomer. (D20) **F 412, F17**

poly(vinyl chloride), n—a polymer prepared by the polymerization of vinyl chloride as the sole monomer. **F 1251, F04**

poly(vinyl chloride) (pvc)—a polymer prepared by the polymerization of vinyl chloride as the sole monomer. (D 883, D20) **F 869, F08**

pond—a surface which is incompletely drained. **D 1079, D08**

ponded ash, n—ash that is in an ash pond or that has been excavated from an ash pond. **E 2201, E50**

pontil—See **punty**. **C 162, C14**

pool—a sharing arrangement for a group of property with a common purpose. **E 2135, E53**

pooled limit of quantitation, n—level of property or concentration of analyte above which quantitative test results can be obtained with a specified degree of confidence. See 3.2.1 for acronym. **D 4175, D02**

pooling—See **pile reversal**. **D 5684, D13**

pooling—the existence of excessive amounts of penetrant, emulsifier or developer in an incompletely drained area. **E 1316, E07**

poorly bonded—a condition in which the soil particles are weakly held together by the ice, so that the frozen soil has poor resistance to chipping and breaking. **D 7099, D18**

poorly-bonded permafrost—ice-bearing permafrost in which few of the soil particles are bonded together by ice. **D 7099, D18**

pop-in—a discontinuity in the force against clip gage displacement record. This discontinuity is characterized by a sudden increase in displacement and, generally, a decrease in force. Subsequently, the displacement and force increase to above their respective values at pop-in. **E 1823, E08**

pop-off—in dry process enameling, a defect appearing as a small

conical piece of porcelain enamel, either partially or entirely separated from the ware. **C 286, B08**

popouts, n—small holes in the pavement surface, normally ranging in diameter from 25 mm (1 in.) to 100 mm (4 in.) and depth from 13 mm (0.5 in.) to 50 mm (2 in.). **E 867, E17**

popouts, n—small holes in the pavement surface, normally ranging in diameter from 25 mm (1 in.) to 100 mm (4 in.) and depth from 13 mm (0.5 in.) to 50 mm (2 in.). **E 1778, E17**

poppers—a defect characterized by randomly occurring, relatively small, circular shaped areas of ground coat appearing in the first cover coat sheet steel porcelain enamel. **C 286, B08**

population, n—the totality of items or units of materials under consideration. **D 5681, D34**

population, n—the totality of items or units of material under consideration. **E 456, E11**

population, n—the totality of items or units of material under consideration. **F 1773, F08**

population (or universe)—*in fatigue testing*, the totality of the set of test specimens, real or conceptual, that could be prepared in the specified way from the material under consideration. **E 1823, E08**

porcelain—a glazed or unglazed vitreous ceramic whiteware made by the porcelain process, and used for technical purposes, designating such products as electrical, chemical, mechanical, structural, and thermal wares when they are vitreous.

alumina porcelain—a vitreous ceramic whiteware for technical application in which alumina (Al_2O_3) is an essential crystalline phase.

chemical porcelain—vitreous ceramic whitewares used for containing, transporting, or reacting of chemicals.

cordierite porcelain—a vitreous ceramic whiteware for technical application in which cordierite ($2\text{MgO}\cdot 2\text{Al}_2\text{O}_3\cdot 5\text{SiO}_2$) is the essential crystalline phase.

forsterite porcelain—a vitreous ceramic whiteware for technical application in which forsterite ($2\text{MgO}\cdot \text{SiO}_2$) is the essential crystalline phase.

steatite porcelain—a vitreous ceramic whiteware for technical application in which magnesium metasilicate ($\text{MgO}\cdot \text{SiO}_2$) is the essential crystalline phase.

titanium porcelain—a vitreous ceramic whiteware for technical application in which titania (TiO_2) is the essential crystalline phase.

zircon porcelain—a vitreous ceramic whiteware for technical application in which zircon ($\text{ZrO}_2\cdot \text{SiO}_2$) is the essential crystalline phase. **C 242, C21**

porcelain enamel—a substantially vitreous or glassy, inorganic coating bonded to metal by fusion at a temperature above 800°F (425°C approximate). **C 286, B08**

porcelain process—the method of producing glazed ware by which a ceramic body and glaze are matured together in the same firing operation. **C 242, C21**

porcelain tile—a ceramic mosaic tile or paver that is generally made by the dust-pressed method of a composition resulting in a tile that is dense, fine-grained, and smooth with sharply formed face, usually impervious and having colors of the porcelain type which are usually of a clear, luminous type or granular blend thereof. **C 242, C21**

pore, n—an inherent or induced cavity within a particle or within an object. **B 243, B09**

pore—a discontinuity, essentially circular in cross section, in a coating extending through to the underlying coating or basis material. **B 374, B08**

pore, n—*in carbon and graphite technology*, in a carbon or graphite foam, a passage that interconnects two cells. **C 709, D02**

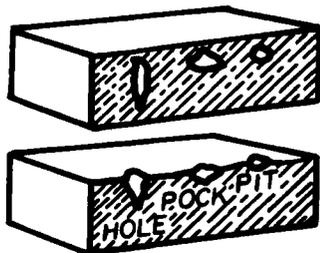
pore—*in catalysis*, a small opening in a material permitting admission, adsorption, or passage of a fluid. **D 3766, D32**

pore, n—*in carbon and graphite technology*, in a carbon or graphite foam, a passage that interconnects two cells. **D 4175, D02**

pore—an opening or void in a membrane or filter matrix.

D 6161, D19

pore—an internal cavity which may be exposed by cutting, grinding, or polishing to become a pit, pock, or hole.



F 109, C21

pore count, *n*—in carbon and graphite technology, in open-cell foams, the number of pores aligned in one plane in one linear inch, as determined by stereoscopic image analysis. C 709, D02

pore count, *n*—in carbon and graphite technology, in open-cell foams, the number of pores aligned in one plane in one linear inch, as determined by stereoscopic image analysis. D 4175, D02

pore diameter—the diameter of a pore in a model in which the pores in a sorbent are assumed to be cylindrical in shape and which is calculated from data obtained by a specified procedure.

D 2652, D28

pore-forming material, *n*—a substance included in a powder mixture that volatilizes during sintering and thereby produces a desired kind and degree of porosity in the finished compact. B 243, B09

pore ice—ice occurring in the pores of earth materials. D 7099, D18

pore-liquid—liquid that occupies an open space between solid soil particles. Within this guide, pore-liquid is limited to aqueous pore-liquid; that includes water and its solutes. D 653, D18

pore-liquid tension—see **matric-suction** or **soil waterpressure**.

D 653, D18

pore, (P), *n*—as used in fractography, a volume-distributed flaw that is a discrete cavity or void in a solid material. C 1145, C28

pore pressure (pore waterpressure)—see **neutral stress** under stress.

D 653, D18

pores—in wood anatomy, a term applied to the cross section of a vessel or of a vascular tracheid. D 9, D07

pores—the complex network of channels in the interior of a particle of a sorbent. D 2652, D28

pores, *n*—an inherent or induced network of channels and open spaces within an otherwise solid structure. F 2312, F04

pore size distribution—in catalysis, the volume of pores of a material expressed or displayed as a function of pore diameters.

D 3766, D32

pore volume—volume of the pores in a unit weight of a sorbent.

D 2652, D28

pore volume distribution—the distribution of pore volumes among pores of different sizes or diameters. D 2652, D28

pore volume distribution—in catalysis, an alternative term for pore size distribution. D 3766, D32

pore volume of flow (V_{pg}), *n*—the cumulative volume of flow through a test specimen divided by the volume of voids within the specimen. D 4439, D35

pore water—water contained in the voids of the soil or rock.

D 653, D18

pore water—water occurring in the pores of earth materials.

D 7099, D18

pore water—water occupying space between sediment or soil particles (syn. **interstitial water**). E 943, E47

poromer, *n*—See **poromeric material**, the preferred term.

D 1566, D11

poromeric material, *n*—a flexible synthetic leather-like material that

is permeable to air and water vapor and usually resistant to water penetration and abrasion. D 1566, D11

porometry, *n*—the determination of the distribution of pore diameters relative to direction of fluid flow by the displacement of a wetting liquid as a function of pressure. F 2312, F04

porosimetry, *n*—the determination of pore volume and pore size distribution through the use of a nonwetting liquid (typically mercury) intrusion into a porous material as a function of pressure. F 2312, F04

porosity, *n*—the amount of pores (voids) expressed as a percentage of the total volume of the powder metallurgy part. B 243, B09

porosity—in metallic coatings, the presence of any discontinuity, crack, or hole in the coating that exposes a different underlying metal. B 542, B02

porosity, *n*—the percentage of the total volume of a material occupied by both open and closed pores. C 71, C08

porosity—the volume fraction of voids contained in a solid, often expressed as a percent.

closed porosity—the volume fraction of all pores within a solid mass that are closed off by surrounding solid and, hence, are inaccessible to each other and to the external surface: they thus are not detectable by gas or liquid penetration.

connected porosity—the volume fraction of all pores, voids, and channels within a solid mass that are interconnected with each other.

open porosity—the volume fraction of all pores, voids, and channels within a solid mass that are interconnected with each other and communicate with the external surface, and thus are measurable by gas or liquid penetration (Syn. **apparent porosity**). C 242, C21

porosity, *n*—the percentage of the total volume of a material occupied by both open and closed pores. C 709, D02

porosity, *n*—the ratio of the volume of air or void contained within the boundaries of a material to the total volume (solid matter plus air or void) expressed as a percentage. (See also **air permeability** and **permeability**.) D 123, D13

porosity—the ratio of the aggregate volume of voids or interstices in a rock or soil to its total volume. (ISRM) D 653, D18

porosity, *n*—the presence of numerous small cavities. D 1566, D11

porosity—the existence in a material of connected air voids. It is frequently expressed as the ratio of void volume to total volume. D 1695, D01

porosity—of particles in catalysis, the ratio of the volumes of the pores in the particles to the volumes enclosed by their envelopes. D 3766, D32

porosity: porosity, internal—the presence of numerous pits or pin holes beneath the pultruded surface; usually observable only in a cut cross section. D 3918, D20

porosity, *n*—the percentage of the total volume of a material occupied by both open and closed pores. D 4175, D02

porosity, *n*—the ratio of the volume of air or void contained within the boundaries of a material to the total volume (solid matter plus air or void) expressed as a percentage. D 4850, D13

porosity—that portion of a membrane filter volume which is open to fluid flow, also known as void volume. D 6161, D19

porosity—holes in a solid, not necessarily connected. E 7, E04

porosity, *n*—the ratio of the aggregate volume of interstices in a rock or soil to its total volume, usually stated as a percent. E 957, E44

porosity—in paper, the property that allows the passage of air through the sheet—an important factor in ink penetration, and also a quality that may affect paper feeding in some readers that have vacuum feeding mechanisms. F 149, F05

porosity, *n*—property of a solid which contains an inherent or induced network of channels and open spaces. F 2312, F04

porosity, apparent—See **open porosity** under **porosity**. C 242, C21

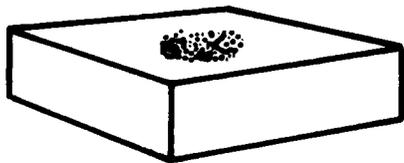
porosity, *n* (D)—the ratio, usually expressed as a percentage, of: (1) the volume of voids of a given soil or rock mass, to (2) the total volume of the soil or rock mass. D 653, D18

porosity, surface

porosity, surface—the presence of numerous visible pits or pin holes at or near the pultruded surface. **D 3918, D20**

porous—substances containing pores for fluids to pass due to an open physical structure. **D 6161, D19**

porous area—an area that will retain dye when tested in accordance with Practice E 165 and, if broken through at the porous area, will show evidence of dye penetration into the body.



F 109, C21

porous ice—ice that contains numerous voids, usually interconnected and usually resulting from melting at air bubbles or along crystal interfaces from presence of salt or other materials in the water, or from the freezing of saturated snow. Though porous, the mass retains its structural unity. **D 7099, D18**

porous packaging material—a material used in medical packaging which is intended to provide an environmental and biological barrier, while allowing sufficient air flow to be used in gaseous sterilization methods (for example, EtO, steam, gas plasma). **F 1327, F02**

porous region, (PR), n—as used in fractography, a volume-distributed flaw that is a 3-dimensional zone of porosity or microporosity. **C 1145, C28**

porous seam, (PS), n—as used in fractography, a volume-distributed flaw that is a 2-dimensional area of porosity or microporosity. **C 1145, C28**

porous woods—another name for hardwoods, which frequently have vessels or pores large enough to be seen readily without magnification. **D 9, D07**

port—an opening in a melting furnace designed for the passage of fuel, air/oxygen, flame, or exhaust gases or combination thereof. **C 162, C14**

port, n—an opening or aperture in an integrating sphere. **E 284, E12**

portable vacuum cleaner operational weight, n—the unit weight of the cleaner, including cord, as usually used to vacuum carpets plus the accessories such as hose, motorized nozzle, tools, and tool caddy if they are normally attached to or stored on the cleaner. Weight is with clean filters and the electric cord. **F 395, F11**

portable vacuum cleaner total weight, n—the weight of the cleaner, electric cord, all hoses, and attachments included with the model, but not including any packaging. Weight is with clean filters. **F 395, F11**

portal—the surface entrance to a tunnel. (ISRM) **D 653, D18**

portfolio analysis—a technique used to seek the combination of assets with the maximum return for any given degree of risk (that is, variance of the return), or the minimum risk for any given rate of return. **E 631, E06**

portfolio analysis, n—a technique used to seek the combination of assets with the maximum return for any given degree of risk (that is, variance of the return), or the minimum risk for any given rate of return. **E 833, E06**

portfolio (portfeuille)—group of securities, buildings, or other properties held by an individual or institutional investor. **E 631, E06**

portfolio (portfeuille)—group of securities, buildings, or other properties held by an individual or institutional investor. **E 1480, E06**

portion size—the number of lengths of pipe to be used for a specific test. **B 846, B05**

portion, test, n—see **sample**, the preferred term. **D 1566, D11**

portland blast-furnace slag cement—essentially an intimately interground mixture of portland cement clinker and granulated blast-

furnace slag or an intimate and uniform blend of portland cement and fine granulated blast-furnace slag in which the amount of the slag constituent is within specified limits conforming to Specification C 150. **D 2946, C17**

portland cement, n—a hydraulic cement produced by pulverizing clinker consisting essentially of hydraulic calcium silicates, and usually containing one or more forms of calcium sulfate as an interground addition. **C 11, C11**

portland cement, n—a hydraulic cement produced by pulverizing portland-cement clinker, and usually containing calcium sulfate. **C 219, C01**

portland cement—hydraulic cement produced by pulverizing clinker consisting essentially of hydraulic calcium silicates, and usually containing one or more of the forms of calcium sulfate as an interground addition and conforming to Specification C 150. **D 2946, C17**

portland-cement clinker, n—a clinker, partially fused by pyroprocessing, consisting predominantly of crystalline hydraulic calcium silicates. **C 219, C01**

Portland cement concrete pavement, n—a pavement having a surface of aggregate mixed with Portland cement paste binder or a mixture of Portland cement and other pozzolans. **E 867, E17**

portland cement concrete pavement, n—a pavement having a surface of aggregate mixed with portland cement paste binder or a mixture of portland cement and other pozzolans. **E 1778, E17**

Portland Cement-Lime Mortar (PCL)—See Cement-Lime Mortar. **C 51, C07**

portland cement plaster, n—a plaster mix in which portland cement or combinations of portland and masonry cements or portland cement and lime are the principal cementitious materials mixed with aggregate. **C 11, C11**

portland pozzolan cement—intimate and uniform blend of portland cement or portland blast-furnace slag cement and fine pozzolan produced by intergrinding portland cement and pozzolan, by blending portland cement or portland blast-furnace slag cement and finely divided pozzolan, or a combination of intergrinding and blending, in which the amount of the pozzolan constituent is within specified limits. **D 2946, C17**

portrait mode, adj—a printer output orientation in which the printed lines run perpendicular to the direction of movement of the paper. (See **landscape mode**.) **F 1457, F05**

POS—an abbreviation for point of sale data entry systems where actual transactions are recorded by terminals operating on-line to a central computer. These systems frequently employ optical scanning as a means of capturing data. **F 149, F05**

positive column—that region of an electric discharge between the cathode and anode falls. **B 542, B02**

positive development, direct development—charged area development by means of toner particles having appropriate charge polarity so that dark areas of the print correspond to dark areas of the original. **F 335, F05**

positive displacement pump—a pump that will continue to build pressure until the power source is stalled if the pump outlet is blocked. **D 653, D18**

positive distortion—See **distortion**. **E 7, E04**

positive eyepiece—an eyepiece in which the focal plane is external to its lenses. **E 7, E04**

positive identification—This phrase is inappropriate because it seems to suggest that some identifications are more positive than others. **E 1658, E30**

positive image—a developed image in which dark areas correspond to dark areas of the original subject. **F 335, F05**

positive load—a load that results in the outdoor side of a glass specimen being the high-pressure side. **E 631, E06**

positive (negative) ion yield—the total number of positive (negative) secondary ions sputtered from the specimen per incident primary particle. **E 673, E42**

- positive, photographic**—a photograph having approximately the same rendition of light and shade as the original subject. E 7, E04
- positive replica**—See **replica**. E 7, E04
- positive side waterproofing, n**—an application wherein the waterproofing system and the source of hydrostatic pressure are on the same side of the structural element. D 1079, D08
- positive test**—the observation of the characteristic color change within a specified time limit, usually within 10 to 30 s.
- post**—See **railing systems**. E 631, E06
- positive transparency**—a photographic print made on a transparent base from a negative. In electron microscopy this is used as an intermediate step to prepare a negative print. E 7, E04
- possible/could have**—these terms have no place in expert opinions on handwriting because the examiner's task is to decide to what degree of certainty it can be said that a handwriting sample is by a specific person. If the evidence is so limited or unclear that no definite or qualified opinion can be expressed, then the proper answer is *no conclusion*. To say that the suspect "could have written the material in question" says nothing about probability and is therefore meaningless to the reader or to the court. The examiner should be clear on the different meanings of "possible" and "probable," although they are often used interchangeably in everyday speech. E 1658, E30
- post**—short timber used in upright position for supporting structures of fencing. It may be round, split, or sawn. D 9, D07
- post, n**—a vertical supporting member. E 631, E06
- post, n**—a vertical supporting member. E 1481, E06
- post**—post holding clincher to facilitate assembly of container bottoms. F 592, F16
- post, n**—a non-threaded anchor component that connects to the bony elements of the spine, pelvis, or ribs by means of a non-threaded hole in the bony element. F 1582, F04
- post cap**—a fitting atop a post usually to exclude water from tubular posts. F 552, F14
- post-cleaning**—the removal of residual liquid penetrant examination materials from the test part after the penetrant examination has been completed. E 1316, E07
- post-consumer, adj**—refers to materials that are reclaimed from products that have already served their intended end-use as consumer item. Waste from industrial processes are not considered post-consumer. Post-consumer materials are a subset of **recovered materials**. E 2114, E06
- post-consumer recycled content, n**—the portion, often expressed as a percent by weight, of material used in the manufacture of a new product, where the material ex. works has been recovered or otherwise diverted from disposal. F 141, F06
- post-conviction sex offender testing (PCSOT), n**—See clinical polygraph examination.
- disclosure examination, n**—a form of Post-Conviction Sex Offender Testing (PCSOT) which involves an in-depth look at the entire life cycle of an offender and his or her sexual behaviors up to the date of criminal conviction. Sometimes referred to as a sexual history examination. E 2035, E52
- postcure, n**—further treatment by time or temperature, or both, of an adhesive to modify specific properties. D 907, D14
- postcure, v**—to further treat an adhesive by time or temperature, or both, to modify specific properties. D 907, D14
- post cure, n**—heat or radiation treatment, or both, to which a cured or partially cured thermosetting plastic or rubber composition is subjected, to enhance the level of one or more properties. D 1566, D11
- post cure**—heat or radiation treatment, or both, to which a cured or partially cured thermosetting plastic or rubber composition is subjected to enhance the level of one or more properties.
- pot-life**—See **working life**.
- prebleeding**—See **debulking**. E 631, E06
- post cure**—heat or radiation treatment, or both, to which a cured or partially cured thermosetting plastic or rubber composition is subjected to enhance the level of one or more properties.
- post dispensing contraction, n**—*in building construction*, the volumetric decrease of a sealant that occurs between dispensing and cure. C 717, C24
- post dispensing expansion, n**—*in building construction*, the volumetric increase of a sealant that occurs between dispensing and cure. C 717, C24
- postemergence herbicide**—a chemical applied after emergence of the specified weed or crop. E 609, E35
- post emulsification**—a penetrant removal technique employing a separate emulsifier. E 1316, E07
- post-fab, n**—fabrication process where close-outs and inserts are attached or put into the panel after the facings are bonded to the core. C 274, D30
- post-flashover, adj**—the stage of a fire at which the average air temperature in the upper half of the room exceeds 600°C. E 176, E05
- postforming, n**—the forming of cured or partially cured thermosetting plastics. D 883, D20
- post hinge**—a fitting that attaches to the gate post, the pintle of which fits the frame hinge permitting the gate to swing. F 552, F14
- post-nucleation**—the step where, if necessary, the catalyst is converted to its final form. This is the final step prior to electroless plating. B 374, B08
- post treatment**—a process of applying chemical(s) to a membrane after formation to improve its performance. D 6161, D19
- post treatment**—the addition of chemicals to the product or concentrate stream to make it suitable for the desired end use application. D 6161, D19
- post treatment**—utilization of equipment such as degasifiers to make the product or concentrate stream, or both, suitable for the desired end use application. D 6161, D19
- post-weld heat treatment, n**—heating weldments immediately after welding, to provide **tempering**, **stress relieving**, or a controlled rate of cooling to prevent formation of a hard or brittle microstructure. A 941, A01
- pot**—a one-piece refractory container for molten glass. Types of pots include: C 162, C14
- potable water**—term used to indicate water having a total dissolved solids content less than 500 mg/L with a sufficiently low level of biological agents, suspended solids, organic odor and color-generating components to be safe and palatable for drinking. D 6161, D19
- potable water**—water that is satisfactory for drinking and culinary purposes, meeting the requirements of the health department having jurisdiction. E 772, E44
- pot arch**—a furnace for firing or preheating a pot. C 162, C14
- potash**—potassium oxide (K₂O). Loosely, a carbonate of potassium. C 162, C14
- potential drop, Δh (L)**—the difference in total head between two equipotential lines. D 653, D18
- potential migration pathway, n**—the route that may be taken by contaminants in the environment as they move or are transported from the source(s), usually in a downgradient direction. D 5681, D34
- potentiodynamic**—refers to a technique wherein the potential of an electrode with respect to a reference electrode is varied at a selected rate by application of a current through the electrolyte. G 15, G01
- potentiometer**—an instrument for the measurement of electromotive force by balancing against it an equal and opposite electromotive force across a calibrated resistance carrying a definite current. Potentiometers can be made manual or with automatic self-balancing features. E 7, E04
- potentiometric surface**—an imaginary surface representing the static

potentiometric surface

- head of ground water. The water table is a particular potentiometric surface. **D 653, D18**
- potentiostaircase**—refers to a potentiostep technique for polarizing an electrode in a series of constant potential steps wherein the time duration and potential increments or decrements are equal for each step. **G 15, G01**
- potentiostat**—an instrument for automatically maintaining an electrode in an electrolyte at a constant potential or controlled potentials with respect to a suitable reference electrode. **G 15, G01**
- potentiostatic**—the technique for maintaining a constant electrode potential. **G 15, G01**
- potentiostep**—refers to a technique in which an electrode is polarized in a series of potential increments or decrements. **G 15, G01**
- pot furnace**—a furnace for melting glass in pots. **C 162, C14**
- pot furnace**—a furnace used to smelt porcelain enamel raw batch contained in a crucible. **C 286, B08**
- potholes, n**—bowl-shaped holes in the pavement surface, grater than 100 mm (4 in.) in diameter, and more than 25 mm (1 in.) in depth. **E 867, E17**
- potholes, n**—bowl-shaped holes in the pavement surface, greater than 0.1 m (4 in.) in diameter, and more than 25 mm (1 in.) in depth. **E 1778, E17**
- pot life**—See **working life**. **C 717, C24**
- pot life**—the period of time during which a reacting thermosetting composition remains suitable for its intended processing after mixing with reaction-initiating agents. **D 883, D20**
- pot life; working life, n**—period of time during which a multi-part adhesive can be used after mixing the components. **D 907, D14**
- pot life, n**—the period of time during which a reacting thermosetting plastic or rubber composition remains suitable for its intended use, after mixing with a reaction-initiating agent. **D 1566, D11**
- pot-life**—See **working life**. **E 1749, E06**
- pot life, n**—the duration of time that the wet-state remains workable after it has been mixed. **E 2110, E06**
- pot life**—the period of time during which a reacting thermosetting plastic or rubber composition remains suitable for its intended processing after mixing with reaction-initiating agents. (D20) **F 412, F17**
- pot, pan, and utensils washing machine, commercial**—machines that uniformly wash, rinse, and heat-sanitize food preparation utensils. The machines are capable of removing physical soil and sanitizing multiple pots, pans, and utensils from properly racked and pre-scraped multiple items. **F 1827, F26**
- pot, pan, and utensil washing machine, commercial**—see **pot, pan, and utensil washing machines, commercial**. **F 1827, F26**
- pottery**—all fired ceramic wares that contain clay when formed, except technical, structural, and refractory products. **C 242, C21**
- potting, n**—an embedding process for parts that are assembled in a container (or “can”) into which the insulating material is poured, and the container remains an integral part of the finished unit as the outer surface. **D 1711, D09**
- pot wagon**—a vehicle used for transferring a pot from a pot arch to a pot furnace. **C 162, C14**
- pouch, n**—a small or moderate-sized bag, sack, or receptacle for carrying or containing parts. **D 996, D10**
- poultry corrosion**—See **deposit corrosion**. **G 15, G01**
- poultry, n**—chickens, turkeys, ducks, geese, and other domesticated fowl. **F 2463, F10**
- Pourbaix diagram (electrode potential-pH diagram)**—a graphical representation showing regions of thermodynamic stability of species in metal-water electrolyte systems. **G 15, G01**
- pour density, n**—the mass per unit volume of pelleted carbon black. **D 3053, D24**
- pouring pit refractory, n**—a refractory associated with the transfer or flow control of molten steel between furnace and mold. **C 71, C08**
- pour-on application**—application by pouring a chemical onto the target. **E 1102, E35**
- pour point**—the lowest temperature at which a liquid can be observed to flow under specified conditions. **D 2864, D27**
- pour point, n**—*in petroleum products*, the lowest temperature at which movement of the test specimen is observed under the prescribed conditions of the test. **D 4175, D02**
- powder, n**—particles that are usually less than 1000 μm (1 mm) in size. **B 243, B09**
- powder, n**—particles of a solid characterized by small size, nominally within the range of from 0.1 to 1000 μm . **B 899, B02**
- powder**—synonym for **bulksolid**, particularly when the particles of the bulk solid are fine. **D 653, D18**
- powder**—see **dry powder**. **E 1316, E07**
- powder adhesion**—the ability of an electrostatically charged powder to remain attached by static attraction to a grounded substrate. **C 286, B08**
- powder blend, n**—a homogeneous mixture of powder from one or more heats; it is limited to the amount that can be mixed in the same blender at one time. **B 899, B02**
- powder blend**—See **dry-blend**. **D 883, D20**
- powder blower**—a compressed air device used to apply magnetic powder over the surface of a part undergoing inspection. **E 1316, E07**
- powder cleaner, n**—a cleaning agent in which an absorbent compound is the principal ingredient. See **absorbent compound**. **D 123, D13**
- powder cleaner, n**—a cleaning agent in which an absorbent compound is the principal ingredient. See **absorbent compound**. **D 5253, D13**
- powder cleaning, n**—See the preferred term, **dry extraction cleaning**. **D 5253, D13**
- powder coating, n**—a coating produced by the use of a heat-fusible coating powder. **D 1711, D09**
- powdered activated carbon**—activated carbon in particle sizes predominantly smaller than 80 mesh. **D 2652, D28**
- powdered iced tea dispenser**—commercial equipment designed to deliver a portion of instant tea, usually mixed with tap water and dispensed into a container with ice. **F 1827, F26**
- powdered rubber, n**—particulate rubber composed of mainly non-spherical particles that have a maximum particle dimension equal to or below 425 μm (40 mesh). See **particulate rubber**. **D 1566, D11**
- powdered rubber, n**—particulate rubber composed of mainly non-spherical particles that have a maximum particle dimension equal to or below 425 μm (40 mesh) (also refer to **particulate rubber**). **D 5681, D34**
- powder flow meter, n**—an instrument for measuring the rate of flow of a powder according to a specified procedure. **B 243, B09**
- powder forging, n**—densification (generally hot) of a P/M preform by forging. **B 243, B09**
- powdering, n**—*as related to metallic coatings*, microcracking and fine particle separation of generally brittle coatings when the coating is severely stressed. **A 902, A05**
- powdering**—partial or total disintegration of the polish film resulting in a fine, light-colored material. **D 2825, D21**
- powdering**—a phenomenon that occurs in the creases of shoes during wear when polish film does not have adequate flexibility and breaks up into small powdery particles. **D 2825, D21**
- powdering, n**—a condition where ink easily rubs off a print after the normal drying period. Also referred to as “chalking.” **D 6488, D01**
- powder injection molding (PIM), n**—a process in which a mixture of powders and a binder system is forced under pressure into a mold. See also **metal injection molding**. **B 243, B09**
- powder lubricant, n**—an agent mixed with or incorporated in a powder to facilitate the pressing and ejecting of the compact. **B 243, B09**
- powder metallurgy, n**—the production and utilization of metal powders. **B 243, B09**
- powder metallurgy part, n**—a shaped object that has been formed

from metal powders and bonded by heating below the melting point of the major constituent. A structural or mechanical component, bearing, or bushing made by the powder metallurgy process. Synonymous with **P/M part**. **B 243, B09**

powder method—any method of X-ray diffraction involving a polycrystalline and preferably randomly oriented powder specimen and a narrow beam of monochromatic radiation. **E 7, E04**

powder porcelain enameling—process by which the application of porcelain enamel is achieved by dry electrostatic spraying. **C 286, B08**

powder porcelain resistivity—the opposition that a porcelain powder offers to the flow of direct current, equal to the voltage drop across the powder, divided by the current through the powder. (Also known as **electrical resistance**) **C 286, B08**

powder retention—Same as **electrostatic retention**. **C 286, B08**

powder rolling, *n*—see **roll compacting**. **B 243, B09**

powder to air ratio—ratio of the mass of powder delivered to the spray gun to the total volume of air used to convey and aspirate it. **C 286, B08**

power, active (real), *P*—the product of the rms current in a circuit, the rms voltage across the circuit and the cosine of the angular phase difference between the current and voltage. **A 340, A06**

power cable insulating paper, *n*—paper used, in conjunction with an insulating liquid, as the primary electrical insulation on conductors for transmission of electric energy. **D 1711, D09**

power capacity—electrical power is defined as current \times voltage = $V \times I$ (watts) **F 2112, F01**

power factor, dielectric—same as **power factor**. **D 2864, D27**

power factor, magnetic, $\cos \gamma$ —(a) the cosine of the angle between vectors representing the rms values of the applied voltage of a circuit and the current in circuit.

(b) the ratio of the active (real) power to the apparent power in an ac circuit. **A 340, A06**

power factor, *PF, n*—the ratio of the power in watts, *W*, dissipated in a material to the product of the effective sinusoidal voltage, *V*, and current, *I*, in volt-amperes. **D 1711, D09**

power factor, *PF*—the ratio of the power in watts, *W*, dissipated in a material, to the product of the effective values of voltage, *V*, and current, *I*, in volt-amperes:

$$PF = W/VI$$

The power factor is related to the **dissipation factor, *D***, as follows:

$$PF = D / \sqrt{1 + D^2}$$

D 2864, D27

power loss—the power, per unit volume, that is transformed into heat through hysteresis. (ISO) **D 4092, D20**

power, reactive (quadrature), *P_q*—the product of the rms current in an electrical circuit, the rms voltage across the circuit, and the sine of the angular phase difference between the current and the voltage.

$$P_q = EI \sin \theta$$

where:

P_q = reactive power in vars,

E = voltage in volts,

I = current in amperes, and

θ = angular phase by which *E* leads *I*.

NOTE—The reactive power supplied to a magnetic core having an *SCM* excitation is the product of the magnetizing current and the voltage induced in the exciting winding. **A 340, A06**

power spectral density—the limiting mean-square value (for example, of acceleration, velocity, displacement, stress, or other random variable) per unit bandwidth, that is the limit of the

mean-square value in a given rectangular bandwidth divided by the bandwidth, as the bandwidth approaches zero. **D 653, D18**

power spectral density—the limiting mean-square value (for example, of acceleration, velocity, displacement, stress, or other random variable) per unit bandwidth of frequency, that is the limit of the mean-square value of a given rectangular bandwidth divided by the bandwidth, as the bandwidth approaches zero. **E 1823, E08**

power unit, *n*—the part of a central vacuum system that contains the suction source and dirt receptacle. **F 395, F11**

pozzolan, *n*—a siliceous or siliceous and aluminous material, which in itself possesses little or no cementitious value but will, in finely divided form and in the presence of moisture, chemically react with calcium hydroxide at ordinary temperatures to form compounds possessing cementitious properties. **C 125, C09**

pozzolan, *n*—a siliceous or siliceous and aluminous material, which in itself possesses little or no cementitious value but which will, in finely divided form and in the presence of moisture, chemically react with calcium hydroxide at ordinary temperatures to form cementitious hydrates. **C 219, C01**

pozzolan—a siliceous or siliceous and aluminous material, which in itself possesses little or no cementitious value but will, in finely divided form and in the presence of moisture, chemically react with calcium hydroxide at ordinary temperatures to form compounds possessing cementitious properties. **D 653, D18**

pozzolan, *n*—primarily siliceous or siliceous and aluminous materials that will, in finely divided form and in the presence of moisture, chemically react with calcium hydroxide at ordinary temperatures to form compounds possessing cementitious properties. **E 2201, E50**

pozzolanic activity, *n*—the phenomenon of strength development that occurs when lime and certain aluminosilicates react at ambient temperatures in the presence of water. **E 2201, E50**

ppb(v)—See **concentration**. **D 1356, D22**

ppm(v)—See **concentration**. **D 1356, D22**

practical response time—the length of time that elapses between the instant at which an ion-selective electrode and a reference electrode are brought into contact with a sample solution (or at which the concentration of the ion of interest in a solution in contact with an ion-selective electrode and a reference electrode is changed) and the first instant at which the potential of the cell becomes equal to its steady-state value within 1 mV. The experimental conditions used should be stated, that is, the stirring rate, the composition of solution of which the response time is measured, the composition of the solution to which the electrode was exposed prior to this measurement, the history and preconditioning of the electrode, and the temperature. **D 4127, D19**

practical skills instructor—an individual who assists with practical skills instruction under the direction of the course instructor/coordinator. **F 1177, F30**

practice, *n*—a definitive procedure for performing one or more specific operations or functions that does not produce a test result. **D 123, D13**

practice, *n*—a definitive procedure for performing one or more specific operations or functions that does not produce a test result. **D 5684, D13**

preadaptation, *n*—the incubation of an inoculum in the presence of the test substance which is done prior to the initiation of the test and under conditions similar to the test conditions. **D 4175, D02**

pre-adaptation, *n*—the pre-incubation of an inoculum in the presence of the test material and under conditions similar to the test conditions. **D 4175, D02**

pre-adaptation, *n*—the incubation of an inoculum in the presence of the test material which is done prior to the initiation of the test and under conditions similar to the test conditions. **D 4175, D02**

pre-adaptation, *n*—the incubation of an inoculum in the presence of the test material which is done prior to the initiation of the test and under conditions similar to the test conditions. **D 6384, D02**

pre-alloyed powder, *n*—powder composed of two or more elements that are alloyed in the powder manufacturing process in which the

pre-alloyed powder, *n*

particles are of the same nominal composition throughout. Synonymous with **completely alloyed powder**. **B 243, B09**

prebake resistance, n—deprecated term, see **precure heat tolerance**. **D 1566, D11**

prebleeding—See **debulking**. **E 1749, E06**

pre-bond treatment, n—Synonym for **surface preparation**. **D 907, D14**

preburn period, n—*in atomic emission spectrometry*, the time interval after the initiation of a discharge during which the emitted radiation energy is not recorded for analytical purposes. **E 135, E01**

preceramic polymer, n—inorganic or organometallic polymers that can be converted (after polymer curing) to a ceramic by a thermal treatment.

Discussion—Such preceramic polymers are commonly used to form non-oxide ceramic, such as silicon carbide, silicone oxycarbide, silicon nitride, and aluminum nitride. **C 1145, C28**

precious metals, n—the eight noble metals: gold, silver, palladium, platinum, rhodium, iridium, osmium, and ruthenium. **B 899, B02**

precipitate—an insoluble product of a chemical reaction of soluble compounds in water. **D 6161, D19**

precipitation, n—separation of a new phase from solid, liquid, or gaseous solutions, usually with changing conditions of temperature or pressure, or both.

electrostatic precipitation, n—a process consisting of the separation of particulate matter from air or other gases under the influence of an electrostatic field.

meteorological precipitation, n—the precipitation of water from the atmosphere in the form of hail, mist, rain, sleet, and snow.

thermal precipitation, n—a process consisting of the separation of particulate matter from air and other gases under the influence of a relatively large temperature gradient extending over a short distance.

ultrasonic precipitation, n—a process consisting of the separation of particulate matter from air and other gases following agglomeration induced by an ultrasonic field. **D 1356, D22**

precipitation—separation of a new phase from solid, liquid, or gaseous solutions, usually with changing conditions of temperature or pressure, or both. **E 7, E04**

precipitation hardening, n—**hardening** caused by the precipitation of a constituent from a supersaturated solid solution. **A 941, A01**

precipitation hardening alloys—group of alloys that can be hardened by participation of second phases or intermetallic compounds by cooling during a thermal or thermal-mechanical aging treatment. **F 1789, F16**

precipitation heat treatment, n—**artificial aging** in which a constituent precipitates from a supersaturated solid solution. **A 941, A01**

precipitation heat treatment—a thermal treatment of a solution heat-treated product to produce property changes such as hardening, strengthening, and conductivity increase by precipitation of constituents from the supersaturated solid solution. This treatment has also been called “age hardened” and “precipitation hardened.” **B 846, B05**

precipitation titration—a titration in which the titrant and the sample species form a precipitate. An electrode can be used to follow the titration if it senses either of the ions involved in the reaction. The success of the titration depends on the lower limit of detection of the electrode, the solubility of the precipitate, the reaction rate, and the possible presence of other species which are also precipitated by the titrant. Examples of precipitation titrations are the determination of halides with silver nitrate and sulfate with lead ion. **D 4127, D19**

precipitator, n—a device or apparatus for the separation of particulate matter from air or other gases.

electrostatic precipitator, n—apparatus employing electrostatic

precipitation for the separation of particles from a gas stream.

thermal precipitator—See **precipitation**. **D 1356, D22**

precision—the agreement of repeated measurements of the same parameter expressed quantitatively as the standard deviation computed from the results of a series of controlled determinations. **C 242, C21**

precision, n—the degree of agreement within a set of observations or test results obtained as directed in a test method. **D 123, D13**

precision, n—*underconditions of single-operator precision*, the single-operator-laboratory-sample-apparatus-day precision of a method; the precision of a set of statistically independent observations all obtained as directed in the method and obtained over the shortest practical time interval in one laboratory by a single operator using one apparatus and randomly drawn specimens from one sample of the material being tested. **D 123, D13**

precision, n—*underconditions of within-laboratory precision with multiple operators*, the multi-operator, single-laboratory-sample, single-apparatus-day (within-operator) precision of a method; the precision of a set of statistically independent test results all obtained in one laboratory using a single sample of material and with each test result obtained by a different operator, with each operator using one apparatus to obtain the same number of observations by testing randomly drawn specimens over the shortest practical time interval. **D 123, D13**

precision, n—*underconditions of between laboratory precision*, the multi-laboratory, single-sample, single-operator-apparatus-day (within-laboratory) precision of a method; the precision of a set of statistically independent test results all of which are obtained by testing the same sample of material and each of which is obtained in a different laboratory by one operator using one apparatus to obtain the same number of observations by testing randomly drawn specimens over the shortest practical time interval. **D 123, D13**

precision—the degree of agreement of repeated measurements of the same property, expressed in terms of dispersion of test results about the arithmetical mean result obtained by repetitive testing of a homogeneous sample under specified conditions. The precision of a method is expressed quantitatively as the standard deviation computed from the results of a series of controlled determinations. **D 459, D12**

precision, n—the degree of agreement of repeated measurements of the same parameter expressed quantitatively as the standard deviation computed from the results of a series of controlled determinations. **D 1129, D19**

precision, n—the degree of agreement of repeated measurements of the same property, expressed in terms of dispersion of test results about the mean result obtained by repetitive testing of a homogeneous sample under specified conditions.

overall precision, n—a value including components of within-laboratory and between-user variability.

single-operator precision, n—a measure of the replication of repeated measurements obtained by a single operator on a given sample. **D 1356, D22**

precision, n—the closeness of agreement between test results obtained under prescribed conditions. **D 4175, D02**

precision, n—the degree of agreement between two or more results on the same property of identical test material. In this practice, precision statements are framed in terms of *repeatability* and *reproducibility* of the test method. **D 4175, D02**

precision, n—the degree of agreement between two or more results on the same property of identical test material. In this practice, precision statements are framed in terms of the *repeatability* and *reproducibility* of the test method. **D 4175, D02**

precision—the degree of agreement of repeated measurement of the same property, expressed in terms of dispersion of test results about the arithmetical mean result obtained by repetitive testing of a homogeneous sample under specified conditions. The precision

of a test method is expressed quantitatively as a standard deviation computed from the results of a series of controlled determinations.

D 4790, D16

precision, *n*—a generic concept used to describe the dispersion of a set of measured values.

D 5681, D34

precision—a term used to indicate the capability of a person, an instrument, or a method to obtain reproducible results; specifically, a measure of the random error as expressed by the variance, the standard error, or a multiple of the standard error.

D 5681, D34

precision—the closeness of agreement between randomly selected individual measurements or test results (see Terminology E 456).

E 131, E13

precision—of methods of chemical analysis, a characteristic manifested by agreement among individual results at a given analyte content.

E 135, E01

precision—the closeness of agreement between measurements obtained under prescribed conditions (see Terminology E 456).

E 170, E10

precision, *n*—the closeness of agreement between test results obtained under prescribed conditions. See also **repeatability, reproducibility**.

E 284, E12

precision, *n*—the scatter between individual values of test data within the subset, normally computed with respect to the mean of the subset. (See **bias**.)

E 344, E20

precision, *n*—the closeness of agreement between independent test results obtained under stipulated conditions.

E 456, E11

precision—degree of mutual agreement between individual measurements, namely repeatability and reproducibility. Compare **accuracy**.

E 631, E06

precision—a term used to indicate the capability of a person, an instrument, or a method to obtain reproducible results; specifically, a measure of the random error as expressed by the variance, the standard error, or a multiple of the standard error.

E 856, D34

precision—the degree of agreement of repeated measurements of the same property. Precision statements in ASTM methods for industrial chemicals will be derived from the estimated standard deviation or coefficient of variation of a series of measurements and will be expressed in terms of the repeatability, the within-laboratory, between days variability, and the reproducibility of the method.

E 1547, E15

precision—the closeness of agreement between repetitive independent test results obtained under prescribed conditions (see Terminology E 456).

E 1605, E06

precision—the closeness of agreement between randomly selected individual measurements or test results for a given set of experimental variables.

E 1823, E08

precision—the degree of agreement among or between repeated measurements of the same property.

E 2161, E37

precision, *n*—a measurement concept that expresses the ability to generate test results that agree with each other in absolute magnitude.

F 538, F09

precision (as distinguished from accuracy)—the degree of mutual agreement between individual measurements, namely repeatability and reproducibility. (E 380)

F 221, F05

precision index of the average, *n*—the sample standard deviation divided by the square root of the number of samples.

precut building—See **building**.

E 631, E06

precleaning—the removal of surface contaminants from the test part so that they will not interfere with the examination process.

E 1316, E07

precoagulum, *n*—coagulum resulting from the partial inadvertent coagulation of a latex.

D 1566, D11

precoat—the initial coating of the septum in a diatomaceous earth filter to provide initial straining medium.

D 6161, D19

precoat—see **basecoat**.

F 1623, F05

precondition, *v*—to bring a sample or specimen of a textile material to a relatively low moisture content (approximate equilibrium in an

atmosphere between 3 and 25 % relative humidity) prior to conditioning in a controlled atmosphere for testing.

D 123, D13

pre-condition, *n*—the pre-incubation of an inoculum under the conditions of the test in the absence of the test material.

D 4175, D02

pre-conditioning—an activity conducted prior to placing plugging material into a borehole in order to stabilize the hole.

D 653, D18

preconditioning—any preliminary exposure of a material to the influence of specified atmospheric conditions for the purpose of favorably approaching equilibrium with a prescribed atmosphere.

E 41, G03

preconsolidation pressure (prestress), p_e (FL⁻²)—the greatest effective pressure to which a soil has been subjected.

D 653, D18

pre-consumer, *adj*—refers to materials that are reclaimed from manufacturing and other industrial processes, and products which have not served their intended end-use as a consumer item. Pre-consumer materials include: culls, trimmed materials, print overruns, overissue publications, and obsolete inventories.

E 2114, E06

pre-consumer recycle content, *n*—material recovered or diverted from industrial waste streams for use in the manufacture of a new product or a product made by a new process, often expressed as a percent by weight. This excludes materials and by-products generated from and commonly reused or reworked within the original manufacturing process.

F 141, F06

precrack, *n*—a crack that is intentionally induced into the test specimen prior to testing the specimen to fracture

C 1145, C28

precrack force, P_M [F]—the allowable precrack force.

E 1823, E08

preure heat tolerance (adhesives), *n*—the amount of exposure (at a certain time and temperature) prior to bonding that a cure-activated adhesive system can tolerate without significant impairment of its adhesion potential.

D 1566, D11

precut building—a **manufactured building** produced largely of elements cut to size in a factory and transported for assembly at the erection site.

E 631, E06

predictive thermometer—any thermometer that indicates the true temperature of a measurement site in a time shorter than that necessary for the thermometer to reach equilibrium temperature of that site.

E 344, E20

predictive thermometer, *n*—one that provides an indication of the final stabilized temperature of the measurement site in advance of the time necessary for the transducer to reach a stabilized temperature.

E 344, E20

prediluted aqueous ethylene glycol coolant, *n*—a commercially prepared uniform solution (50 % by volume minimum) of ethylene-glycol-based engine coolant concentrate and deionized water (described in Specification D 1193, Type IV).

D 4725, D15

predrilled hole—hole drilled through metal connector plate during its fabrication.

prefabricated building—See **building**.

prefabricated panel system—See **building system**.

E 631, E06

preemergence herbicide—a chemical applied before emergence of a specified weed or planted crop.

E 609, E35

pre-exposure—exposure of a photoconductive medium to a light source prior to imaging.

F 335, F05

prefabricated building—Use **manufactured building**.

E 631, E06

prefabricated panel system—building-panel system fabricated away from its ultimate position on a building.

E 631, E06

pre-fabricated vertical drain (PVD), *n*—a geocomposite consisting of geotextile cover and drainage core installed vertically into soil to provide drainage for accelerating consolidation of soils.

D 4439, D35

preference, *n*—choice of one product, treatment, or item over others in a given set based upon hedonics, sensory properties, or other criteria.

E 253, E18

preferential adsorption—adsorption in which one or more components are adsorbed to a much greater extent than others.

D 2652, D28

preferential sputtering—See **sputtering**.

E 673, E42

preferred orientation, *n*—in *manufactured carbon and graphite product technology*, an alignment in the crystal or defect structure of a body leading to variations in physical properties as a function of direction; normally referenced to an orthogonal system where one of the axes is the working direction. C 709, D02

preferred orientation, *n*—in *manufactured carbon and graphite product technology*, an alignment in the crystal or defect structure of a body leading to variations in physical properties as a function of direction; normally referenced to an orthogonal system where one of the axes is the working direction. D 4175, D02

preferred orientation—a condition of polycrystalline aggregate in which the crystal orientations are not distributed at random. E 7, E04

preferred white, *n*—for *color determination*, the white color, usually bluish, that is judged by a given group of observers looking at a given series of specimens to be the whitest color attainable. D 2946, C17

preferred white surface(s)—the particular surface which under specified viewing conditions is considered whitest by a statistically significant majority of representative observers in a series of paired comparisons performed at a specified time and geographical locale (psychological definition). D 459, D12

prefilming airblast nozzle—an airblast nozzle in which solid surfaces are configured to produce a liquid film that subsequently is broken up by adjacent airstreams. E 1620, E29

prefit—a process to check the fit of mating detail parts in an assembly prior to adhesive bonding in order to ensure proper bondlines. E 631, E06

prefit—a process to check the fit of mating detail parts in an assembly prior to adhesive bonding in order to ensure proper bondlines. E 1749, E06

pre-flame reaction, *n*—in *fuel testing*, a slow, nonluminous reaction of the sample or its decomposition products with the atmosphere in the combustion chamber. D 4175, D02

preflex effect, *n*—the phenomenon occurring in vulcanized rubber, related to the Mullins effect, whereby the dynamic moduli at low strain amplitude are less after a history to high strains than before. (See also **Mullins effect**.) (Also called strain history effect.) D 1566, D11

preform, *n*—a P/M compact intended to be changed in shape through deformation and densification. B 243, B09

preform, *n*—a preshaped mat or woven structure formed from fibers of whiskers to the desired configuration and reinforcement architecture. C 1145, C28

preform, *n*—a coherent, shaped mass of powdered, granular or fibrous plastic molding compound, or of fibrous filler material with or without resin. (ISO) D 883, D20

preform, *n*—a preshaped fibrous reinforcement, normally without matrix, but often containing a binder to facilitate manufacture, formed by distribution of fibers to the approximate contour and thickness of the finished part. D 3878, D30

preformed—formed prior to driving. F 592, F16

preformed flexible joint sealant—pliable material, formed into a defined cross section, that is applied to the surface of a pipe, box section, or manhole section joint, intended to control the movement of fluids or solids through the joint. C 822, C13

preformed gasket—an elastomeric compound molded in the form of a continuous strip, channel, or other shape, for use in filling joints and providing weathertight seals in glazing or between building components. C 717, C24

preforming, *v*—the initial pressing of a metal powder to form a compact that is subjected to a subsequent pressing operation other than coining or sizing. Also, the preliminary shaping of a refractory metal compact after presintering and before the final sintering. B 243, B09

preheat—to heat the equipment's cooking medium, cavity, or surface (see **cooking medium**, **cooking cavity**, or **cooking surface**) from

a predetermined ambient temperature to the equipment's thermostatic set point. F 1827, F26

preheat duration—total time required for preheat (see **preheat**), from preheat initiation at controls to when the equipment is ready to cook. F 1827, F26

preheat energy—amount of energy consumed (Btu, kJ or kWh) by the equipment while heating the equipment's cooking medium, cavity, or surface (see **cooking medium**, **cooking cavity**, or **cooking surface**) from an ambient temperature to a thermostat set point, E_p . F 1827, F26

preheating, *n*—*fortool steels*, heating to an intermediate temperature immediately before final **austenitizing**. A 941, A01

preheating, *n*—heating before welding, a mechanical treatment, or some further thermal treatment. A 941, A01

preheating, solar—the use of solar energy to partially heat a substance, such as domestic potable water, prior to heating it to a higher desired temperature with auxiliary fuel. E 772, E44

preheat rate—average rate at which the temperature of the equipment's cooking medium, cavity, or surface (see **cooking medium**, **cooking cavity**, or **cooking surface**) is heated from a predetermined ambient temperature to the equipment's thermostat set point. F 1827, F26

preheat time—time required for the equipment to heat from the ambient room to a specified and calibrated operating temperature, or thermostat set point, T_p . F 1827, F26

preheat zone—that portion of a continuous furnace through which the ware passes before entering the firing zone. C 286, B08

prehospital emergency medical services—a sub-system of the emergency medical services system which provides medical services to patients requiring immediate assistance due to illness or injury, prior to the patients' arrival at an emergency medical facility. F 1177, F30

prehospital provider—all personnel providing emergency medical care in a location which is remote from facilities which are capable of providing definitive medical care. F 1177, F30

preignition, *n*—in a *spark-ignition engine*, ignition of the mixture of fuel and air in the combustion chamber before the passage of the spark. D 4175, D02

pre-launch production plan—written description of the dimensional, mechanical, chemical, and performance testing that will be carried out during initial production, prior to full production. F 1789, F16

preliminary assessment (PA), *n*—a review of existing information and an off-site reconnaissance, if appropriate, to determine whether a release may require additional investigation or action. A preliminary assessment may include an on-site reconnaissance, if appropriate. See ASTM Guidance for Transaction Screen Questionnaire (Practice E 1528). D 5681, D34

premature deterioration, *n*—in *building construction*, significant deleterious change (to a degree that jeopardizes functionality) of an installed sealant, coating or membrane earlier than the product's claimed or reasonably expected service life. C 717, C24

premix, *n*—a uniform mixture of ingredients to a prescribed analysis, prepared by the powder producer, for direct use in compacting powder metallurgy products. B 243, B09

premix, *n*—in reinforced thermosetting plastics, the admixture of resin, reinforcements, fillers, etc., not in web or filamentous form, ready for molding. D 883, D20

premix burner, *n*—in *flame atomic absorption and emission spectrometry*, a burner in which the fuel gas is mixed with the oxidizing gas before reaching the combustion zone. E 135, E01

prepack seal—a preassembly seal installed to fill voids or provide a support seal for subsequent fillet sealing. E 631, E06

prepack seal—a preassembly seal installed to fill voids or provide a support seal for subsequent fillet sealing. E 1749, E06

preparation time—the time from the removal of a cooked load (see **load**) from the equipment until the next load is entered in the equipment. F 1827, F26

preparatory coat—an initial coat of the liquid-applied membrane which is applied at cracks, joints, or terminal points to provide reinforcement to the membrane at these critical areas. **C 717, C24**

prepared coal—*for the purpose of Test Method D 4749*, any coal, regardless of its topsize, that has been manually or mechanically cleaned. This includes coal that has been processed over a picking table or air tables through a breaker, jig, or other device which segregates according to size or density (specific gravity). **D 121, D05**

preplaced aggregate concrete—concrete produced by placing coarse aggregate in a form and later injecting a portland cement-sand or resin grout to fill the interstices. **D 653, D18**

prepolymer, *n*—a polymer of degree of polymerization between that of the monomer or monomers and the final polymer. (ISO) **D 883, D20**

prepolymer, *n*—a polymer of degree of polymerization between that of the monomer or monomers and the final polymer. **F 1251, F04**

prepreg, *n*—in reinforced thermosetting plastics, the admixture of resin, reinforcements, fillers, etc., in web or filamentous form, ready for molding. **D 883, D20**

prepreg—the admixture of fibrous reinforcement and polymeric matrix used to fabricate composite materials. Its form may be sheet, tape, or tow. For thermosetting matrices, it has been partially cured to a controlled viscosity called “B stage.” **D 3878, D30**

prepreg—a combination of mat, fabric, nonwoven material, or roving with resin usually advanced to the B-stage, ready for curing. **E 631, E06**

prepreg—a combination of mat, fabric, nonwoven material, or roving with resin usually advanced to the B-stage, ready for curing. **E 1749, E06**

preprinted symbol, *n*—a symbol printed in advance of application either on a label or on the article to be identified. **F 1294, F05**

preproduction test, *n*—a test or series of tests conducted by (1) an adhesive manufacturer to determine conformity of an adhesive batch to established production standards, (2) a fabricator to determine the quality of an adhesive before parts are produced, or (3) an adhesive specification custodian to determine conformance of an adhesive to the requirements of a specification not requiring qualification tests. (Compare **acceptance test** and **qualification test**.) **D 907, D14**

prepunched hole—hole punched through metal connector plate during its fabrication. **E 631, E06**

present serviceability, *n*—the current condition of a pavement (traveled surface) as perceived by the traveling public. **E 867, E17**

present serviceability rating (PSR), *n*—a mean rating of the serviceability of a pavement (traveled surface) established by a rating panel under controlled conditions. The accepted scale for highways is 0 to 5, with 5 being excellent. **E 867, E17**

present value—the value of a benefit or cost found by discounting future cash flows to the base time (Syn. *present worth*). **E 631, E06**

present value, *n*—the value of a benefit or cost found by discounting future cash flows to the base time (Syn. *present worth*). **E 833, E06**

present value factor—The discount factor used to convert future values (benefits and costs) to present values (Syn. *present worth factor*).
present worth—See **present value**.
present worth factor—See **present value factor**. **E 631, E06**

present value factor, *n*—The discount factor used to convert future values (benefits and costs) to present values (Syn. *present worth factor*). **E 833, E06**

*present worth, *n**—See **present value**. **E 833, E06**

*present worth factor, *n**—See **present value factor**. **E 833, E06**

preservation, *n*—action taken to retard or prevent deterioration or damage to cultural objects. **D 123, D13**

preservation, *n*—*in packaging*, the application of protective measures such as cleaning, drying, and the use of preservatives, barrier materials, cushioning, and containers. **D 996, D10**

preservation, *n*—the protection of cultural property through activities that minimize chemical and physical deterioration and damage and that prevent loss of informational content. The primary goal of preservation is to prolong the existence of cultural property. **D 5038, D13**

preservation, *n*—the act or process of applying measures to sustain the existing form, integrity, or materials of a **building**, structure, or **artifact** and the existing form or vegetative cover of a cite.

*conservation, *n**—management of a natural resource, structure, or **artifact** to prevent misuse, destruction, or neglect. It may include detailed characterization and recording (technical or inventory) or provenance and history and application of measures.

*protection, *n**—the act or process of applying measures designed to affect the physical condition of a **building**, structure, or **artifact** by guarding it from deterioration, loss, or attack; or, to cover or shield it from damage.

*rehabilitation, *n**—*of a structure*, the act or process of returning a structure to a state of utility through **repair** or **alteration** which makes possible an efficient contemporary use.

*restoration, *n**—the act or process of reestablishing accurately the form and details of a structure, site, or **artifact** as it appeared at a particular period of time, by means of removal of later work or by the **reconstruction** of missing earlier work.

pressure sensitive adhesive—See **adhesive, contact pressure**. **E 631, E06**

preservative—a chemical substance which, when suitably applied to wood, makes the wood resistant to attack by fungi, insects, marine borers, or weather conditions. **D 9, D07**

preservative—a material that prolongs the useful life of an agrichemical by inhibiting decomposition by microorganisms. **E 609, E35**

preservative (latex), *n*—substance added to un compounded latex before or after concentration to inhibit putrefaction and accompanying coagulation. **D 1566, D11**

preshadowed replica—See **replica**. **E 7, E04**

presintering, *v*—the heating of a compact at a temperature below the normal final sintering temperature, usually to increase the ease of handling or shaping the compact, or to remove a lubricant or binder before sintering. **B 243, B09**

*prespot, *n**—See **pretreat**. **D 5253, D13**

press, *v*—to apply force to a mass of powder, generally while confined in a die or container, to form a compact. **B 243, B09**

press—an apparatus for applying and maintaining pressure on an assembly of veneers and adhesive in the manufacture of plywood. It may be operated mechanically or hydraulically and the platens may be cold or heated depending on the type of adhesive used. **D 1038, D07**

press—mechanical device that removes liquids from solids by mechanically pressing the solids against a porous surface. **E 1705, E48**

press-and-blow process—a process of glass manufacture in which the finish and parison are pressed and the parison is subsequently blown to form the final shape. **C 162, C14**

pressed bar, *n*—a compact in the form of a bar; a green compact. **B 243, B09**

pressed density, *n*—synonymous with **green density**. **B 243, B09**

pressed glass—glassware formed by pressure between a mold and a plunger. **C 162, C14**

pressed-in crease, *n*—a sharp crease inserted intentionally in a fabric usually by application of pressure, heat, and moisture. **D 123, D13**

pressed-in crease, *n*—a sharp crease inserted intentionally in a fabric usually by application of pressure, heat, and moisture. **D 4850, D13**

pressed product, *n*—*for cooling tower fill*, that which is pressed singly or in stacks interlayered with templates, at a minimum pressure of 12 MPa (1740 psi). **D 2946, C17**

pressed products, *n*

pressed products, *n*—*in cooling tower fill*, includes those that are pressed singly or in stacks interlayered with templates, at a minimum pressure of 12 MPa (1740 psi). **C 1154, C17**

pressing, *v*—shaping of brick by pressing clay or shale into a mold cavity which forms the peripheral dimensions of the brick. **C 43, C15**

pressing:

dry pressing—forming ceramic ware in dies from powdered or granular material by direct pressure.

hot pressing—a jiggering process wherein a heated profile tool or plunger is used.

wet pressing (plastic pressing)—forming ceramic ware in dies from a plastic body by direct pressure. **C 242, C21**

pressing, *n*—*in the care of textiles*, a process of smoothing and shaping by heat and pressure, with or without the presence of steam. **D 123, D13**

pressing, *n*—*in the care of textiles*, a process of smoothing and shaping by heat and pressure, with or without the presence of steam. **D 3136, D13**

pressing and finishing, *n*—this term takes into account all of the industrial pressing and finishing treatments used in garment production. **D 123, D13**

pressing and finishing, *n*—this term takes into account all of the industrial pressing and finishing treatments used in garment production. **D 7022, D13**

pressing crack, *n*—*in a rigid die system*, a defect occurring as a result of the forming operation. **B 243, B09**

pressing (n)—an as-pressed, oversized piece of glass used as the precursor for finishing to an optical element blank. **C 162, C14**

pressing (v)—the operation of forming pressed glass. **C 162, C14**

press-off, *n*—*in knitted fabric*, a condition in which the yarn fails to knit and either the fabric falls off the needles or the design is distorted or incomplete. **D 123, D13**

press-off, *n*—*in knitted fabrics*, a condition in which the yarn fails to knit and either the fabric falls off the needles or the design is distorted or incomplete. **D 3990, D13**

pressure, *n*—the force exerted to a surface per unit area. **D 123, D13**

pressure, *n*—the force or load per unit area.

*gage pressure, *n**—the difference in pressure between that existing within a system and that of the surrounding atmosphere.

*static pressure, *n**—the pressure of a fluid at rest, or in motion, exerted perpendicularly to the direction of flow.

*total pressure, *n**—the pressure representing the sum of static pressure and velocity pressure at the point of measurement.

*velocity pressure, *n**—that pressure caused by and related to the velocity of the flow of fluid; a measure of the kinetic energy of the fluid. **D 1356, D22**

pressure—the internal force per unit area exerted by any material. Since the pressure is directly dependent on the temperature, the latter must be specified. The pressure may be reported in either of two ways:

(1) **absolute pressure**—the total pressure with zero as a reference point, usually expressed as pounds-force per square inch absolute (psia).

(2) **gage pressure**—the pressure in excess of atmospheric pressure. Under standard conditions at sea level, the numerical value of the absolute pressure is 14.7 higher than that of the gage pressure, which is usually expressed in pounds-force per square inch gage (psi). **D 3064, D10**

pressure, *n*—the force exerted to a surface per unit area. **D 4850, D13**

pressure—when expressed with reference to pipe, the force per unit area exerted by the medium in the pipe. **F 412, F17**

pressure atomizer—a device wherein pressurized liquid is the primary source of energy utilized to produce a spray. **E 1620, E29**

pressure atomizing nozzle—see **pressure atomizer**. **E 1620, E29**

pressure-break, *n*—as applied to a defect in a laminated plastic a break apparent in one or more outer sheets of the paper, fabric, or other base visible through the surface layer of resin which covers it. **D 883, D20**

pressure bulb—the zone in a loaded soil or rock mass bounded by an arbitrarily selected isobar of stress. **D 653, D18**

pressure check—an imperfection; a check or crack in a glass article resulting from too much pressure in forming. **C 162, C14**

pressure correction factor—a multiplier that adjusts the measured gas volume to the actual volume at standard gas pressure, P_{cf}

$$= \frac{\text{absolute actual gas pressure psia}}{\text{absolute standard pressure psia}}$$

$$= \frac{\text{gas gage pressure psig} + \text{barometric pressure psia}}{\text{absolute standard pressure psia}}$$

NOTE—Absolute standard gas temperature and pressure used in this calculation should be the same values used for determining the higher heating value. PG&E standard conditions are 519.67°R and 14.73 psia.

F 1827, F26

pressure, design—pressure used in design to determine the required minimum thickness and minimum mechanical properties.

E 1316, E07

pressure design basis—one of a series of established pressure values for a plastic piping component (multilayer pipe, fitting, valve, and so forth) obtained by categorizing the long-term hydrostatic pressure strength determined in accordance with an industry test method that uses linear regression analysis. **F 412, F17**

pressure die-casting, *n*—Same as die casting. **B 899, B02**

pressure difference—in leak testing, the difference between the pressure on the inlet side of the leak and the pressure on the exit side of the leak. **E 1316, E07**

pressure drop—the difference between the pressure measured in the condenser and the pressure measured in the distillation flask.

D 4175, D02

pressure dye test—(1) a form of leak test in which the item or items to be tested are filled with a liquid dye or fluorescent oil which is then pressurized for the purpose of driving the liquid through possible leakage paths with the presence of the leaks being visible when viewed from the exterior; (2) a form of leak test in which the item or items to be tested are immersed in a liquid dye or fluorescent oil which is then pressurized for the purpose of driving liquid into possible leakage paths with their presence being visible when the excess liquid has been removed from the exterior.

E 1316, E07

pressure-evacuation test—a leak test in which one or more devices are placed under gas pressure for a period of time, the objective being to accumulate enough gas in those devices that may leak to permit an indication on a leak detector sensitive to the gas when the devices are placed in an evacuated system joined to the leak detector. **E 1316, E07**

pressure filling—pressurizing a container by injecting a propellant through the valve under high pressure. The operation is usually used where the propellant content is small, and it is carried out under ambient conditions (that is, refrigeration equipment is not needed). **D 3064, D10**

pressure filtration—filtration performed in an enclosed pressurized filter vessel. **D 6161, D19**

pressure fixing—the process of making the image permanent by means of pressure. **F 335, F05**

pressure flow, *n*—flow in a direction parallel to the plane of a geotextile or related product driven predominately by a differential fluid pressure. **D 4439, D35**

pressure fryer—equipment with a deep kettle containing oil or fat covered by a heavy, gasketed lid with a pressure valve. The equipment kettle operates between 10 and 12 psig. See **fryer**.

F 1827, F26

pressure head—the head of water at a point in a porous system; negative for unsaturated systems, positive for saturated systems. Quantitatively, it is the water pressure divided by the specific weight of water. **D 653, D18**

pressure inflated—inflatable boom that requires pressurized gas for its flotation. **F 818, F20**

pressure-less steam cooker—equipment where in the cooking compartment operates between 0 and 2.9 psig. See **steam cooker**. **F 1827, F26**

pressure limit, *n*—the minimum pressure of an oxidant (or oxidant mixture) that will just support sustained combustion of a material initially at given conditions of oxidant concentration, temperature, flow condition, and propagation direction. **G 126, G04**

pressure mark, *n*—See **bruise**. **D 3990, D13**

pressure melting—lowering of the melting point of ice through the application of pressure. **D 7099, D18**

pressure nozzle—see **pressure atomizer**. **E 1620, E29**

pressure, *p* (FL⁻²)—the load divided by the area over which it acts. **D 653, D18**

pressure pipe—pipe designed to resist continuous pressure exerted by the conveyed medium. **F 412, F17**

pressure probe—see **probe**. **E 1316, E07**

pressure rating (PR)—the estimated maximum water pressure the pipe is capable of withstanding continuously with a high degree of certainty that failure of the pipe will not occur. **F 412, F17**

pressure ratio (PR), *n*—defined as $PR = (P_{ex,a} - \Delta P_{ignitor}) / P_{ignitor}$. **E 1445, E27**

pressure relief device—a pressure-activated valve designed to automatically relieve excessive pressure. **E 772, E44**

pressure, saturation—the pressure, for a pure substance at any given temperature, at which vapor and liquid, or vapor and solid, coexist in stable equilibrium. **E 41, G03**

pressure sensitive—a carbon paper, ribbon, or paper capable of producing an image from pressure as with pen or pencil. **F 221, F05**

pressure-sensitive adhesive, *n*—a viscoelastic material which in solvent-free form remains tacky and will adhere instantaneously to most solid surfaces with the application of very slight pressure. **D 907, D14**

pressure sensitive adhesive—See **adhesive, contact pressure**. **E 1749, E06**

pressure-sensitive-adhesive tape—See **tape**. **D 996, D10**

pressure-sensitive article, *n*—a combination of a pressure-sensitive adhesive with a backing or with a backing and release liner. **D 907, D14**

pressure-sensitive copy paper—paper systems that develop a visible image on the application of localized pressure. **F 221, F05**

pressure station, *n*—a specified induced change in the building pressure difference from the initial zero-flow building pressure difference (Pa, in. H₂O).

primary circulation area—See **space categories**.

primary circulation area—See **building space**. **E 631, E06**

pressure tank—a container from which slip is removed by air pressure. **C 286, B08**

pressure testing—a method of permeability testing with water or grout pumped downhole under pressure. **D 653, D18**

pressure testing—a method of leak testing in which the component being tested is filled completely with a gas or liquid which is then pressurized. The outside of the component is examined for the detection of any leaks. **E 1316, E07**

pressure-treated wood—wood treated by applying pressure to force the preservative into it. **D 9, D07**

pressure, vapor—the pressure exerted by a vapor.

NOTE—If a vapor is kept in confinement over its source so that the vapor can accumulate, the temperature being held constant, the vapor pressure approaches a fixed limit called the maximum, or saturated, vapor pressure, dependent only on the temperature and the liquid.

E 41, G03

pressure vessel—the vessel containing one or more individual membrane elements and designed to withstand safely the hydraulic pressure driving the separation mechanism. **D 6161, D19**

pressure-void ratio curve (compression curve)—a curve representing the relationship between effective pressure and void ratio of a soil as obtained from a consolidation test. The curve has a characteristic shape when plotted on semilog paper with pressure on the log scale. The various parts of the curve and extensions to the parts of the curve and extensions to the parts have been designated as recompression, compression, virgin compression, expansion, rebound, and other descriptive names by various authorities. **D 653, D18**

pressure washing—the cleaning of soil or rock surfaces accomplished by injection of water, air, or other liquids, under pressure. **D 653, D18**

pressure, water vapor—the component of atmospheric pressure caused by the presence of water vapor, usually expressed in millimetres, inches of mercury, or pascals. **E 41, G03**

prestressing force—axial force in anchor resulting from setting or torquing of anchor or nut. **E 2265, E06**

pretension, *n*—the specified tension applied to a specimen preparatory to making a test. **D 123, D13**

pretension, *n*—the specified tension applied to a specimen preparatory to making a test. **D 4848, D13**

pretest interview, *n*—the earliest portion of the PDD examination process during which the examinee and examiner discuss the test, test procedure, and the details of the test issues. The pretest interview also serves to prepare the examinee for the testing. **E 2035, E52**

pretreat, *vt*—preapplication of cleaning agent to spots, stains, and areas of high soil concentration to maximize activation time and therefore facilitate soil removal during overall cleaning. **D 123, D13**

pretreat, *v*—*in the cleaning of textile floor coverings and upholstered furniture*, apply a cleaning agent to spots, stains, and areas of high soil concentration prior to overall cleaning to maximize activation time and facilitate soil removal. **D 5253, D13**

pretreatment—processes such as chlorination, filtration, coagulation, clarification, acidification which may be used on feedwater ahead of membrane devices to improve quality, minimize scaling and corrosion potential, control biological activity. **D 6161, D19**

prevailing torque—torque necessary to rotate a fastener relative to its mating component with the torque being measured with the fastener in motion and zero axial load in the assembly. **F 1789, F16**

preventative maintenance cycle—the predetermined interval through which specified servicing events take place. (See **PM cycle**.) **F 1457, F05**

prevention process—future-oriented strategy that, through analysis and action toward correcting the process itself, enriches quality through continuous improvement activities. **F 1789, F16**

prevention system—system which outlines advance quality planning, in-process inspection, process controls, and statistical methods to control the processes and seek continuous improvement. **F 1789, F16**

prevulcanization inhibitor (PVI), *n*—a compounding material that increases the time to incipient vulcanization of a rubber mix. **D 1566, D11**

primary accelerator, *n*—the principal highest concentration accelerator used in a vulcanizing system. **D 1566, D11**

primary atomization, *n*—the initial disintegration of a liquid jet, sheet, or film. **E 1620, E29**

primary backing, *n*—*for tufted pile yarn floor covering*, the fabric through which the pile yarn is carried by needles to form tufts; the backing fabric. **D 123, D13**

primary backing, *n*—*for tufted pile yarn floor covering*, the fabric through which the pile yarn is carried by needles to form tufts; the backing fabric. **D 5684, D13**

primary biodegradation, *n*—degradation of the test material by

primary biodegradation, *n*

microorganisms resulting in a change in the test material's physical or chemical properties, or both. **D 4175, D02**

primary biodegradation, *n*—degradation of the test substance resulting in a change in its physical or chemical properties, or both. **D 4175, D02**

primary biodegradation, *n*—degradation of the test material by microorganisms resulting in a change in the test material's physical or chemical properties, or both. **D 6384, D02**

primary biodegradation test, *n*—a test that monitors the disappearance of a test material by measuring some physical attribute of the material. **D 4175, D02**

primary biodegradation test, *n*—a test which follows the disappearance of a test substance by measuring some attribute of the substance. **D 4175, D02**

primary biodegradation test, *n*—a test that monitors the disappearance of a test material by measuring some physical attribute of the material. **D 6384, D02**

primary boiling—the evolution of gas during the initial firing of porcelain enamel; sometimes a defect. **C 286, B08**

primary breakup, *n*—see **primary atomization**. **E 1620, E29**

primary circulation area—portion of building area dedicated to public corridor, lobby, or atrium; or required for access to stairs, elevators, restroom facilities, or building exits. **E 631, E06**

primary circulation area—See **space categories**. **E 1480, E06**

primary clay (residual clay)—a clay that remains geologically at its site of formation. **C 242, C21**

primary colorants, *n*—a small number of colorants (dyes or pigments) that may be mixed subtractively to produce a large gamut of colors. **E 284, E12**

primary color stimuli, *n*—three selected colored lights used to specify the color of any light presented by the amounts of the three that must be mixed additively to produce light matching the light presented. **E 284, E12**

primary consolidation (primary compression) (primary time effect)—see **consolidation**. **D 653, D18**

primary container—a container which is in contact with the contents. **D 996, D10**

primary crystals—the first type of crystals that separates from a melt on cooling. **E 7, E04**

primary current distribution—the distribution of the current over the surface of an electrode in the absence of polarization. **B 374, B08**

primary extinction—a decrease in intensity of a diffracted X-ray beam caused by perfection of crystal structure extending over such a distance (about 10^{-4} cm or greater) that interference between multiply reflected beams inside the crystal causes a decrease in the intensity of the externally diffracted beam. **E 7, E04**

primary filter pack—a clean silica sand or sand and gravel mixture of selected grain size and gradation that is installed in the annular space between the borehole wall and the well screen, extending an appropriate distance above the screen, for the purpose of retaining and stabilizing the particles from the adjacent strata. The term is used in place of gravel pack. **D 653, D18**

primary flow-rate standard—See **standard**. **D 1356, D22**

primary healing, *n*—healing by first intention. **F 2312, F04**

primary heat, *n*—the product of a single cycle of a batch melting process. **A 941, A01**

primary hole—*in grouting*, the first series of holes to be drilled and grouted, usually at the maximum allowable spacing. **D 653, D18**

primary insulation, *n*—the first layer of two or more layers of insulating materials over a conductor. **D 1711, D09**

primary jacket, *n*—a layer of insulating material applied over the primary insulation for the purpose of providing mechanical protection for the primary insulation. **D 1711, D09**

primary light source, *n*—surface of an object emitting light produced by a transformation of energy. **E 284, E12**

primary lining—the lining first placed inside a tunnel or shaft, usually used to support the excavation. The primary lining may be

of wood or steel sets with steel or wood lagging or rock bolts and shot-crete. (ISRM) **D 653, D18**

primary passive potential (passivation potential)—the potential corresponding to the maximum active current density (critical anodic current density) of an electrode that exhibits active-passive corrosion behavior. **G 15, G01**

primary permeability—internal permeability of intact rock; intergranular permeability (not permeability due to fracturing). **D 653, D18**

primary photovoltaic reference cell, *n*—a photovoltaic reference cell calibrated in sunlight. **E 1328, E44**

primary porosity—the porosity that developed during the final stages of sedimentation or that was present within sedimentary particles at the time of deposition. **D 653, D18**

primary prevention—abatement of accessible lead-based paint and paint residue to prevent the possibility of lead poisoning. **E 631, E06**

primary protective clothing—protective clothing designed to be worn for work activities during which significant exposure to molten substance splash, radiant heat, and flame is likely to occur. **F 1494, F23**

primary radiation—radiation coming directly from the source. **E 1316, E07**

primary reference fuel blends above 100 octane, *n*—the milliliters per U.S. gallon of tetraethyllead in *isooctane* that define octane numbers above 100 in accordance with an empirically determined relationship. **D 4175, D02**

primary reference fuel blends below 100 octane, *n*—the volume % of *isooctane* in a blend with *n*-heptane that defines the octane number of the blend, *isooctane* being assigned as 100 and *n*-heptane as 0 octane number. **D 4175, D02**

primary reference fuels, *n*—*for knock testing*, *isooctane*, *n*-heptane, volumetrically proportioned mixtures of *isooctane* with *n*-heptane, or blends of tetraethyllead in *isooctane* that define the octane number scale. **D 4175, D02**

primary reference fuels, *n*—*for octane rating*, blended fuels of reference grade *isooctane* and *n*-heptane. **D 4175, D02**

primary sampling unit, *n*—the sampling unit containing all of the sources of variability which should be considered in acceptance testing; the sampling unit taken in the first stage of selection in any procedure for sampling a lot or shipment. (See **lot sampling unit**.) **D 123, D13**

primary sampling unit, *n*—the sampling unit containing all the sources of variability which should be considered in acceptance testing; the sampling unit taken in first stage of selection in any procedure for sampling a lot or shipment. **D 4439, D35**

primary sampling unit, *psu*, *n*—the element, increment, segment or cluster selected at the first stage of the selection procedure from a population or universe. **E 1402, E11**

primary seal—a seal that in combination with the structure and optional brush coat or secondary seal forms a continuous, durable, and absolute seal in the sealing plane and requires no additional seals. **E 631, E06**

primary seal—a seal that in combination with the structure and optional brush coat or secondary seal forms a continuous, durable, and absolute seal in the sealing plane and requires no additional seals. **E 1749, E06**

primary standard, *n*—standard that is designated or widely acknowledged as having the highest metrological qualities and whose value is accepted without reference to other standards of the same quantity.

NOTE—The concept of primary standard is equally valid for base quantities and derived quantities. **D 1129, D19**

primary standard—See **standard**. **D 1356, D22**

primary standard, *n*—one whose calibration is determined by measurement according to specified parameters. **D 2946, C17**

primary standard, *n*—a physical standard calibrated by an absolute method. **E 284, E12**

primary-standard dosimeter—a dosimeter of the highest metrological quality, established and maintained as an absorbed-dose standard by a national or international standards organization.

E 170, E10

primary state of stress—the stress in a geological formation before it is disturbed by man-made works. (ISRM)

D 653, D18

primary variable, *n*—the primary characteristic or measurement of interest.

D 5681, D34

primary wound closure, *n*—wound closure for healing by first intention.

F 2312, F04

primary (X-ray)—the beam incident on the sample.

E 7, E04

primary X rays, *n*—in *spectrometry*, the emergent beam from the X-ray source.

E 135, E01

prime coat, *n*—an application of a low-viscosity bituminous material to an absorptive surface, designed to penetrate, bond, and stabilize this existing surface and to promote adhesion between it and the construction course that follows.

D 8, D04

primer—in *building construction*, a compatible coating designed to enhance adhesion.

C 717, C24

primer, *n*—the first of two or more coats of a paint, varnish, or lacquer system.

D 16, D01

primer, *n*—a coating applied to a surface, prior to the application of an adhesive, to improve the performance of the bond.

D 907, D14

primer—a thin liquid bitumen applied to a surface to improve the adhesion of heavier applications of bitumen and to absorb dust.

D 1079, D08

primer—a coating applied to a surface prior to the application of an adhesive, sealant, or paint to improve the adhesive bonding characteristics or corrosion resistance, or both, of the surface.

E 631, E06

primer—a coating applied to a surface prior to the application of an adhesive, sealant, or paint to improve the adhesive bonding characteristics or corrosion resistance, or both, of the surface.

E 1749, E06

primer—an organic solvent, which enhances adhesion, applied to plastic pipe and fittings prior to application of a solvent cement.

F 412, F17

primers, *n*—liquid coatings applied to improve the adhesion of the EIFS to the substrate or of the finish to the base coat

NOTE—Primers are sometimes applied to improve the water resistance of cementitious base coats.

E 2110, E06

priming, *v*—the initial process of evacuating air from the mechanical pump dispenser and replacing it with product so that the dispensing process may begin.

D 6655, D10

principal component analysis—a mathematical procedure for resolving sets of data into orthogonal components whose linear combinations approximate the original data to any desired degree of accuracy.

E 131, E13

principal plane—each of three mutually perpendicular planes through a point in a soil mass on which the shearing stress is zero.

intermediate principal plane—the plane normal to the direction of the intermediate principal stress.

major principal plane—the plane normal to the direction of the major principal stress.

minor principal plane—the plane normal to the direction of the minor principal stress.

D 653, D18

principal point—a point on the axis of symmetry of a lens or lens system from which any ray entering the lens or lens system will emerge in a parallel direction.

E 7, E04

principal stress—see **stress**.

D 653, D18

principal stress (normal) [FL⁻²], *n*—the maximum or minimum value of the normal stress at a point in a plane considered with respect to all possible orientations of the considered plane. On such principal planes the shear stress is zero.

E 6, E28

principal stress (strain)—the stress (strain) normal to one of three mutually perpendicular planes on which the shear stresses (strains) at a point in a body are zero. (ISRM)

D 653, D18

print, *n*—in still photography, printing, and digital imaging, an image, usually on paper, to be viewed by reflected light.

E 284, E12

printability gage, *n*—a printer's tool used to determine the amount of print gain under given printing conditions.

F 1294, F05

printability range, *n*—the range of print gain found under actual working conditions, based on press sheets selected at random during a press run.

F 1294, F05

print contrast, *n*—a differential measurement of light reflectance between image area and background area.

F 1457, F05

print contrast ratio—in *optical character recognition*, the ratio obtained by subtracting the reflectance at an inspection area from the maximum reflectance found within a specified distance from that area, and dividing the result by that maximum reflectance. See **print contrast signal**.

F 149, F05

print contrast signal—the relative value of the contrast of printing in relation to the paper background on which it is printed as defined by the following equation:

$$PCS_p = \frac{R_w - R_p}{R_w}$$

where:

R_w = maximum reflectance found within the area of interest to which the PCS of point *p* is referenced. (In measuring printed images, this area of interest should be a rectangle approximately twice the nominal character height by twice the nominal character width and centered on the character being measured), and

R_p = reflectance from a small measurement area centered on point *p*.

The reflectance R_w and R_p are measured within a circular area of 0.008 in. (0.2 mm) in diameter.

F 149, F05

print contrast signal (PCS), *n*—a comparison between the reflectance of printed bars and intervening spaces. PCS, under a given set of illumination conditions, is defined by the following equation:

$$PCS = \frac{R_s - R_b}{R_s}$$

where:

R_s = Space reflectance, and

R_b = Bar reflectance.

F 1294, F05

printed circuit board—see **printed wiring board and PWB**.

F 1457, F05

printed sheet vinyl flooring, *n*—a floor surfacing material which has a printed pattern and is protected with a wearlayer of transparent or translucent vinyl plastic. The wearlayer may also include a specialty performance top coating.

F 141, F06

printed wiring board, *n*—a circuit board on which the conductors have been set by a print-like process. (See **PWB**.)

F 1457, F05

printer—an output unit that produces durable hard-copy record of data in the form of a sequence of discrete graphic characters belonging to a predetermined character set.

F 909, F05

printer emulation module, *n*—a device used to simulate the presence of a printer in a system. (See **PEM**.)

F 1457, F05

printer output area, *n*—the maximum area on the page to which the printer will print.

F 1457, F05

printer ready—see **data terminal ready**.

F 1457, F05

print gain, *n*—gain in bar width of the printed bar code symbol, compared to the original precision film master; caused in the plate-making process by ink spread during printing.

F 1294, F05

printing—the act of producing an image on a document or other receptor media from a machine or printer designed for that purpose, such as a printing press, thermal printer, or a computer printer, such as a laser or ink jet.

F 335, F05

printing—the act of producing an image on a document or other receptor media from a machine or printer designed for that

printing

- purpose, such as a printing press, thermal printer, or a computer printer such as a laser or ink jet. **F 909, F05**
- printing ink, n**—a colored or pigmented liquid or paste composition that dries to a solid film after application as a thin layer by printing machinery. **D 16, D01**
- printing module, n**—those components in the laser printer that together drive the laser scanner, create the image on the page, and deliver the page to the stacker. **F 1457, F05**
- printout**—information printed on paper. **F 1457, F05**
- printout queuing, n**—a feature which allows a number of documents to be lined up or queued in memory for subsequent printout while other documents are being processed or printed, or both. **F 1457, F05**
- print quality**—the interrelationship of printed material and imprinted material that affects the optimum performance of the scanner. Refer to OCR Print Quality Guideline, ANSI X3.99-83. **F 149, F05**
- print quality, n**—as described in ANSI X3.182, the grade of a printed bar code symbol as rated by measurements and calculations of various parameters. **F 1294, F05**
- print resistance, n (coatings)**—the ability of a coating to resist taking on the imprint due to the pressure of another surface placed against it. **D 16, D01**
- print speed rating, n**—highest speed of image development under fixed operating conditions to obtain optimum print quality. **F 1623, F05**
- print speed response, n**—the response curve of optical density versus print speed with a fixed energy level input. **F 1623, F05**
- print void, n**—a defective spot of unprinted matter in a print solid or halftone that can be caused by a buildup of foreign matter on the plate or blanket. **D 6488, D01**
- prism illuminator**—a 45 to 90° prism interposed in a microscope for the purpose of directing an intense oblique beam of light to the object. The prism illuminator utilizes only one half the aperture of the microscope as does the mirror illuminator with an attending loss of resolution over that obtainable with either a plane glass illuminator or a pellicle mirror. **E 7, E04**
- private label distributor**—distributor who, by prearrangement with a manufacturer, markets fasteners identified with the distributor's unique identification marking and who assumes responsibility for the fasteners. **F 1789, F16**
- probabilistic design**—design that accounts for the uncertainties due to statistical variabilities in physical and mechanical properties of the materials, elements, or structures, and in the applied loads (compare **deterministic design**). **E 631, E06**
- probability function, n**—of a discrete variate, the mathematical expression which gives the probability that a variate will take a particular value. **D 123, D13**
- probability function, n**—of a continuous variate, the mathematical expression whose definite integral gives the probability that a variate will take a value within the two limits of integration. **D 123, D13**
- probability level, n**—a general term that reflects the stated proportion of times an event is likely to occur. (Compare to *confidence level* and *significance level*.) **D 123, D13**
- probability of failure**—the probability that a glass specimen will fail when tested at a given load. General industry practice is to express the probability of failure as lights per 1000 lights. **E 631, E06**
- probability sample, n**—a sample of which the sampling units have been selected by a chance process such that, at each step of selection, a specified probability of selection can be attached to each member available for selection. **D 121, D05**
- probability sample, n**—a sample of which the sampling units have been selected by a chance process. At each step of selection, a specified probability of selection can be attached to each sampling unit available for selection. **E 456, E11**
- probability sample, n**—a sample of which the sampling units have been selected by a chance process such that, at each step of selection, a specified probability of selection can be attached to each sampling unit available for selection.

NOTE—These probabilities of selection need not be equal. If equal, see simple random sample. See the general term—sample. Also, see Practice E 105 in this volume. **E 456, E11**

- probability sample, n**—a sample of which the sampling units have been selected by a chance process such that, at each step of selection, a specified probability of selection can be attached to each sampling unit available for selection. **E 1402, E11**
- probable**—the evidence contained in the handwriting points rather strongly toward the questioned and known writings having been written by the same individual; however, it falls short of the “virtually certain” degree of confidence.
- Examples*—It has been concluded that the John Doe of the known material probably wrote the questioned material, or it is my opinion (or conclusion or determination) that the John Doe of the known material *probably* wrote the questioned material. **E 1658, E30**
- probably did not**—the evidence points rather strongly against the questioned and known writings having been written by the same individual, but, as in the probable range above, the evidence is not quite up to the “virtually certain” range.
- Examples*—It has been concluded that the John Doe of the known material probably did not write the questioned material, or it is my opinion (or conclusion or determination) that the John Doe of the known material probably did not write the questioned material. **E 1658, E30**
- probe, n**—a tube used for sampling or for measuring pressures at a distance from the actual collection or measuring apparatus. **D 1356, D22**
- probe, n**—an assembly, including the transducer, that is used to position the transducer in the specific location at which the temperature is to be determined. **E 344, E20**
- probe, n**—part of an *IR thermometer* that channels net *infrared* radiation between the *subject* and the *sensor* and is intended to be positioned near or inside the *subject*. **E 344, E20**
- probe**—in leak testing, a tube having an opening at one end, used for directing or collecting a stream of tracer gas. **E 1316, E07**
- probe*—see **search unit**. **E 1316, E07**
- probe coil**—in electromagnetic testing, a small coil or coil assembly that is placed on or near the surface of test objects. **E 1316, E07**
- probe coil clearance**—the perpendicular distance between adjacent surfaces of the probe and test part; also lift-off. **E 1316, E07**
- probe cover, n**—disposable or reusable sanitary barrier enveloping that part of the *probe* which otherwise would come in contact with a *subject*. **E 344, E20**
- probe cover and sheath, n**—a device provided for the purpose of preventing biological contact between the patient and the probe or thermometer. **E 344, E20**
- probe cover and sheath, n**—a device provided for the purpose of preventing biological contact between the patient and probe (see Specification E 1104). **E 344, E20**
- probe covers and sheaths, n**—devices provided for the purpose of preventing biological contact between the patient and the probe or clinical thermometer. **E 344, E20**
- probe gas**—in leak testing, a tracer gas which issues from an orifice so as to impinge on a restricted test area. **E 1316, E07**
- probe ion**—an ionic species intentionally produced by an ion source and directed onto the specimen surface at a known incident angle with a known energy. **E 673, E42**
- probe test**—a leak test in which the tracer gas is applied by means of a probe so that the area covered by the tracer gas is localized. This enables the individual leaks to be located. **E 1316, E07**
- procedure, n**—specified way to carry out an activity or process. **E 1605, E06**
- procedure, n**—specified way to perform an activity. **E 1732, E30**
- procedure, n**—a documented description of the operations to be performed, the precautions to be taken, and the measures to be applied directly or indirectly related to the manufacture of an

intermediate, API, or drug product.

E 2363, E55

process:

dry process (dry mix)—the method of preparation of a ceramic body wherein the constituents are blended dry, following which liquid may be added as required for subsequent processing.

wet process (slip process)—the method of preparation of a ceramic body wherein the constituents are blended in sufficient liquid to produce a fluid suspension for use as such or for subsequent processing. C 242, C21

process—a defined event or sequence of events in plating or coating that may include pretreatments and posttreatments. F 2078, F07

processability, *n*—the relative ease with which raw or compounded rubber can be handled in rubber machinery. D 1566, D11

process aids, *n*—materials, excluding solvents, used as an aid in the manufacture of an intermediate or API that do not themselves participate in a chemical or biological reaction (for example, filter aid, activated carbon).

E 2363, E55

process analytical technology (PAT), *n*—system for designing, analyzing, and controlling manufacturing through timely measurements of critical quality and performance attributes of raw and in-process materials and processes with the goal of ensuring final product quality.

E 2363, E55

process anneal—a heat treatment used to soften metal for further cold working; in ferrous sheet and wire industries, heating to a temperature close to but below the lower limit of the transformation range and subsequently cooling for working; in the nonferrous industries, heating above the recrystallization temperatures at a time and temperature sufficient to permit the desired subsequent cold working. E 7, E04

process annealing, *n*—in the sheet and wire industries, heating a steel object to a temperature close to, but below, A_{c1} and then cooling it, in order to soften it for further cold working. A 941, A01

process annealing—sometimes called subcritical annealing or stress relieving, performed at temperatures just below the lower critical temperature. Process annealing neither refines grains nor redissolves cementite, but does improve the ductility and decreases residual stress in work-hardened steel. F 1789, F16

process average, *n*—for the items produced, the true and unknown level of (1) the fraction of nonconforming items or (2) a characteristic of the items as determined by a specific test method.

D 123, D13

process capability index, C_p , *n*—an index describing process capability in relation to specified tolerance. E 456, E11

process capability, **PC**, *n*—statistical estimate of the outcome of a characteristic from a process that has been demonstrated to be in a state of statistical control. E 456, E11

process control, *n*—checks performed during manufacturing to measure critical attributes and, if appropriate, adjust the process to deliver the desired output(s).

E 2363, E55

process control radiograph—a radiograph which images a beam purity indicator and sensitivity indicator under identical exposure and processing procedures as the test object radiograph. A process control radiograph may be used to determine image quality parameters in circumstances of large or unusual test object geometry. E 1316, E07

processed biologics, *n*—cells, tissues, or organs that have undergone manipulation for use in the manufacture of TEMPs; processing here extends beyond the minimal manipulation or processing as it is applied in the field of structural, reproductive and metabolic tissue transplantation. A processed biologic may be used as a component of a TEMP. F 2312, F04

processed tire, *n*—a scrap tire that has been altered, converted, or size reduced. D 5681, D34

process fishscaling—fishscaling that appears during the drying or firing cycle of cover coat application. C 286, B08

process flow—current or anticipated sequential process steps required to produce a fastener. F 1789, F16

processing—the work involved in transforming quarry blocks into dimension stone, including sawing, drilling, grinding, honing, polishing, carving, and all other operations necessary for installation. C 119, C18

processing, *vt*—any activity performed on cells, tissues, and organs other than recovery, such as preparation and preservation for storage and packaging. F 2312, F04

processing aid, *n*—a compounding material that improves processability of a polymeric compound by reducing nerve, providing better dispersion of dry material, increasing the extension rate, reducing power consumption during mixing, producing smoother surfaces on calendered and extruded products, and improving knitting to name a few examples. D 1566, D11

processing capacity—the number of hits that can be processed at the processing speed before the system must interrupt data collection to clear buffers or otherwise prepare for accepting additional data. E 1316, E07

processing documentation metadata, *n*—information that describes the processes applied to data from original source data through to storage in an ADMS. E 867, E17

processing materials, *n*—any item or material that is not a component of the TEMP and is in contact with the cells, tissues, and organs during processing. F 2312, F04

processing speed—the sustained rate (hits/s), as a function of the parameter set and number of active channels, at which AE signals can be continuously processed by a system without interruption for data transport. E 1316, E07

process oil, *n*—a hydrocarbon oil derived from petroleum or other sources, used as an extender or process aid. D 1566, D11

processor, *n*—applies to garment maintenance, the party performing the care and maintenance operation. F 1494, F23

process parameter, *n*—an attribute of the manufacturing system. E 2363, E55

process parameters—combination of conditions originating from people, measurement, materials, method, and environment that contribute to a given output. F 1789, F16

process performance index, P_p , *n*—index describing process performance in relation to specified tolerance. E 456, E11

process performance, **PP**, *n*—statistical measure of the outcome of a characteristic from a process that may not have been demonstrated to be in a state of statistical control. E 456, E11

process waste—inorganic by-product materials such as mine tailings, culm piles, coal processing conversion and combustion wastes, cement and limekiln dust, by-product gypsum, and chemically treated compositions made from these wastes or waste mixtures. D 5681, D34

Proctor compaction curve—see **compaction curve**. D 653, D18

Proctor penetration curve—see **penetration resistance curve**. D 653, D18

Proctor penetration resistance—see **penetration resistance**. D 653, D18

prods—hand-held electrodes. E 1316, E07

producer, *n*—primary manufacturer of the material. B 881, B07

producer, *n*—the primary manufacturer of the material. B 899, B02

producer's risk, *n*—the probability of rejecting a lot when the process average is at the acceptable quality level or AQL. D 123, D13

product, *n*—the upholstered furniture for which information is required. E 176, E05

product, *n*—material, composite or assembly about which information is required. E 176, E05

product, *n*—mattress, or mattress with foundation, for which fire-test-response characteristics are to be measured. E 176, E05

product, n

product, n—material, component, or complete end-use product, in use in fixed guideway transportation vehicles. **E 176, E05**

product, n—any object possessing intrinsic value, capable of delivery either as an assembled whole or as a component part or parts, and produced for introduction into trade or commerce. **E 2201, E50**

product analysis, n—a chemical analysis of the semifinished or finished steel. **A 902, A05**

product analysis, n—a chemical analysis of a specimen taken from the semi-finished product or the finished product. **A 941, A01**

product analysis—chemical analysis performed on the finished fastener to verify that the chemical composition is within specified limits. **F 1789, F16**

product channel spacer (permeate carrier)—the fabric or other material through which permeate water flows after it passes through the flat sheet membrane. **D 6161, D19**

product deterioration—chemical reaction or physical change within or between components considered compatible in the original formulation, that may be due to time or temperature of storage, or other factors. **D 3064, D10**

product formulation—the specific formulation of the completed product, including propellant(s), usually expressed as mass per mass percent. **D 3064, D10**

production capacity—maximum rate (lb/h) at which the equipment can bring the specified food product to a specified “cooked” condition in accordance with the cooking energy efficiency test (see **cooking energy efficiency**), *PC*.

$$PC = \frac{W \times 60}{t}$$

where:

PC = production capacity of the equipment, lb/h (kg/h),

W = total weight of food cooked during cooking test, lb (kg), and

t = total time of cooking test, min.

F 1827, F26

production cycle—the series of operations required to process through the facility a quantity of feedstock mixed with water having a volume equal to the typical volume of the fermentation system and return the facility to the configuration at the start of the cycle. The quantity of water mixed with the feedstock shall be as per specification for normal operation. This volume is equal to the sum of the working volumes of all fermenters in a batch fermentation process. This volume is equal to the sum of the working volumes of each stage of fermentation in a continuous fermentation process. **E 1705, E48**

production lot, n—that part of one manufacturer’s production made from the same nominal raw material under essentially the same conditions and designed to meet the same specifications.

D 123, D13

production plan—complete written plan of fastener and process characteristics, process controls, tests, and acceptance procedures that will occur during full production. **F 1789, F16**

production rate—rate (lb/h) at which the equipment brings the specified food product to a specified “cooked” condition, *PR*.

F 1827, F26

production run—the quantity of BMLs (produced at one time and from the same material lot) that travel together continuously through the same processing steps, that is, assembly, size reduction, annealing, etc. **E 344, E20**

production unit—as referred to in this practice, is a quantity of geotextile agreed upon by the purchaser and seller for the purpose of sampling. **D 4439, D35**

productivity—flow rate of product water. **D 6161, D19**

product staging—a process in which the permeate from one membrane module is used as the feed to another membrane module in order to further improve product quality. **D 6161, D19**

product standard, n—material having a color designated as standard for a specified product. **E 284, E12**

product tube—the tube at the center of the spiral wound cartridge which collects permeate water. **D 6161, D19**

product water—purified water produced by a process. See **permeate**. **D 6161, D19**

proeutectoid carbide—primary crystals of cementite formed directly from the decomposition of austenite exclusive of that cementite which results from the eutectoid reaction. **E 7, E04**

proeutectoid ferrite—primary crystals of ferrite formed directly from the decomposition of austenite exclusive of that ferrite which results from the eutectoid reaction. **E 7, E04**

professional care, n—for consumer textile products, cleaning and maintenance procedures requiring the services of a person specially trained and skilled in their use. **D 123, D13**

professional care, n—for textile products, cleaning and maintenance procedures requiring the services of a person specially trained or skilled in their use. **D 3136, D13**

professional judgement, n—the process of formulating a decision based on evaluating data, information, observations, or a combination of the three, using the professional’s training and experience, and made in light of common industry practice. **E 1605, E06**

professional use, n—intended or implied use of an instrument by individuals that are licensed or certified for collecting information for medical diagnosing purposes. **E 344, E20**

proficiency testing—determination of laboratory testing performance by means of interlaboratory test comparisons, (ISO Guide 2).

E 1187, E36

proficiency testing, n—determination of laboratory testing performance by means of interlaboratory test comparisons. **E 1732, E30**

profile, n—wrought product that is long in relation to its cross sectional dimensions which is of a form other than that of sheet, plate, foil, rod, bar, tube, or wire.

extruded profile, n—profile produced by hot extruding.

structural profile, n—profile, rolled or extruded, commonly used for structural purposes such as angles, channels, H-beams, I-beams, tees, and zeos. **B 881, B07**

profile, n—the contour of the top surface of the tile when viewed from the nose end. **C 43, C15**

profile—see **soil profile**. **D 653, D18**

profile, vt—in atomic emission spectrometry, to scan and set the deflection of the grating, or actual or apparent position of the entrance slit, or actual or apparent location of the exit slits, to produce optimum measurement of intensity. **E 135, E01**

profile depth, n—the difference between the amplitude measurements pavement macrotexture profile and a horizontal line through the top of the highest peak within a given baselength. **E 867, E17**

profile, longitudinal—see **longitudinal profile**. **E 867, E17**

profile record, n—a data record of the surface elevation, slope or acceleration, of arbitrary length. **E 867, E17**

profile segment, n—that part of a profile record for which the profile index will be calculated. **E 867, E17**

profile, transverse—see **transverse profile**. **E 867, E17**

profilometer, n—equipment used to measure profile of traveled surface roughness. **E 867, E17**

program—See facility program. **E 631, E06**

program, n—See facility program. **E 833, E06**

program, n—a documented policy with procedures for selection and use of CPC. **F 1494, F23**

program administrator, n—a person responsible for the formulation and implementation of a CPC program. **F 1494, F23**

program attention, n—an application-dependent signal sent by the operator to the cluster controller from the printer to signify that a task was performed. **F 1457, F05**

program authority, n—a person responsible for enforcing the requirements of a CPC program. **F 1494, F23**

program controller—a device which can automatically execute a pre-determined schedule of control. **E 7, E04**

programmable read only memory, n—an information storage area

that can be recorded on and read by an operator, but modified only through special physical processes. (See **PROM**.) F 1457, F05

programmed temperature gas chromatography, PTGC—utilized changes in column temperature with time. D 2864, D27

progressive aging, *n*—aging by increasing the temperature in steps, or continuously, during the aging cycle. A 941, A01

progressive failure—failure in which the ultimate shearing resistance is progressively mobilized along the failure surface. D 653, D18

progressive failure—formation and development of localized fractures which, after additional stress increase, eventually form a continuous rupture surface and thus lead to failure after steady deterioration of the rock. (ISRM) D 653, D18

project brief—See **facility program**. E 1480, E06

project brief, *n* (exposéé projet)—document describing the required **facility serviceability** in detail sufficient for the project to proceed. E 631, E06

projected length, L_p —length of the projection of the ski, measured between the ski tip and the ski tail parallel to the ski body pressed against a plane surface. F 472, F27

projected length, L_p —the length of the projection of the snowboard, measured between the snowboard tip and the snowboard tail with the snowboard unweighted on a plane surface (unweighted meaning solely under the influence of its own weight). F 1107, F27

projected treadlife [L], *n*—the test distance that gives h as the average tread depth; where h is the height of treadwear indicator above groove (or void) base. F 538, F09

projection—a calculation, usually performed by a software package, which predicts the performance of parts or all of a water plant. D 6161, D19

projection, *n*—a pavement contacting area of the tread band, bounded by void. F 538, F09

projection distance—distance from the eyepiece to the image screen. E 7, E04

projection head—flange or collar spaced at short distance from end of wire, with wire projecting from upper side of flange or collar forming part of head and wire projecting from other side of flange or collar forming the shank. (See **gudgeon**.) F 547, F16

projection lens—the final lens in the electron microscope corresponding to an ocular or projector in a compound light microscope. This lens forms a real image on the viewing screen or photographic film. E 7, E04

project level analysis, *n*—evaluation of a pavement section to select the type and timing of rehabilitation or maintenance corrective actions. E 867, E17

project life, *n*—the time period over which the economic viability of a geothermal facility is evaluated. E 957, E44

project (projet)—resources and activities used to achieve a specific set of objectives within a specified time schedule.
project brief—See **facility program**.
project record—use **as-built**, the preferred term.
protection—See **preservation**. E 631, E06

project (projet)—resources and activities used to achieve a specific set of objectives within a specified time schedule. E 1480, E06

PROM—programmable read only memory. F 1457, F05

promoter, *n*—a material that provides thermal energy which is used to increase the temperature to start combustion of the material being tested. G 126, G04

proof—See **rod proof**. C 162, C14

proof, *n*—*in fire assay*, a synthetic verifier having a precious metal content similar to that expected in the test sample. E 135, E01

proof—measurement term of concentration of ethanol in water solutions. E 1705, E48

proof correction, *n*—*in fire assay*, the adjustment to the final assay obtained by analyzing the proof concurrently with the test sample. E 135, E01

proofing, *n*—process of coating a fabric with raw or compounded rubber to impede penetration by a liquid, usually water. D 1566, D11

proofing (the act of), *n*—process of coating a fabric with rubber. D 1566, D11

proof load—a magnitude of uniform load at which glass specimens shall be tested. E 631, E06

proof load, externally threaded fastener—tension applied load that the fastener must support without evidence of permanent deformation (for most carbon or alloy steel fastener strength grades or property classes, proof loads are established at approximately 90 % to 93 % of the expected minimum yield strength). F 1789, F16

proof load factor, *a*—the constant which, when multiplied by the equivalent design load, determines the proof load. E 631, E06

proof-test current—the current measured during ac proof tests.

NOTE—This current is an indication of the validity of the dielectric constant of the type of material used and the thickness of the total contact area under test. F 819, F18

propagance, *n*—ratio of propagated flux to incident flux; a general term that includes the results of reflection, transmission, and similar effects that modify the flux in a beam. E 284, E12

propagation of flame, *n*—the upward and outward movement of the flame front from the ignition source to the vessel walls, that is determined by visual observation. E 1445, E27

propagation of flames, *n*—a combustion reaction that produces at least a 7 % rise of the initial absolute pressure.

$$\frac{P_2}{P_1} \geq 1.07.$$

E 1445, E27

propellant—liquefied gas with a vapor pressure greater than atmospheric pressure (14.7 psia (101 kPa)) at 105°F (40.6°C). D 3064, D10

propellant—an inert ingredient in pressurized products that provides the force necessary to dispense the formulation from its container. E 609, E35

propene concentrate, *n*—*in liquefied natural gas technology*, concentrate containing more than 50 % propene. (Synonym—*propylene*.) D 4175, D02

property—the real DoD property subject to classification under the classification of environmental condition of property area types. D 5681, D34

property—the real property that is the subject of the EBS described in this practice as well as the real property adjacent to the subject property (which may be privately owned). Real property includes buildings and other fixtures and improvements located on the property and affixed to the land. D 5681, D34

property—something or a number of things in which one has the rights and interests subject to ownership. It includes both tangible property and intangible property. E 2135, E53

property class—system of strength classifications used for bolts, nuts, and screws manufactured to metric standards. F 1789, F16

property class symbols—metric series standardized symbols denoting the combination of the fastener's base material, its strength properties, its performance capabilities, and the engineering standard against which it was produced. F 1789, F16

property control function—a business unit within an organization that is responsible for defining, implementing, and maintaining an infrastructure and related processes that ensure the adequate control, protection, preservation, and maintenance of the organization's property. E 2135, E53

property control system—an entity's international management program for protecting, preserving, accounting for, and controlling property from acquisition through disposition, including both application and compliance. E 2135, E53

property custodian—an individual or organization accountable for property. E 2135, E53

property management—a monitoring and control function, charged with assuring that organizational processes related to the lifecycle management of property support organization objectives, represent

property management

sound business practice, and are compliant with applicable standards, policies, regulations, and contractual requirements.

E 2135, E53

property management system—a subset of existing organizational processes related to the lifecycle management of property. These processes represent sound practice and are compliant with applicable standards, policies, regulations, and contractual requirements.

E 2135, E53

property manager—the individual designated by the organization to provide leadership to the organization in the management and use of assets.

E 2135, E53

property owner—person, firm, corporation, guardian, conservator, receiver, trustee, executor, or other judicial officer who, alone or jointly or severally with others, owns, holds, or controls the whole or any part of the freehold or leasehold title to any property, with or without accompanying actual possession of it, and shall include in addition to the holder of legal title, any vendee in possession of it, but may not include a mortgagee or an owner of a reversionary interest under a ground rent lease.

E 631, E06

property records—information retained for use in managing property.

E 2135, E53

property responsibility—obligations of a person or entity for actions related to property such as maintenance, control, and record-keeping. More general than accountability.

E 2135, E53

property system function—a major portion of a property control system. Examples include property management, acquisition, receiving, identification, records, movement, storage, physical inventories, reports, consumption, utilization, maintenance, subcontractor or alternate location control, and disposition.

E 2135, E53

property system functional segment—a portion of a property system function of property control that may be separately identified and contains similar properties, procedures, and conditions of control that can be isolated for purpose of analysis.

E 2135, E53

property tax files—the files kept for property tax purposes by the local jurisdiction where the property is located and includes records of past ownership, appraisals, maps, sketches, photos, or other information that is reasonably ascertainable and pertaining to the property.

D 5681, D34

proportional limit, *n*—the maximum stress that a material is capable of sustaining without significant deviation from proportionality of stress to strain.

D 907, D14

proportional limit, *n*—the greatest stress which a material is capable of sustaining without any deviation from proportionality of stress to strain (Hooke's law).

D 4439, D35

proportional limit—greatest stress that the material is capable of sustaining without a deviation from the law of proportionality of stress to strain (Hooke's Law). In many cases, the elastic limit is so close to the proportional limit that no distinction is made.

F 1789, F16

proportional limit [FL⁻²], *n*—the greatest stress which a material is capable of sustaining without any deviation from proportionality of stress to strain (Hooke's law).

E 6, E28

proportional limit stress, *n*—the greatest stress that a material is capable of sustaining without any deviation from proportionality of uniaxial stress to strain (uniaxial Hooke's law).

C 1145, C28

proportional sampling, *n*—a method of selection such that the proportion of the sampling units (usually, psu's) selected for the sample from each stratum is the same (except for possible rounding effects).

E 1402, E11

proportional spacing—a system of printing where the character spacing is set in accordance with the character width; this is in contrast to a fixed number of characters per inch such as 10 pitch (10 characters/inch), 12 pitch (12 characters/inch), 15 pitch (15 characters/inch), etc.

F 1457, F05

proportional spacing, *n*—a system of printing wherein the character spacing is set in accordance with the character width. (See **fixed pitch**.)

F 1457, F05

proportioning probe—in leak testing, a probe that can vary sample

to pure air ratios between 100 % sample and 100 % pure air without substantially changing the total flow from the probe.

E 1316, E07

proportioning pump—see **metering pump**.

D 653, D18

proprietary—made and marketed by one having the exclusive right to manufacture and sell; privately owned and managed.

D 653, D18

propylene concentrate—concentrate containing more than 90 % propylene.

D 4175, D02

propylene concentrate, *n*—hydrocarbon product containing more than 50 % propylene.

D 4175, D02

propylene glycol ether of methylcellulose—see (2-hydroxypropyl)methylcellulose.

D 1695, D01

propylene plastic, *n*—a plastic based on polymers of propylene or copolymers of propylene with other monomers, the propylene being in the greatest amount by mass.

F 1251, F04

propylene plastics, *n*—plastics based on polymers of propylene or copolymers of propylene with other monomers, the propylene being in the greatest amount by mass. (ISO)

D 883, D20

propylene plastics, *n*—plastics based on polymers of propylene or copolymers of propylene with other monomers, the propylene being in the greatest amount by mass. (ISO, D20)

F 412, F17

protected water boom—boom intended for use in protected waters with moderate environmental conditions (see Practice F 625 for environmental descriptors).

F 818, F20

protecting tube, *n*—a tube designed to enclose a temperature-sensing device and protect it from the deleterious effects of the environment.

E 344, E20

protection anchors, *n*—anchors used to secure a climbing rope while leading a climb or to lower off one.

F 1773, F08

protection board—See **protection course**.

C 717, C24

protection course—semi-rigid sheet material placed on top of the waterproofing membrane to protect it against damage during subsequent construction and to provide a protective barrier against compressive and shearing forces induced by materials placed above it.

C 717, C24

protection potential—the most noble potential where pitting and crevice corrosion will not propagate.

G 15, G01

protection tube—a tube made of a specially selected material which can be used to protect a thermocouple from adverse effects of the environment.

E 7, E04

protective atmosphere—(1) a gas envelope surrounding the part to be brazed, welded, or thermal sprayed, with the gas composition controlled with respect to chemical composition, dew point, pressure, flow rate; (2) the atmosphere in a heat treating or sintering furnace formulated to protect the parts or compacts from oxidation, nitridation, or other contamination from the environment.

B 374, B08

protective clothing, *n*—an item of clothing that is specifically designed and constructed for the intended purpose of isolating all or part of the body from a potential hazard; or, isolating the external environment from contamination by the wearer of the clothing.

F 1494, F23

protective clothing material, *n*—any element, constituent, or substance from which protective clothing is composed or can be made.

F 1494, F23

protective filter—see **filter**.

D 653, D18

protein—general term used to cover single cell microorganisms, extract of the microorganisms, (bacteria or fungi or algae) that is used for food or feed to animals and humans.

E 1705, E48

protocol, *n*—a formal set of conventions governing a communication process.

F 1457, F05

prototype plan—written description of the dimensional, mechanical, chemical, and performance tests that will be used to facilitate the building of a prototype.

F 1789, F16

protrusion, *n*—*infabrics*, a general term for a visible group of fibers, a yarn, or a yarn segment that extends above the fabric surface.

D 123, D13

protrusion, *n*—*infabrics*, a general term for a visible group of fibers, a yarn, or a yarn segment that extends above the fabric surface.

D 4850, D13

provider, *n*—the individual or organization providing specific dwelling designs, materials, products, components, subsystems, or buildings for acceptance by the specifier.

E 2151, E06

proximal—nearest to the body, or center, or some other point considered as the center of a system.

F 869, F08

proximal end—that portion of the instrument that is closest to the surgeon when in use.

F 921, F04

proximal end—that portion of the instrument that is closest to the surgeon when in use.

F 1078, F04

proximate analysis, *n*—*in the case of coal and coke*, the determination, by prescribed methods, of moisture, volatile matter, fixed carbon (by difference), and ash.

D 121, D05

proximate analysis, *n*—the determination, by prescribed methods, of moisture, volatile matter, fixed carbon (by difference), and ash.

D 5681, D34

proximate analysis—the determination, by prescribed methods, of moisture, volatile matter, fixed carbon (by difference), and ash. Unless otherwise specified, the term proximate analysis does not include determinations of chemical elements or any determinations other than those named.

E 856, D34

proximate analysis—the determination, by prescribed methods, of moisture, volatile matter, fixed carbon (by difference), and ash. The term **proximate analysis** does not include determinations of chemical elements or determinations other than those named.

E 1705, E48

proximate analysis—an assay of the moisture, ash, volatile matter, and fixed carbon as determined by prescribed test methods. Other constituents such as sulfur and phosphorus are not included.

E 1705, E48

PRT design, *n*—a generic term used to differentiate between different PRT construction details, such as element and connecting wire construction, insulation methods, sealing techniques, and mounting methods (for example, spring loaded or direct mounting).

E 344, E20

pseudobinary—a term of indefinite meaning, sometimes used synonymously with “quasibinary,” sometimes used to designate an “isopleth.”

E 7, E04

pseudoelasticity, *n*—See **superelasticity**.

F 2005, F04

pseudoglow discharge, *n*—a type of partial discharge characterized by pulses of relatively small amplitude, and generally, a long rise time.

D 1711, D09

pseudomonotropy—an irreversible solid state transformation which occurs below the melting points of both the stable and metastable solid states.

E 7, E04

pseudoreplica—See **replica**.

E 7, E04

PSSI—*in viscometry*, abbreviation for permanent shear stability index.

D 4175, D02

psychology, *n*—the science dealing with the mind and with the mental and emotional processes.

E 2035, E52

psychometrics, *n*—application of measurement principles to psychological phenomena.

E 253, E18

psychophysical color, *n*—characteristics of a color stimulus (that is, light producing a visible sensation that is a function of its wave length) denoted by three dimension values such as three tristimulus values.

D 2946, C17

psychophysical methods, *n*—procedures for establishing relationships between measurable physical stimuli and resulting sensory responses. Some examples of these methods are the method of limits, method of constant stimuli, and the method of adjustment.

E 253, E18

psychophysical power law, *n*—a power function describing the relationship between physical amounts of stimuli and their respective perceived intensities. The mathematical relationship is:

$$R = kS^n$$

where:

R = perceived intensity of a given stimulus,

S = physical amount of that stimulus,

k = constant reflecting the unit of measurement, and

n = exponent that is an empirical constant characteristic of the given sensory system.

E 253, E18

psychophysics, *n*—the study of the functions relating the physical measurements of stimuli and the sensations and perceptions the stimuli evoke.

E 284, E12

psychophysiological detection of deception (PDD), *n*—the academic discipline that provides the student, the practitioner, and the researcher with the theoretical and applied psychological, physiological, and psychophysiological fundamentals for a thorough understanding of PDD tests and the skills and qualifications for conducting PDD examinations (see **polygraphy**).

E 2035, E52

psychophysiological veracity (PV) examination, *n*—see definition of PDD

E 2035, E52

psychophysiology, *n*—the study of interactions between mental and physiological processes.

E 2035, E52

psychrometer, *n*—a variety of hygrometer comprising a dry bulb temperature indicator and a wet bulb temperature indicator which is cooled to the wet bulb temperature by the spontaneous evaporation of moisture.

D 123, D13

psychrometer, *n*—a variety of hygrometer comprising a dry bulb thermometer and a wet bulb thermometer, which, when suitably aspirated, indicates the thermodynamic wet- and dry bulb temperature of the gas.

aspirated psychrometer, *n*—an hygrometer comprising wet- and dry-bulb thermometers that are mounted in a housing to which is attached a motor-driven fan or blower that draws air over the thermometer bulbs at a rate which produces the minimum wet-bulb reading.

sling (whirling) psychrometer, *n*—an hygrometer comprising wet- and dry-bulb thermometers that are mounted on a frame that can be rotated or whirled.

D 1356, D22

psychrometer, *n*—a variety of hygrometer comprising a dry bulb temperature indicator and a wet bulb temperature indicator which is cooled to the wet bulb temperature by the spontaneous evaporation of moisture.

D4920, D13

P-T diagram—a two-dimensional, graphical representation of phase relationships in a system of any order, by means of the pressure and temperature variables.

E 7, E04

PTFE tape—joint sealing tape composed of polytetrafluoroethylene.

D 653, D18

P_{th} —threshold load in which P_i is invariant with respect to loading rate; P_{th} is the basis for calculating the threshold stress or the threshold stress intensity

F 2078, F07

P-T-X diagram—a three-dimensional, graphical representation of the phase relationships in a binary system, by means of the pressure, temperature and concentration variables.

E 7, E04

P_u —highest load level held long enough to record gage measurements, in newtons (pound-force).

E 631, E06

public housing agency (PHA)—any state, county, municipality, or other government entity or public body (or agency or instrumentality thereof) that is authorized to engage or assist in the development or operation of housing for low-income families.

E 631, E06

puckering, *n*—*inbonded, fused, or laminated fabrics*, a wavy, three-dimensional effect typified by closely spaced wrinkles, on either the face fabric or the backing fabric, or both.

D 123, D13

puddling—soil consolidation by agitating by means of poles, a mixture of soil and sufficient water to leave a puddle on the surface.

C 896, C04

pull—the quantity of glass delivered by a melting furnace in a given time, usually 24 h.

C 162, C14

pull, *n*—a group of fibers grasped by the forceps at one time and drawn from the specimen in the combs.

D 123, D13

pull, n

pull, n—*in zippers*, a part connected to a zipper slider by which the slider is operated. **D 123, D13**

pull, n—a part connected to a zipper slider by which the slider is operated. **D 2050, D13**

pull, n—a group of fibers grasped by the forceps at one time and drawn from the specimen in the combs. **D 7139, D13**

pulled-surface, n—as applied to a defect in a laminated plastic imperfections in the surface ranging from a slight breaking or lifting in spots to pronounced separation of its surface from its body. **D 883, D20**

pulled wool, n—wool taken from the pelt of a slaughtered sheep and which has not been commercially scoured. **D 123, D13**

pulled wool, n—wool taken from the pelt of a slaughtered sheep and which has not been commercially scoured. Syn. *slipe wool* and *skin wool*. **D 4845, D13**

pulley, n—a device containing a grooved wheel over which a rope runs to reduce friction and change the angle of pull. **F 1773, F08**

pull-in—See **jerk-in**. **D 3990, D13**

pulling over—operation in which upper of a shoe is pulled over the last. **F 869, F08**

pull-out, n—void existing on the plane of polish of a metallographic specimen caused by the dislodging of a particle or constituent during the grinding or polishing operation. **E 7, E04**

pull post—a terminal post used in a line of fence to brace a long stretch or to effect a change in elevation along the fence line. **F 552, F14**

pull-through failure—a failure mode in which the anchor body pulls through the expansion mechanism without development of the full concrete breakout capacity. **E 2265, E06**

pulp, n—a fluid mixture of solids and water, also known as slurry. **D 121, D05**

pulper—a water filled tank with a motor driven grinding disk to grind and cut waste material, and mixes this material with water to produce a slurry that is pumped to the waterpress through a sizing screen. **F 1827, F26**

pulping, n—the operation of altering a cellulosic raw material such as pulpwood, rags, straw, reclaimed paper, and so forth, into a form suitable for further processing into paper or paperboard; may vary from simple mechanical action to rather complex, chemical digestive sequences and combinations of the two. (See **chemical pulp**, **semichemical pulp**, and **mechanical pulp**.) **D 1968, D06**

pulps, dissolving—chemical cellulose from wood pulp. **D 1695, D01**

pulps for chemical conversion—chemical cellulose from wood pulp. **D 1695, D01**

pulps for manufacture of cellulose derivatives—chemical cellulose from wood pulp. **D 1695, D01**

pulpwood—any wood cut or prepared primarily for the production of wood pulp. **D 9, D07**

pulse—a short wave train of mechanical vibrations. **E 1316, E07**

pulsed cavitation test, n—a test using a vibratory cavitation device in which the cavitation is generated intermittently, with alternating vibratory periods and quiescent periods of controlled relative duration. **G 40, G02**

pulse discharge, n—a type of partial-discharge phenomenon characterized by a spark-type breakdown. **D 1711, D09**

pulsed simulator—simulator whose irradiance output at the test plane area is in a single short duration pulse of 100 ms or less. **E 772, E44**

pulse echo method—an inspection method in which the presence and position of a reflector are indicated by the echo amplitude and time. **E 1316, E07**

pulse Fourier transform NMR—a form of NMR in which the sample is irradiated with one or more pulse sequences of radio-frequency power spaced at uniform time intervals, and the averaged free induction decay following the pulse sequences is converted to a frequency domain spectrum by a Fourier transformation. **E 131, E13**

pulse length—a measure of the duration of a signal as expressed in time or number of cycles. **E 1316, E07**

pulseless-glow discharge, n—a type of partial-discharge phenomenon characterized by a diffused glow. **D 1711, D09**

pulse plating—a method of electroplating in which the current is frequently interrupted or periodically decreased. **B 374, B08**

pulse repetition rate—see **frequency (pulse repetition)**. **E 1316, E07**

pulse travel time (T_p), n—the total time, measured in seconds, required for the sonic pulse to traverse the specimen being tested, and for the associated electronic signals to reverse the circuits of the pulse-propagation circuitry. **C 709, D02**

pulse travel time (T_p), n—the total time, measured in seconds, required for the sonic pulse to traverse the specimen being tested, and for the associated electronic signals to reverse the circuits of the pulse-propagation circuitry. **D 4175, D02**

pulse tuning—a control used on some ultrasonic examination equipment to optimize the response of the search unit and cable to the transmitter by adjusting the frequency spectrum of the transmitted pulse. **E 1316, E07**

pultruded, adj—made by pultrusion. **D 3918, D20**

pultrude, v—to draw resin-impregnated reinforcement through a die. **D 3918, D20**

pultrusion—(1) a process described as the reversed "extrusion" of resin-impregnated reinforcements in the manufacture of rods, tubes, sheets, and shapes of uniform cross section. The reinforcement, after being wet-out by the resin-application system, is drawn through a die to form the desired cross section. (2) a term that is applied to the product of the above process. (3) a term used to show association with the above process. **D 3918, D20**

pultrusion—a process to continuously fabricate composite structural shapes or flat sheet by drawing prepreg materials through forming dies to produce the desired constant cross-sectional shape and simultaneously curing the resin. **E 631, E06**

pultrusion—a process to continuously fabricate composite structural shapes or flat sheet by drawing prepreg materials through forming dies to produce the desired constant cross-sectional shape and simultaneously curing the resin. **E 1749, E06**

pulverization, n—the reduction in particle size of metal powder by mechanical means, a specific type of disintegration. **B 243, B09**

pumpability—*in grouting*, a measure of the properties of a particular grout mix to be pumped as controlled by the equipment being used, the formation being injected, and the engineering objective limitations. **D 653, D18**

pump-down time—time of evacuation. **E 1316, E07**

pumping, n—ejection of liquid or solid material, or both, from beneath the pavement through a crack or joint. **E 867, E17**

pumping, n—ejection of liquid or solid material or both from beneath the pavement through a crack or joint. **E 1778, E17**

pumping, n—ejection of water, material, or both from beneath the pavement through a crack or joint. **E 1778, E17**

pumping of pavement (pumping)—see **pavement pumping**. **D 653, D18**

pumping sampler—a device that draws the water-sediment mixture through a pipe or hose, the intake of which is placed at the desired sampling point in a stream. **D 4410, D19**

pumping test—a field procedure used to determine in situ permeability or the ability of a formation to accept grout. **D 653, D18**

pump-out tubulation—a tube extending from an evacuated device through which gas is pumped and which is usually permanently sealed off after the device has been evacuated. Sometimes called exhaust tubulation. **E 1316, E07**

punch, n—a member of a compacting tool set used to close the die cavity and transmit the applied pressure to the powder or P/M compact. **B 243, B09**

punchouts, n—a broken area of a concrete slab bounded by closely spaced cracks (usually less than 1 m (3 ft)). **E 867, E17**

- punchouts**, *n*—a broken area of a concrete slab bounded by closely spaced cracks (usually less than 1 m (3 ft)). E 1778, E17
- punch ware**—handmade, thin, blown glassware, especially tumblers. C 162, C14
- puncture resistance**, (F), *n*—the inherent resisting mechanism of the test specimen to the failure by a penetrating or puncturing object. D 4439, D35
- puncture test**—See **package testing**. D 996, D10
- pungency**, *n*—irritating, piercing, or sharp trigeminal sensation, experienced primarily in the nasal cavity, as a result of exposure to ammonia or to the volatiles of such substances as freshly prepared mustard or horseradish. E 253, E18
- punty**—(1) a gathering iron of solid cross-section.
(2) a device to which ware is attached for holding during fire polishing or finishing. C 162, C14
- purchaser**, *n*—*as related to corrugated metal pipe*, the person or agency that purchases the finished pipe. A 902, A05
- purchaser**, *n*—*in pipe laying*, the person, company, or organization that purchases any materials or work to be performed. C 1154, C17
- purchaser**, *n*—*for pipe laying*, the person, company, or organization that purchases any materials or work to be performed. D 2946, C17
- purchaser**, *n*—*of an ASTM test*, a person or organization that pays for the conduct of an ASTM test method on a specified product. D 4175, D02
- pure monomer resin**, *n*—a resin produced by the polymerization of essentially pure compounds such as styrene, one of the methylstyrenes, or controlled mixtures of pure monomers. D 6440, D01
- pure shear**—a state of strain resulting from that stress condition most easily described by a Mohr circle centered at the origin. (ISRM) D 653, D18
- purge time**, *n*—*in an intermittent contact test*, the time immediately following the termination of the contact time when the test chemical is removed from the challenge side chamber and air or nitrogen is blown over the outside surface of the protective clothing material. F 1494, F23
- purified cotton cellulose**—see **cotton cellulose, purified**. D 1695, D01
- purified wood cellulose**—see **wood cellulose, purified**. D 1695, D01
- purity**, *n*—the percentage of $\text{CaSO}_4 \cdot \frac{1}{2} \text{H}_2\text{O}$ in the calcined gypsum portion of a gypsum plaster or gypsum concrete, as defined by Specification C 28/C 28M, for Gypsum Plasters. The percentage of $\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$ in the gypsum or the gypsum portion of fully hydrated, dry, set gypsum plaster. C 11, C11
- purity**—The purity of a stream is defined in terms of one or more identifiable components, *x*, *y*, *z*, etc. The purity for any component such as *x* is the mass of *x* in a stream divided by the total mass of that stream. In some cases, the mass of *x* must be defined in practical terms that relate to the origin of the feed. For example, the purity of a ferrous product magnetically recovered from refuse can be expressed as the purity of ferrous by proximate analysis. Alternatively, it can be expressed as the purity by manual sorting, with all nonferrous materials that cannot readily be removed by hand as the contaminants. In any case, purity must be defined for each application. D 5681, D34
- purity**, *n*—See **colorimetric purity, excitation purity**. E 284, E12
- purity, of a biological drug product**—the measure of the biologically active drug in relation to the total substances (not including additives) present in the drug product, usually expressed on a percentage basis. E 1705, E48
- purlin**—a wood member, commonly rectangular in cross section and comparatively long and slender, used most often in a horizontal position in heavy roof construction to support rafters and decking. D 9, D07
- purlin nail, "straw"**—galvanized, regular-stock-steel, aluminum-alloy or copper, 4 to 16 by $\frac{1}{8}$ -in., 0.135 or 0.148-in. nails of desired length with flat $\frac{1}{32}$ -in., curved or $\frac{15}{32}$ -in. head, $\frac{1}{16}$ -in. cast lead head or plastic washer and sheared-square or diamond point; for securing corrugated roofing to I-beams. F 547, F16
- pusher**—tool mechanism for forcing fastener into driving channel. F 592, F16
- push-off crack**, *n*—*in a rigid die system*, a defect or crushed surface caused by the action of the feed shoe or other mechanism removing the compact from the area above the lower punch. B 243, B09
- push-on joint**—see **joint, push-on**. F 412, F17
- putty**—(archaic) a white polishing compound. C 162, C14
- putty**, *n*—*in building construction*, a knife-grade compound generally used as a glazing compound or to fill cracks or holes. C 717, C24
- putty**, *n*—a dough-like material consisting of pigment and vehicle, used for sealing glass in frames, and for filling imperfections in wood or metal surfaces. See **glazing compound**. D 16, D01
- PVC**—poly(vinyl chloride) coating on fence materials. F 552, F14
- P-V diagram**—a graphical representation of the variation of the specific volume of a substance, with change in pressure. E 7, E04
- PV limit**, *n*—*in tribology*, the upper value of a load-bearing material's PV product above which a material fails to function satisfactorily. (See also **PV product**.) G 40, G02
- PV product**, *n*—*in tribology*, the product of the nominal contact pressure on a load-bearing surface and the relative surface velocity between the load-bearing material and its counterface. (See also **PV limit**.) G 40, G02
- P-V-T diagram**—a three-dimensional, graphical representation of a surface, describing the variation of the specific volume of a substance, with independent change of pressure and temperature. E 7, E04
- PWB**—see **printed wiring board**. F 1457, F05
- P-X diagram**—a two-dimensional, graphical representation of the isothermal phase relationships in a binary system; the coordinates of the graph are pressure and concentration. E 7, E04
- P-X projection**—a two-dimensional, graphical representation of the phase relationships in a binary system produced by making an orthographic projection of the phase boundaries of a P-T-X diagram upon a pressure-concentration plane. E 7, E04
- pyranometer**—an instrument (radiometer) used to measure the total solar radiant energy incident upon a surface per unit time and unit surface area. E 631, E06
- pyranometer**—(1) a radiometer to measure the global solar irradiance in the plane of its aperture; (2) A radiometer used to measure the total solar radiant energy incident upon a surface per unit time per unit area. This energy includes the direct radiant energy, diffuse radiant energy, and reflected radiant energy from the background. E 772, E44
- pyranometer**, *n*—a radiometer used to measure the total solar radiant energy incident upon a surface per unit time per area. This energy includes the direct radiant energy, diffuse radiant energy, and reflected radiant energy from the background. G 113, G03
- pyranometer, field**—a pyranometer essentially meeting the World Meteorological Organization Class II specifications, appropriate to field use and typically exposed continuously. E 772, E44
- pyranometer, net**—an instrument for measuring the difference between the irradiance falling on the top and bottom of a horizontal surface. E 772, E44
- pyranometer, reference**—a pyranometer essentially meeting the World Meteorological Organization Class I specifications and used principally to calibrate other instruments. E 772, E44
- pyranometer, spherical**—instrument for measuring the solar flux falling from a solid angle 4π on a spherical surface. E 772, E44
- pyrgeometer**—an instrument for measuring net atmospheric irradiance on a horizontal upward facing black surface at the ambient air temperature. E 772, E44
- pyrheliometer**—a radiometer used to measure the direct or beam solar irradiance incident on a surface normal to the sun's rays. E 772, E44
- pyrheliometer**, *n*—a radiometer used to measure the direct or beam solar irradiance incident on a surface normal to the sun's rays. G 113, G03

pyrheliometer, compensated

pyrheliometer, compensated—pyrheliometer based on the comparison of the heating of two identical metal strips, one exposed to a solar radiant energy, the other to a joule effect. **E 772, E44**

pyrheliometer, secondary reference—a pyrheliometer essentially meeting the World Meteorological Organization Class I specifications but not having self-calibrating capability. **E 772, E44**

pyridine bases—a mixture of pyridine and substituted pyridines. The pyridine bases in tar acids refer to those that react with 0.02 *N* perchloric acid. **D 4790, D16**

pyridine, refined—pyridine (including its impurities) having a total distillation range of 1.0°C. Refined to improve color characteristics. Refer to Specification D 2323 for complete specifications. **D 4790, D16**

pyro—a common expression for the compound tetrasodium pyrophosphate ($\text{Na}_4\text{P}_2\text{O}_7$), either hydrous or anhydrous. **C 286, B08**

pyrogen, *n*—any substance that produces fever. **F 2312, F04**

pyrogens—any substance capable of producing a fever in mammals. Often a bacterial endotoxin such as lipo polysaccharide generated by gram negative bacteria at destruction. Chemically and physically stable, pyrogens are not necessarily destroyed by conditions that kill bacteria. **D 6161, D19**

pyrolysis, *n*—process of simultaneous phase and chemical species change caused by heat (compare **smoldering**). **E 176, E05**

pyrolysis—the breaking apart of complex molecules by heating (over the range from 392° to 932° (200° to 500°C)) in the absence of oxygen, producing solid, liquid, and gaseous fuels. **E 1705, E48**

pyrolytic coating—a thin coating produced by the decomposition of a volatile compound on a hot surface. **C 162, C14**

pyrolytic graphite, *n*—in *carbon and graphite technology*, an artifact consisting predominantly of graphite which was deposited as a

solid on a hot surface by cracking of gaseous or liquid hydrocarbons. **C 709, D02**

pyrolytic graphite, *n*—in *carbon and graphite technology*, an artifact consisting predominantly of graphite which was deposited as a solid on a hot surface by cracking of gaseous or liquid hydrocarbons. **D 4175, D02**

pyrometer—an instrument for measuring temperatures (see **pyrometry**). An autographic or recording pyrometer automatically measures and records temperatures. **E 7, E04**

pyrometric cone equivalent (PCE), *n*—the number of that Standard Pyrometric Cone whose tip would touch the supporting plaque simultaneously with a cone of the refractory material being investigated when tested in accordance with Test Method C 24. **C 71, C08**

pyrometric cones, *n*—elongated trigonal pyramids of standard size made from specified mixtures of ceramic materials which when heated under stated conditions, may be used as an index of heat treatment. **C 71, C08**

pyrometry—the measurement of temperatures: for example, by measuring the electrical resistance of wire, the thermoelectric force of a couple, the expansion of solids, liquids or gases, the specific heat of solids, or the intensity of radiant energy per unit area. **E 7, E04**

pyrophyllite—a hydrated aluminum silicate mineral of the theoretical composition $\text{Al}_2\text{O}_3 \cdot 4\text{SiO}_2 \cdot \text{H}_2\text{O}$, having physical properties in the raw state resembling mineral talc. **C 242, C21**

pyroxylin finish—a plastic finish based on nitrocellulose used on leather. **D 1517, D31**

pyrradiometer, spherical—instrument for measuring total flux falling from a solid angle 4π on a spherical surface. **E 772, E44**

Q

- QD**—abbreviation for quick disassembly zipper. (See **releasing stop**.)
D 123, D13
- QD**—abbreviation for quick disassembly zipper. (See **releasing stop**.)
D 2050, D13
- QR**—abbreviation for quick release zipper. (See **releasing stop**.)
D 123, D13
- QR**—abbreviation for quick release zipper. (See **releasing stop**.)
D 2050, D13
- quad**—one quadrillion (10^{15}) Btu.
E 1705, E48
- quadrant mat**—additional tension zone circumferential reinforcement secured to a layer of reinforcement in the concrete pipe wall.
C 822, C13
- quadratic integrator**, *n*—*in textile unevenness testing*, an integrator that operates continuously and reports unevenness for the time during which it has been active, giving equal weight consideration to all portions of the input.
D 123, D13
- quadratic integrator**, *n*—*in textile unevenness testing*, an integrator that operates continuously and reports unevenness for the time during which it has been active, giving equal consideration to all portions of the input. (Syn. compensating-memory integrator.)
D 4849, D13
- quadratic rate**, *n*—the sum of the squares of the individual discharge magnitudes during a certain time interval divided by that time interval and expressed as (coulombs) per second.
D 1711, D09
- quadrivariant equilibrium**—a stable state among a number of conjugate phases equal to two less than the number of components, that is, having four degrees of freedom.
E 7, E04
- quadruple curve**—in a P-T diagram, a line representing the sequence of pressure and temperature values along which three conjugate phases occur in univariant equilibrium.
E 7, E04
- quadruple point**—in a P-T diagram the pressure and temperature at which four conjugate phases occur in invariant equilibrium.
E 7, E04
- qualification**—*in protective coatings*: The characteristics or abilities gained through training or experience, or both, that enable an individual to perform a required function.
D 4538, D33
- qualification (personal)**—characteristics or abilities gained through training or experience, or both, that enable an individual to perform a required function.
F 1789, F16
- qualification test**, *n*—a series of tests conducted by the procuring activity, or an agent thereof, to determine conformance of materials, or materials system, to the requirements of a specification which normally results in a qualified products list under the specification. (Compare **acceptance test** and **preproduction test**.)
D 907, D14
- qualification test**, *n*—a series of tests conducted by the procuring agency or an agent thereof to determine conformance of thermistor sensors to the requirements of a specification, normally for the development of a qualified products list under the specification.
E 344, E20
- qualification test**—an evaluation, generally nonrepetitive, conducted on an existing, altered, or new product to determine acceptability.
F 412, F17
- qualification testing**—testing performed on a product to determine whether or not the product conforms to requirements of an applicable specification.
F 412, F17
- qualified identification**—An *identification* is not qualified. However, opinions may be qualified when the evidence falls short of an *identification* or *elimination*.
E 1658, E30
- qualified technical personnel**, *n*—persons such as engineers and chemists who, by virtue of education, training, or experience, know how to apply physical and chemical principles involved in the reactions between oxidants and other materials.
G 126, G04
- qualitative**, *adj*—pertaining to a descriptive measurement, such as (1) taste or (2) presence/absence of a characteristic or component.
D 1129, D19
- qualitative sensory profile**, *n*—a description of a sample consisting of sensory attributes, but without intensity values.
E 253, E18
- quality**, *n*—the totality of features and characteristics of a product or service that bear on its ability to satisfy a given need.
- quality assurance**, *n*—a system of activities whose purpose is to provide assurance that the overall quality control job is in fact being done effectively.
- quality control**, *n*—the overall system of activities whose purpose is to provide a quality of product or service that meets the needs of users; also, the use of such a system.
D 1356, D22
- quality**, *n*—collection of features and characteristics of a product, process, or service that defines its ability to satisfy stated or implied needs or requirements.
E 253, E18
- quality**—totality of characteristics of an entity that bear on its ability to satisfy stated or implied needs.
E 1187, E36
- quality**—the mass of vapor phase per unit mass of a liquid-vapor two-phase single-component fluid.
G 40, G02
- quality**, *n*—See **particle concentration**.
G 40, G02
- quality assurance**—See **quality**.
D 1356, D22
- quality assurance**, *n*—all those planned or systematic actions necessary to provide adequate confidence that a material, product, system, or service will satisfy given needs.
D 4439, D35
- quality assurance**—all systematic actions necessary to provide adequate confidence that a calibration, measurement, or process is performed to a predefined level of quality.
E 170, E10
- quality assurance**—all the planned and systematic activities implemented within the quality system, and demonstrated as needed, to provide adequate confidence that an entity will fulfill requirements for quality.
E 1187, E36
- quality assurance**, *n*—all the planned and systematic activities implemented within the quality system, and demonstrated as needed, to provide adequate confidence that an entity will fulfill requirements for quality.
E 1732, E30
- quality assurance**—all of the planned and systematic activities carried out for the purpose of establishing that a fastener lot is within specified tolerances, limits, and other requirements.
F 1789, F16
- quality assurance program**—specific requirements within a quality system which serves to focus the activities of a fastener organization in pursuit of stated requirements of the quality plan.
F 1789, F16
- quality assurance (QA)**, *n*—an integrated system of management activities involving planning, quality control, quality assessment, reporting, and quality improvement to ensure that a process or service (for example, environmental data) meets defined standards of quality with a stated level of confidence.
D 5681, D34
- quality assurance (QA)**, *n*—the sum total of the organized arrangements made with the object of ensuring that all APIs or drug products are of the quality required for their intended use and that quality systems are maintained.
E 2363, E55
- quality assurance/quality control (QA/QC)**—the efforts completed to evaluate the accuracy and precision of a sampling or testing procedure, or both.
D 653, D18
- quality assurance system**—manufacturing system for assuring quality that incorporates either a written control plan or employs other acceptable methods for controlling quality. This may include provisions for prototype development, initial production, and full production including advanced quality planning, continuous improvement, defect prevention, and in-process controls of dimensional, mechanical, and performance characteristics of the fastener.
F 1789, F16
- quality assurance test**—a test in a program which is conducted to determine the quality level.
F 412, F17
- quality audit**—systematic and independent examination to determine whether quality activities and related results comply with planned

quality audit

arrangements and whether these arrangements are implemented effectively and are suitable to achieve objectives. **E 1187, E36**

quality audit, n—systematic and independent examination to determine whether quality activities and related results comply with planned arrangements and whether these arrangements are implemented effectively and are suitable to achieve objectives. **E 1732, E30**

quality constituents, n—measurable characteristic, such as, but not limited to pH, marbling, tenderness, or color. **F 2463, F10**

quality control—See **quality**. **D 1356, D22**

quality control, n—the operational techniques and the activities which sustain a quality of material, product, system, or service that will satisfy given needs; also the use of such techniques and activities. **D 4439, D35**

quality control, n—a system or process for obtaining, maintaining, and verifying a desired level of quality in a data set, process, or service by careful planning and design, the use of proper equipment, continued inspections, and taking corrective actions where and when required. **E 867, E17**

quality control—operational techniques and activities that are used to fulfill requirements of quality. **E 1187, E36**

quality control (QC), n—the overall system of technical activities whose purpose is to measure and control the quality of a product or service so that it meets the needs of users. The aim is to provide quality that is satisfactory, adequate, dependable, and economical. **D 5681, D34**

quality control test—an in-plant test that is conducted on a given test frequency to determine whether product is in accordance with the appropriate specification(s). **F 412, F17**

quality factor, Q, n—the reciprocal of the dissipation factor. **D 1711, D09**

quality factor, Q—the reciprocal of the dissipation factor (when applied to insulating materials). **D 2864, D27**

quality factor, Q—the ratio of elastic modulus to loss modulus, measured in tension, compression, flexure, or shear. **D 4092, D20**

quality management—all activities of the overall management function that determine the quality policy objectives and responsibilities, and implement them by means such as quality planning, quality control, quality assurance and quality improvement within the quality system. **E 1187, E36**

quality management—all activities of the overall management function that determine the quality policy objectives and responsibilities, and implement them by means such as quality planning, quality control, quality assurance and quality improvement within the quality system.

quality management—The responsibility of all levels of management but must be led by top management. Its implementation involves all members of the organization. In quality management, consideration is given to economic aspects. **E 1732, E30**

quality manual—a document stating the quality policy, quality system and quality practices of an organization, (ISO Guide 25). **E 1187, E36**

quality manual, n—a document stating the quality policy, quality system and quality practices of an organization. **E 1732, E30**

quality plan—a document setting out the specific quality practices, resource and sequence of activities relevant to a particular product, service, contract or project, (ISO 8402). **E 1187, E36**

quality policy—overall intentions and direction of an organization with regards quality, as formally expressed by top management. **E 1187, E36**

quality surveillance—continual monitoring and verification of the status of an entity and analysis of records to ensure that specified requirements are being fulfilled. **E 1187, E36**

quality system—organizational structure, procedures, processes and resources needed to implement quality management. **E 1187, E36**

quality system—the organizational structure, responsibilities, procedures, activities, capabilities, and resources that together aim to

ensure that services satisfy date requirements. (Generalized from E 1187.) **E 1605, E06**

quality unit(s), n—an organizational unit independent of production that fulfills both quality assurance and quality control responsibilities. **E 2363, E55**

quantification, n—the process of performing a quantitative determination. **D 1129, D19**

quantitation limit, n—the lowest result that would be considered quantitative. **D 1129, D19**

quantitation limit—an instrumental measurement value that is used to provide a concentration limit for confidently reporting quantitative analysis data for a give analytical method. **E 1605, E06**

quantitation limit—the minimum amount that can be quantified with acceptable accuracy and precision. **E 2161, E37**

quantitative analysis—an analysis run on sample digestates (or serial dilutions of sample digestates) that includes instrumental QC standards. Data from this run are used to calculate and report final lead analysis results. **E 631, E06**

quantitative analysis—the determination of the concentration and distribution of elements within the Auger analysis volume. **E 673, E42**

quantitative sensory profile, n—description of a sample consisting of both sensory attributes and their intensity values. **E 253, E18**

quantity—measurable attribute of a physical phenomenon. There are base units for seven quantities and supplementary units for two quantities upon which units for *all* other quantities are founded.

queue-rail system—Synonym for **traffic-rail system**. **E 631, E06**

quarantine, n—the status of materials isolated physically or by other effective means pending a decision on their subsequent approval or rejection. **E 2363, E55**

quarry—an excavation in the surface of the earth from which stone is obtained for crushed rock or building stone. (ISRM) **D 653, D18**

quarry tile—glazed or unglazed tile, made by the extrusion process from natural clay or shale usually having 6 in.² (39 cm²) or more of facial area. **C 242, C21**

quarter, n—one side of the upper of a shoe or boot from heel to vamp. **F 1646, F13**

quartersawn—a synonym for **edge grain**. **D 9, D07**

quarter wave plate—a device used with a polarizer and analyzer designed to produce circularly polarized light. **E 7, E04**

quartz glass—See **fused silica**. **C 162, C14**

quartzite (commercial definition) (III)—highly indurated, typically metamorphosed sandstone containing at least 95 % free silica, which has a compressive strength of over 117 MPa (17 000 psi). **C 119, C18**

quartzite, ganister, n—for refractories, a rock consisting predominantly of the mineral quartz suitable for the manufacture of silica brick and characterized by a high silica (SiO₂) content and a low percentage of impurities (see Classification C 416). **C 71, C08**

quartzitic sandstone (commercial definition) (II)—sandstone containing at least 90 % free silica (quartz grains plus siliceous cement), which has a compressive strength over 69 MPa (10 000 psi). **C 119, C18**

quasi-binary system—in a ternary or higher order system, a linear composition series between two congruent substances, wherein all equilibria, at all temperatures or pressures, involve only phases having compositions occurring in the linear series, so that the series may be represented as binary on a phase diagram. **E 7, E04**

quasi-isotropic—See **isotropic**. **E 7, E04**

quasi-isotropic laminate—a balanced and symmetric laminate for which a constitutive property of interest, at a given point, displays isotropic behavior in the plane of the laminate. Common quasi-isotropic laminates are (0/±60)s and (0/±45/90)s. **D 3878, D30**

quasi-steady state—state of the solar collector test when the flow rate and temperature of the fluid entering the collector are constant. The exit fluid temperature changes are small and due only to the normal

- change in irradiance that occurs with time for clear sky conditions. **E 772, E44**
- quasi-ternary system**—in a quaternary or higher order system, a planar composition series among three congruent substances, wherein all equilibria, at all temperatures and pressures, involve only phases having compositions occurring upon the plane, so that they may be represented completely upon a ternary phase diagram. **E 7, E04**
- quaternary system**—the complete series of compositions produced by mixing four components in all proportions. **E 7, E04**
- quebracho**—a tanning material extracted from the wood of a South American tree. **D 1517, D31**
- quench aging, *n*—aging** associated with **quenching** after **solution heat treatment**. **A 941, A01**
- quench cracks**—surface discontinuities which usually transverse an irregular or erratic course on the surface of the fastener which may occur because of excessive high thermal or transformation stresses, or both, during fastener heat treatment. **F 1789, F16**
- quench-hardened**—See **hardened**. **F 547, F16**
- quench hardening, *n*—hardening** a steel object by **austenitizing** it, and then cooling it rapidly enough that some or all of the austenite transforms to martensite. **A 941, A01**
- quench hardening**—a treatment for copper-aluminum alloy products consisting of heating above the betatizing temperature followed by quenching to produce a hard martensitic structure. **B 846, B05**
- quenching, *n*—rapid cooling**. **A 941, A01**
- quenching**—see **fritting**. **C 286, B08**
- quenching, *n*—the reduction of fluorescence by a competing deactivating process** resulting from specific interaction between a fluorophor and another substance present in the system. **E 131, E13**
- quenching crack**—a crack formed as a result of thermal stresses produced by rapid cooling from a high temperature—not to be confused with fire crack. **E 7, E04**
- quenching oil, *n*—oil used for cooling metals during a heat-treating operation**. **D 4175, D02**
- Quer-wave (love wave), *W*—dispersive surface wave with one horizontal component, generally normal to the direction of propagation, which decreases in propagation velocity with increase in frequency**. **D 653, D18**
- questioned, *n*—associated with the matter under investigation about which there is some question, including, but not limited to, whether the questioned and known items have a common origin**. **E 1732, E30**
- queue, *n*—a set of tasks stored in memory for use by a device in a specified order. (See **printout queuing**.)** **F 1457, F05**
- queue-rail system**—Synonym for **traffic-rail system**. **E 1481, E06**
- quick break**—a sudden interruption of the magnetizing current. **E 1316, E07**
- quick breaking emulsion**—an emulsion which separates into water and oil within 3 to 10 min after agitation is removed. **E 609, E35**
- quick burst**—Not a preferred term (see **quick burst test, quick burst pressure, and quick burst strength**). **F 412, F17**
- quick burst pressure**—the internal pressure required to bring a piping component to failure when subjected to a quick burst test. **F 412, F17**
- quick burst strength**—the hoop stress resulting from the quick burst pressure. **F 412, F17**
- quick burst test**—an internal pressure test designed to produce failure of a piping component over a relatively short period of time, usually measured in seconds. **F 412, F17**
- quick condition (quicksand)**—condition in which water is flowing upwards with sufficient velocity to reduce significantly the bearing capacity of the soil through a decrease in intergranular pressure. **D 653, D18**
- quick draw, *n*—a short runner**. **F 1773, F08**
- quicklime**—a calcined limestone, the major part of which is calcium oxide or calcium oxide in association with magnesium oxide, capable of slaking with water. **C 51, C07**
- quicklime**—CaO, calcium oxide. **D 6161, D19**
- quicklime sizes**—the different sizes depending upon the type of limestone, kind of kiln used, or treatment subsequent to calcining. The sizes commonly recognized are as follows:
 (1) *large lump*—8 in. (203 mm) and smaller,
 (2) *pebble or crushed*—2½ in. (64 mm) and smaller,
 (3) *ground, screened or granular*—¼ in. (6.4 mm) and smaller, and
 (4) *pulverized*—substantially all passing a No. 20 (850-µm) sieve. **C 51, C07**
- quick test**—see **unconsolidated undrained test**. **D 653, D18**
- quiet zones, *n*—areas of high reflectance (spaces) immediately preceding the start character and following the stop character of a machine-readable symbol as defined for a particular symbology. (See also **clear area**.)** **F 1294, F05**
- quill, *n*—in feathers, the stem or central shaft**. **D 123, D13**
- quill, *n*—in feathers, the stem or central shaft**. **D 7022, D13**
- quill feathers, *n*—feathers which are over 100 mm (4 in.) in length or which have a quill point exceeding 9.5 mm (¾ in.) in length**. **D 123, D13**
- quill feathers, *n*—feathers which are over 100 mm (4 in.) in length or which have a quill point exceeding 9.5 mm (¾ in.) in length**. **D 7022, D13**
- quill point, *n*—in feathers, the section of quill extending beyond the section of barb attachment**. **D 123, D13**
- quill point, *n*—in feathers, the section of quill extending beyond the section of barb attachment**. **D 7022, D13**
- quill shaft, *n*—in feathers, the section of quill from which the barbs emanate**. **D 123, D13**
- quill shaft, *n*—in feathers, the section of quill from which the barbs emanate**. **D 7022, D13**
- quilt, *n*—a bedcovering assembly used primarily for warmth, consisting of an insulating filler secured between two layers of fabric, but generally lighter in weight and thinner than a comforter**. **D 123, D13**
- quilt, *n*—a bedcovering assembly used primarily for warmth, consisting of an insulating filler secured between two layers of fabric, but generally lighter in weight and thinner than a comforter**. **D 7023, D13**
- quilted, *n*—fused or stitched with thread through the upholstery cover material and one or more layers of upholstery material**. **E 176, E05**
- quinoline**—benzo(b)pyridine (C₉H₇N) mol weight 129.15; colorless, refractive oil which darkens on storage; hygroscopic; penetrating odor not as offensive as pyridine; freezing point, -15°C; boiling point, 237.7°C. **D 4790, D16**

R

R₁₀—the portion of a cellulose pulp that is insoluble in 10 % sodium hydroxide using Test Method D 1696 or its equivalent. **D 1695, D01**

R—in a distillation column, abbreviation for reflux ratio. **D 4175, D02**

r—in statistics, abbreviation for repeatability. **D 4175, D02**

R—in statistics, abbreviation for reproducibility. **D 4175, D02**

RA—recycling agent **D 8, D04**

Ra, *n*—in measuring surface finish, the arithmetic average of the absolute distances of all profile points from the mean line for a given distance. **D 4175, D02**

rabbet, *n*—a two-sided, L-shaped, recess in a sash or frame designed to receive glazing. **C 717, C24**

rack, *n*—in warpknitting, a unit of length measure consisting of 480 courses. **D 123, D13**

rack, *n*—in warpknitting, a unit of length measure consisting of 480 courses. **D 4850, D13**

rack—longitudinal offset between adjacent fasteners within strip of collated fasteners. **F 592, F16**

racked fastener—fastener offset in strip. **F 592, F16**

racking—when applied to shear walls, refers to the tendency for a wall frame to distort from rectangular to rhomboid under the action of an in-plane force applied parallel to the wall length. **E 631, E06**

rack length, *n*—in warp knitting, the length of the fabric produced by knitting one rack, measured on the machine under operating take-up tension. **D 123, D13**

rack length, *n*—in warp knitting, the length of the fabric produced by knitting one rack, measured on the machine under operating take-up tension. **D 4850, D13**

rack, plating—a frame for suspending and carrying current to articles during plating and related operations. **B 374, B08**

rack-plating process—fastener coating process in which individual fasteners are placed on a support called a rack which moves the fasteners together through the process steps while providing ready ingress and egress of processing solutions and rinses. In process steps which utilize an electric current, the rack serves to maintain electrical continuity. **F 1789, F16**

radial—coincident with the radius from the pith to the circumference of the tree or log. A radial section is a longitudinal section in a plane that passes through the pith of the tree. **D 9, D07**

radial crushing strength, *n*—the relative capacity of a plain sleeve specimen of sintered metal to resist fracture induced by a load applied between flat parallel plates in a direction perpendicular to the axis of the specimen. **B 243, B09**

radial sectioning—a method of specimen preparation in which a specimen is polished by a cylinder in order to expose compositional changes below the original surface of a specimen with the intent that the depth of these layers can be related to the position on the surface created by the cylinder. **E 673, E42**

radial surface—a longitudinal surface or plane extending wholly or in part from the pith to the bark. **D 9, D07**

radial tire, *n*—a tire constructed so that the ply cords extend from bead to bead at a 90° angle to the centerline of the road. **D 5681, D34**

radian, *n*—the plane angle between two radii of a circle which intersects the circumference of the circle making an arc equal in length to the radius. **D 123, D13**

radian, *n*—the plane angle between two radii of a circle which intersects the circumference of the circle making an arc equal in length to the radius. **D 4849, D13**

radiance, *n*—the rate of radiant emission per unit solid angle and per unit projected area of a source in a stated angular direction from the surface (usually the normal). **C 168, C16**

radiance factor at a point on the surface of a nonself-radiating body, in a given direction under specified conditions of irradiation, *n*—ratio

of the radiance of the body to that of a perfect reflecting or transmitting diffuser, identically irradiated. Symbol: β . **E 349, E21**

radiance factor, β , β_e , *n*—ratio of the radiance from a point on a specimen, in a given direction, to that from the perfect reflecting or transmitting diffuser, similarly irradiated and viewed. **E 284, E12**

radiance (in a given direction, at a point on the surface of a source or receptor or at a point in the path of a beam), *n*—quotient of the radiant flux leaving, arriving at, or passing through an element of surface at this point and propagated in directions defined by an elementary cone containing the given direction by the product of the solid angle of the cone and the area of the orthogonal projection of the element of surface on a plane perpendicular to the given direction. Symbol: L_e , L ; $L_e = d^2\Phi / (d\omega \, dA \, \cos \Theta)$; Unit: Watt per steradian and per square metre, $W \cdot sr^{-1} \, m^{-2}$.

NOTE—Three special cases may be noted:

Case 1—At a point on the surface of a source, in a given direction, radiance is also the quotient of the radiant intensity in the given direction of an element of the surface at this point, by the area of the orthogonal projection of this element on a plane perpendicular to this direction (radiant intensity per unit projected area). $L_e = dI_e / (dA \, \cos \Theta)$.

Case 2—At a point on the surface of a receptor, in a given direction, radiance is also the quotient of the irradiance that is received at this point on a surface perpendicular to the given direction by the solid angle of the elementary cone containing this direction and surrounding the beam which produces this irradiance (perpendicular irradiance per unit solid angle). $L_e = dE_e / d\omega$.

Case 3—On the path and in the direction of an element of a beam, in a nondiffusing, nonabsorbing medium, the radiance is also the quotient of the radiant flux $d\Phi_e$ which transports the beam, by the geometric extent dG of the beam. The geometric extent, which may be defined by two sections of the beam of areas dA and dA' of separation l , and having angles Θ and Θ' between their normals and the direction of the beam is $dG = dA \, \cos \Theta \, d\omega$ where the numerical value in steradians of $d\omega$ is $dA' \, \cos \Theta' / l^2$. $L_0 = d\Phi_e / dG = d^2\Phi_e / (d\omega \, dA \, \cos \Theta)$. In the absence of diffusion, it can be demonstrated in geometrical optics that the optical extent, product of the geometric extent of an element of a beam and the square of the refractive index of the medium of propagation, is an invariant along the length of the beam whatever the deviations that it undergoes by reflection or refraction ($dG \cdot n^2 = \text{constant}$). In consequence, the basic radiance, quotient of the radiance by the square of the refractive index, is invariant along the length of an element of a beam if losses by absorption or by reflection are taken as zero ($L_e \cdot n^2 = \text{constant}$). **E 349, E21**

radiance, L —the flux per unit projected area per unit solid angle leaving a source or, in general, any reference surface. If $d^2\Phi$ is the flux emitted into a solid angle $d\omega$ by a source element of projected area $dA \, \cos \theta$, the radiance is defined as:

$$L = \frac{d^2\Phi}{d\omega \, dA \, \cos \theta}$$

where θ is the angle between the outward surface normal of the area element dA and the direction of observation (unit = $W / sr \cdot m^2$). **E 1316, E07**

radiance, L , L_e , *n*—radiant flux in a beam, emanating from a surface, or falling on a surface, in a given direction, per unit of projected area of the surface as viewed from that direction, per unit of solid angle. **E 284, E12**

radiant, *adj*—pertaining to electromagnetic radiation, with the contributions at all wavelengths weighted equally. **E 284, E12**

radiant efficiency of a source of radiation, *n*—ratio of the radiant flux emitted to the power consumed. Symbol: η_e , η .

NOTE—The radiant efficiency of a source in a limited region of the spectrum may also be considered, that is, the ratio of the radiant flux emitted in this spectral region to the power consumed. **E 349, E21**

radiant emissive power—see **radiant exitance, emitted**. E 772, E44
radiant energy, *n*—energy transmitted as electromagnetic waves.

D 4175, D02

radiant energy—energy transmitted as electromagnetic waves.

E 131, E13

radiant energy, *n*—energy transmitted as electromagnetic radiation.^A

E 284, E12

radiant energy, *n*—energy emitted, transferred, or received as radiation. Symbol: Q_e, Q ; Unit: joule J (1 J = W·s).

NOTE—In ultraviolet radiation therapy and photobiology, this quantity is called “integral dose” (International Photobiology Committee, 1954).

E 349, E21

radiant energy—energy in the form of photons or electromagnetic waves.

E 772, E44

radiant energy, atmospheric—the part of terrestrial radiation that is emitted by the atmosphere.

E 772, E44

radiant energy, blackbody—radiant energy emitted by a (laboratory) blackbody, or radiant energy having that spectral distribution. (Refer to Planck’s law as defined in standard tests).

E 772, E44

radiant energy, circumsolar—radiation scattered by the atmosphere so that it appears to originate from an area of the sky immediately adjacent to the sun. It causes the solar aureole, and its angular extent is directly related to the atmospheric turbidity, being greater with higher turbidity.

E 772, E44

radiant energy, effective nocturnal—energy transfer required to maintain a horizontal upward-facing blackbody surface at the ambient air temperature, in the absence of solar irradiance.

E 772, E44

radiant energy, infrared—radiant energy with wavelengths longer than 770 nm and less than 1 mm (approximately).

E 772, E44

radiant energy, isotropic—diffuse radiant energy that has the same radiance in all directions. See **radiometric properties and quantities**.

E 772, E44

radiant energy, terrestrial—radiant energy emitted by the earth, including its atmosphere.

E 772, E44

radiant exitance at a point on a surface, *n*—quotient of the radiant flux leaving an element of the surface containing the point, by the area of that element. Symbol: M_e, M ; $M_e = d\Phi_e / dA = \int_2 L_e \cos \theta d\omega$. Unit: Watt per square metre, $W \cdot m^{-2}$.

NOTE—The name radiant emittance previously given to this quantity is abandoned because it has given rise to confusion. Thus, the term “emittance” has been used to designate either the flux per unit area leaving a surface (whatever the origin of the flux), the flux per unit area emitted by a surface (flux originating in the surface), or, principally, in certain circles in the United States of America, a quantity without dimensions similar to “emissivity,” but applicable only to a specimen.

NOTE—The expression “self-radiant exitance” ($M_{e,s}$) indicates that the flux considered does not include reflected or transmitted flux.

The expression “thermal-radiant exitance” ($M_{e,th}$) indicates that the flux considered is produced by thermal radiation. These same adjectives (self, thermal) are equally applicable to other quantities, such as radiance, and so forth.

NOTE—In the case of a full radiator (blackbody), the radiance L_e is uniform in all directions. In consequence, when the solid angle is measured in steradians, the radiant exitance has the numerical value $M_e = \pi L_e$.

E 349, E21

radiant exitance at a point on a surface, $M = d\Phi_e / dA$ —the quotient of the radiant flux leaving an element of the surface containing the point, by the area of that element. The exitance may be emitted, transmitted and/or reflected flux, and is measured in watts per square metre ($W \cdot m^{-2}$).

E 772, E44

radiant exitance, emitted—radiant flux emitted per unit surface area.

E 772, E44

radiant exitance, M —the radiant flux per unit area leaving a surface that is,

$$M = \frac{d\Phi}{dA}$$

where:

$d\Phi$ = flux leaving a surface element dA (unit = W/m^2).

NOTE—In general, exitance includes emitted, transmitted and reflected flux.

E 1316, E07

radiant exposure, *n*—time integral of the irradiance at a given point over a specified time interval.

E 284, E12

radiant exposure, *n*—time integral of irradiance, typically reported in joules per square metre, $J \cdot m^{-2}$

G 113, G03

radiant exposure at a point on a surface, *n*—surface density of the energy received. Symbol: H_e, H ; $H_e = dQ_e / dA = \int E_e dt$; Unit: joule per square metre, $J \cdot m^{-2}$.

NOTE—Formerly “irradiation.”

NOTE—Equivalent definition: Product of an irradiance and its duration.

NOTE—In ultraviolet radiation therapy and photobiology, this quantity is called dose (International Photobiology Committee, 1954).

E 349, E21

radiant exposure, H —time integral of irradiance, measured in joules per square metre.

E 772, E44

radiant flux, Φ, n —the time rate of flow of radiant energy; radiant power.

E 284, E12

radiant flux: radiant power, *n*—power emitted, transferred, or received as radiation: Symbol: Φ_e, Φ, P ; $\Phi_e = dQ_e / dt$; Unit: Watt (W).

E 349, E21

radiant flux, $\Phi = dQ/dt$ [Watt (W)]—power emitted, transferred, or received in the form of electromagnetic waves or photons. See **radiometric properties and quantities**.

E 772, E44

radiant flux; radiant power, Φ_e —radiant energy per unit time (unit = W).

E 1316, E07

radiant flux density, *n*—the rate of radiant energy emitted from unit area of a surface in all radial directions of the overspreading hemisphere.

C 168, C16

radiant flux, net—difference between downward and upward (total solar and terrestrial) radiant flux; net flux of all radiant energy across an imaginary horizontal surface.

E 772, E44

radiant flux, net terrestrial—difference between downward and upward terrestrial radiant fluxes; net flux of terrestrial radiant energy.

E 772, E44

radiant flux profile, *n*—the graph relating incident radiant heat energy on the specimen plane to distance from the point of initiation of flaming ignition, that is, 0 mm.

E 176, E05

radiant flux (surface) density at a point of a surface, *n*—quotient of the radiant flux at an element of the surface containing the point, by the area of that element. (See also **irradiance** and **radiant exitance**.) Unit: Watt per square metre, $W \cdot m^{-2}$.

E 349, E21

radiant heat—heat communicated by energy propagated through space and transmitted by electromagnetic waves.

F 1494, F23

radiant intensity, I, I_e, n —the radiant flux per unit solid angle.

E 284, E12

radiant intensity, J, n —the radiant power emitted per unit solid angle in a specified direction.

E 135, E01

radiant intensity of a point source in a given direction, $I = d\Phi / d\Omega$ —quotient of the radiant flux emitted by a source, or by an element of source, in an infinitesimal cone containing the given direction, by the solid angle of the cone, measured in watts per steradian. (Refer to the inverse square law.)

E 772, E44

radiant intensity of a source, in a given direction, *n*—quotient of the radiant flux leaving the source propagated in an element of solid angle containing the given direction, by the element of solid angle. Symbol: I_e, I ; $I_e = d\Phi_e / d\omega$; Unit: Watt per steradian, $W \cdot sr^{-1}$.

NOTE—For a source that is not a point source: The quotient of the radiant flux received at an elementary surface by the solid angle which this surface subtends at any point of the source, when this quotient is taken to the limit as the distance between the surface and the source is increased.

E 349, E21

radiant power—see **radiant flux**. E 772, E44

radiant power, P, n—the rate at which energy is transported in a beam of radiant energy. D 4175, D02

radiant power, P—the rate at which energy is transported in a beam of radiant energy. E 131, E13

radiant power, P, n—the rate at which energy is transported in a beam of radiant energy, preferably expressed in ergs per second or watts. E 135, E01

radiation, n—(1) emission or transfer of energy in the form of electromagnetic waves or particles.

(2) the electromagnetic waves or particles.

NOTE—In general, nuclear radiations and radio waves are not considered in this vocabulary, only optical radiations, that is, electromagnetic radiations (photons) of wavelengths lying between the region of transition to X-rays (1 nm) and the region of transition to radio waves (1 mm). E 349, E21

radiation—the process by which energy is emitted or transferred in the form of photons or electromagnetic waves. (See also **radiant energy**.) E 772, E44

radiation chemical yield, G(x)—the quotient of n(x) by $\bar{\epsilon}$ where n(x) is the mean amount of a specified entity, x, produced, destroyed, or changed by the mean energy, $\bar{\epsilon}$, imparted to the matter (see ICRU Report 33).

$$G(x) = (n(x) / \bar{\epsilon})$$

SI Unit: mol J⁻¹ E 170, E10

radiation coefficient—the quotient of the net radiant exitance of a blackbody (full radiator), by the temperature difference between the blackbody and the surroundings with which it is exchanging radiation. E 772, E44

radiation induced (or enhanced) diffusion—atom movement in the solid, well beyond the typical penetration depth of an incident particle, due to particle beam damage or bombardment induced defects. E 673, E42

radiation pattern, n—the optical pattern of light that leaves the media surface, as described by the radiated light intensity at various angles. F 1294, F05

radiation pyrometer—an instrument for determining temperatures by measuring the radiance (radiant energy per unit area) from an object. E 7, E04

radiation thermometer, n—a radiometer calibrated to indicate the temperature of a blackbody. E 344, E20

radiation thermometer, n—an electronic device that relies on the emitted radiation from a target to access the target's temperature. E 344, E20

radioactivation—an interaction process in which the product nucleus becomes radioactive. E 170, E10

radioactive daughter, n—the direct radioactive decay product of a radionuclide. D 1129, D19

radioactive waste, n—waste that emits radiation, generally alpha or beta particles, often accompanied by gamma. E 833, E06

radioactivity, n—spontaneous nuclear disintegration with emission of corpuscular or electromagnetic radiation, or both. D 1129, D19

radioactivity half-life, n—the unvarying characteristic period of time in which one half of the radioactive atoms of a given radionuclide decay. D 1129, D19

radio frequency (r-f) display—the display of an unrectified signal on the CRT or recorder. E 1316, E07

radiograph—a permanent, visible image on a recording medium produced by penetrating radiation passing through the material being tested. E 1316, E07

radiograph—a permanent, visible image on a recording medium produced by penetrating radiation passing through the material being tested. E 1316, E07

radiographic contrast—the difference in density between an image and its immediate surroundings on a radiograph. E 1316, E07

radiographic equivalence factor—that factor by which the thickness

of a material must be multiplied in order to determine what thickness of a standard material (often steel) will have the same absorption. E 1316, E07

radiographic exposure—see **exposure**. E 1316, E07

radiographic inspection—the use of X rays or nuclear radiation, or both, to detect discontinuities in material, and to present their images on a recording medium. E 1316, E07

radiographic inspection—the use of X rays or nuclear radiation, or both, to detect discontinuities in material, and to present their images on a recording medium. E 1316, E07

radiographic quality—a qualitative term used to describe the capability of a radiograph to show flaws in the area under examination. E 1316, E07

radiographic sensitivity—a general or qualitative term referring to the size of the smallest detail that can be seen on a radiograph, or the ease with which details can be seen. E 1316, E07

radiography—the art, act, or process of making radiographs. E 1316, E07

radiography—the process of producing a radiograph using penetrating radiation. E 1316, E07

radioisotope leak test system—a leak test system which uses a radioactive tracer gas and a detector for measuring the emission from the tracer. E 1316, E07

radioisotopes, n—radionuclides having the same atomic number. D 1129, D19

radiological examination—the use of penetrating ionizing radiation to display images for the detection of discontinuities or to help ensure integrity of the part. E 1316, E07

radiological examination—the use of penetrating ionizing radiation to display images for the detection of discontinuities or to help ensure integrity of the part. E 1316, E07

radiology—the science and application of X rays, gamma rays, neutrons, and other penetrating radiations. E 1316, E07

radiology—the science and application of X rays, gamma rays, neutrons, and other penetrating radiations. E 1316, E07

radiometer, n—a device for measuring radiant power that has an output proportional to the intensity of the input power. E 344, E20

radiometer, n—instrument for measuring radiation in energy or power units. E 349, E21

radiometer—instrument for measuring irradiance in energy or power units. E 772, E44

radiometer—an instrument for measuring the intensity of radiant energy. In infrared thermography, an apparatus that measures the average apparent temperature of the surface subtended by its field of view. E 1316, E07

radiometer, n—a general class of instruments designed to detect and measure radiant energy. G 113, G03

radiometric, adj—pertaining to measurement of quantities associated with radiant energy. E 284, E12

radiometric properties and quantities modifiers—modifiers that can be used to indicate the geometric, spectral, and polarization conditions under which radiometric properties and quantities are evaluated. Radiometric properties and quantities vary with the direction and geometric extent (solid angle) over which the incident or exitant flux, or both, is evaluated, and with the relative spectral distribution of the incident flux and the spectral response of the detector for exitant flux. For reflectance and transmittance, the direction and geometric extent of both the incident beam and exitant beam must be specified. For emittance, only the exitant beam need be specified, and for absorptance, only the incident beam need be specified. The properties also vary with the polarization of the incident flux and the sensitivity to polarization of the collector-detector system for flux incident or exitant at angles greater than about 15° from normal. See the following modifiers: **conical**; **directional**; **hemispherical**; **normal**; and **spectral**. E 772, E44

radiometry, n—measurement of quantities associated with radiation. E 284, E12

radiometry, n—measurement of the quantities associated with radiation. **E 349, E21**

radioscopic inspection—the use of penetrating radiation and radioscapy to detect discontinuities in material. **E 1316, E07**

radioscopy—the electronic production of a radiological image that follows very closely the changes with time of the object being imaged. **E 1316, E07**

radioscopy—the electronic production of a radiological image that follows very closely the changes with time of the object being imaged. **E 1316, E07**

radiosonde, n—a miniature radio transmitter with instruments that is carried aloft (as by an unmanned balloon) for broadcasting by means of precise tone signals or other suitable method the humidity, temperature, pressure, or other parameter every few seconds. **D 1356, D22**

radius of bend, n—the radius of the cylindrical surface of the pin or mandrel that comes in contact with the inside surface of the bend during bending. In the case of free or semi-guided bends to 180° in which a shim or block is used, the radius of bend is one half the thickness of the shim or block. **E 6, E28**

radius of influence of a well—distance from the center of the well to the closest point at which the piezometric surface is not lowered when pumping has produced the maximum steady rate of flow. **D 653, D18**

raggle—same as reglet. **C 717, C24**

raid end band—See **brace band**. **F 552, F14**

rail, n—a horizontal, inclined, or vertical member of a railing system, such as top, intermediate, or bottom member connecting pickets or posts, or both, at specified intervals. (Compare **handrail**.)

rail—See **railing systems, windows and doors**.

rail cap—See **railing systems**.

railing—See **railing systems**. **E 631, E06**

rail, n—a horizontal, inclined, or vertical member of a railing system, such as top, intermediate, or bottom member connecting balusters or posts, or both, at specified intervals. (Compare **handrail**.) **E 1481, E06**

rail—magazine component required for alignment of fastener and directing it into driving channel. **F 592, F16**

rail cap—Synonym for **cap rail**. **E 1481, E06**

rail end—a cup-shaped fitting used with a brace band to connect the top rail or brace to a post. **F 552, F14**

railing—See **banding**. **D 1038, D07**

railing, n—Use **railing system**. **E 1481, E06**

railing return—a bent at the end of a handrail, turning toward the wall or post to which the handrail is attached. **E 631, E06**

railing system—See **railing systems**.

railing return—a bent at the end of a handrail, turning toward the wall or post to which the handrail is attached. **E 1481, E06**

railing system—a framework of horizontal, inclined, vertical, and infill members, including panels and grillwork, for protection of building occupants against fall or injury and for offering safety and convenience in their movement. (Compare **guardrail**.)

railing systems:

baluster, n—(baluster bar) same as **picket**.

balustrade, n—a **railing system** consisting of a row of **pickets** capped by a **handrail**.

bottom rail—the lowest member of a **railing system**, supporting **pickets** or **panels**.

cap, n—a fitting used to close the end of a **pipe**, tubular **post**, **newel**, or **rail**.

cap rail—a **handrail** fastened to the **top rail** of a **railing system**.

collar, n—Same as **escutcheon**.

cover flange—Same as **escutcheon**.

drop cap—the cover of a railing **post** or **newel** that is exposed to view, usually below stringer or **floor**.

easement, n—the curved portion of a **handrail** forming a

transition in the vertical plane between horizontal and inclined sections of **handrail**.

escutcheon, n—a protective or ornamental cover located at the termination of a **post**, **picket**, or **rail** against a tread, **floor**, or wall. Same as **collar**, **cover flange**.

finial, n—an ornamental piece on the top of a **post**, **newel**, or **railing**; frequently in the form of an **urn** or **pineapple**, and so named.

flange plate—a flat (piece) between the end of a **railing** or rail element and the adjoining construction or supporting member.

grab bar—Same as **grab rail**.

grab rail—a short length of **rail** or similar member located for safety or convenience to assist a person in movement.

guardrail system—a **railing system** located for protection of building users at or near the outer edge of a **stair**, ramp, landing, platform, balcony, or accessible roof; at the perimeter of an opening or accessible surface, such as the opening of a **stair**; or at a location where an operating condition requires access limitation to guard against accidental fall and injury. Compare **railingsystem**.

handgrip, n—the part of a **handrail** designed to provide a secure grasp.

handrail, n—a horizontal or sloping member normally grasped by hand for guidance or support.

handrail bracket—a device attached to a wall, **post**, or other surface to support the **handrail**.

handrail height—the vertical distance from the top surface of the **top rail** to the surface of the finished **floor**, top of a ramp, or the nosing line of stair treads.

kick plate—Same as **toe board**.

lamb's tongue—an ornamental curved or tapered fitting terminating a **handrail**, usually tapered to the tip.

lateral scroll—a fitting that curves in a horizontal plane, used to terminate a **handrail**; often ending as a round plate covering the top of a **post**.

mid rail—a rail located between **top** and **bottomrails**.

miter ending—a square, angular, or dovetailed member end, designed to fit an adjacent matching member, thereby providing continuity of profile at the joint.

newel, n—(1) a decorative or structural **post** member, often extending above a **handrail** at the start or end of a **stair** run; usually square or rectangular in cross section, supporting the end of a stair railing or serving as the common support for two stair railings; often supporting a stair stringer and platform. (2) the center **post** of a spiral **stair**.

ogee, n—a molding with a profile having a double curve formed by a convex line turning into a concave line, and resulting in an S-shape.

panel, n—in a **railing system**, a flat element between a **post**, **top rail** and **bottom rail**.

picket, n—one of a series of closely spaced upright members that support the **handrail** in a **railing system**. Same as **baluster**, **baluster bar**.

picket casting—an ornamental element attached to a **picket**.

picket railing system—a system consisting of **posts**, **pickets**, **top rail** and **bottom rail**.

pineapple, n—a **finial** in the form of a pineapple.

pipe railing system—a **railing system** fabricated from **pipe**.

post, n—in **railing systems**, a vertical supporting member. Compare **column**.

rail, n—a horizontal, inclined, or vertical member of a **railingsystem** connecting **pickets** or **posts**, or both, at specified intervals. Compare **handrail**.

rail cap—Same as **cap rail**.

railing, n—Use **railing system**.

railing system—a framework of horizontal, inclined, or vertical members, **panels**, grillwork, or their combinations that

railing system

- support a **handrail**; located at the edge of a **stair** flight, platform, or **floor** as a safety barrier. Compared **guardrail system**, **stair rail system**.
- railing-system penetration limitation*—an arrangement of railing elements designed to prevent passage of a sphere of specified diameter through a **railing system**.
- ramp-rail system*—a **railing system** located alongside a ramp.
- screen, n*—in a **railing system**, a perforated sheet or **wire mesh** in sheet form serving as a **panel**.
- scroll, n*—in a **railing system**, a cast or forged ornamental spiral of convoluted shape serving, for example, as a decorative **panel** or insert.
- side mount*—a railing support that anchors the **post** of a **railing system** to a vertical surface, such as fascia or stair stringer.
- spindle, n*—in a **railing system**, a tapered, round **picket** having a center portion larger in diameter than its ends.
- stair-rail system*—a **rail** or **railing system** located along a **stair** or landing.
- toe board*—in a **railing system**, a vertical plate forming a low curb at the open edge of a stairwell, platform, or floor; to provide a barrier preventing objects from falling beyond it. Same as **kick plate**, **toeplate**.
- toe plate*—Same as **toe board**.
- top rail*—the uppermost member of a **railing system**.
- traffic-rail system*—a **railing system** designed to control the movement of people and requiring special consideration for given conditions.
- transfer-rail system*—a **railing system** designed to support and to permit transfer of body weight in such locations as toilets, showers, and tub enclosures.
- urn, n*—a **finial** in the form of an urn.
- volute, n*—in a **railing system**, an ornamental spiral or *scroll*-shaped form serving, for example, as **handrail** termination.
- wall clip*—a bracket used for anchoring to a wall. Same as **wall flange**.
- wall flange*—Same as **wall clip**.
- wall handrail*—a **handrail** attached to a wall adjacent to a stair, and paralleling the **pitch** of the stair flight; also used along landings, walkways, ramps, and corridors. Same as **wall rail**.
- wall rail*—Same as **wall handrail**.
- wall railing return*—in a **railing system**, a bend at the end of a **wall handrail**, turning toward the wall to which the **handrail** is attached.
- wire mesh*—Same as **screen**.
- railing-system penetration limitation*—See **railing systems**.
- ramp-rail system*—See **railing systems**. E 631, E06
- railing system**—a framework of horizontal, inclined, vertical, and infill members, including panels and grillwork, for protection of building occupants against fall or injury and for offering safety and convenience in their movement. (Compare **guardrail**.) E 1481, E06
- railing-system penetration limitation**—an arrangement of railing elements designed to prevent passage of a sphere of specified diameter through a railing system. E 1481, E06
- railroading, n**—the printing of a continuous mark or line in the plain area of the design that often results in a definite marking or scratching of the engraved cylinder. D 6488, D01
- railroad tracks, n**—a pattern on the printed sheet extending in the machine direction that is comprised of one or more linear regions. D 6488, D01
- rainbowing**—colored patterns in a transparency produced by the photo-elastic molecular nature of the material and stress gradients in the transparency in which certain angles and light polarizations in relation to some windscreen designs may produce localized bands of color in the transparency, often referred to as birefringence. F 2429, F07
- rain density, n*—See **particle concentration**. G 40, G02
- rainfastness**—The maintenance of biological effectiveness of an agrichemical formulation following a rain or overhead irrigation event. E 609, E35
- rainfastness agent**—a material which improves rainfastness. E 1519, E35
- rainwater harvesting, n**—the practice of collecting, storing, and using precipitation from a catchment area such as a roof. E 2114, E06
- raise**—upwardly constructed shaft; that is, an opening, like a shaft, made in the roof of one level to reach a level above. (ISRM) D 653, D18
- raised fiber surface, n**—in *textile fabrics*, intentionally lifted fibers or yarns such as pile, napped, tufted, flocked, or similar surfaces. D 123, D13
- rake**—the sloped edge of a roof at the first or last rafter. D 1079, D08
- RAM**—random access memory. F 1457, F05
- Raman line (band)**—a line (band) that is part of a Raman spectrum. E 131, E13
- Raman shift**—the displacement in wavenumber of a Raman line (band) from the wavenumber of the incident monochromatic beam. E 131, E13
- Raman spectrum**—the spectrum of the modified frequencies resulting from inelastic scattering when matter is irradiated by a monochromatic beam of radiant energy. E 131, E13
- ramming mix, n**—a refractory material, usually tempered with water, that cannot be extruded but that has suitable properties to permit ramming into place to form a monolithic structure. C 71, C08
- ramp-rail system**—a railing system located along the open sides of a ramp. E 631, E06
- random sample*—see **representative sample**. E 631, E06
- ramp-rail system**—a railing system located along the open sides of a ramp. E 1481, E06
- ranch type, adj**—in *shingles*, pertaining to a type of roofing, rectangular in shape, that is lapped at the top and one side. C 1154, C17
- ranch type**—a type of asbestos-cement roofing shingle, rectangular in shape, which is lapped at the top and one side. D 2946, C17
- random assess memory, n**—an electronic data storage system in which the data can be stored and retrieved directly from any memory location. (See **ROM**.) F 1457, F05
- random cause, n**—one of many factors which contribute to variation but which are not feasible to detect and identify since they are random in origin and usually small in effect. D 123, D13
- random composite sample, n**—for *asbestos*, a composite sample in which each individual bag in the lot that is being sampled has an equal chance of being included in the composite sample. D 2946, C17
- random error, n**—the chance variation encountered in all test work despite the closest control of variables. D 4175, D02
- random error, n**—(1) the chance variation encountered in all measurement work, characterized by the random occurrence of deviations from the mean value; (2) an error that affects each member of a set of data (measurements) in a different manner. D 5681, D34
- random error of result, n**—a component of the error which, in the course of a number of test results for the same characteristic, varies in an unpredictable way. E 456, E11
- random errors, n**—errors introduced by the printer, reader, operator, or other system element; errors that are encountered during one scan that may not be encountered during the next scan. F 1294, F05
- randomization, n**—the procedure used to allot treatments at random to the experimental units so as to provide a high degree of independence in the contributions of experimental error to estimates of treatment effects. E 456, E11
- randomization, n**—the procedure used to allot treatments at random to the experimental units so as to provide a higher degree of

independence in the contributions of experimental error to estimates of treatment effects.

NOTE—An essential element in the design of experiments is to provide estimates of effects free from biases due to undetected assignable causes within the experimental space. Randomization is a process to minimize this risk. The operational procedure for assignment *at random* involves the use of random numbers or some similar method for assuring that each unit has an equal chance of being selected for each treatment. **E 1325, E11**

randomized block design, *n*—a design in which the experiment space is subdivided into blocks of experimental units, the units within each block being more homogeneous than units in different blocks. **E 456, E11**

randomized block design, *n*—a design in which the experiment space is subdivided into blocks of experimental units, the units within each block being more homogeneous than units in different blocks.

NOTE—In each block the treatments are allocated randomly to the experimental units within each block. Replication is obtained by the use of two or more blocks, depending on the precision desired, and a separate randomization is made in each block. **E 1325, E11**

randomized block experiment, *n*—a kind of experiment which compares the averages of *k* different treatments that appear in random order in each of *b* blocks. **D 123, D13**

randomized block factorial design, *n*—a factorial experiment run in a randomized block design in which each block includes a complete set of factorial combinations. **E 456, E11**

randomized block factorial design, *n*—a factorial experiment run in a randomized block design in which each block includes a complete set of factorial combinations. **E 1325, E11**

random loading—in fatigue loading, a spectrum loading (straining) where the peak and valley forces (strains) and their sequence result from a random process; the loading (straining) is usually described in terms of its statistical properties, such as the probability density function, the mean, the root mean square, the irregularity factor, and others as appropriate. **E 1823, E08**

random-ordered loading—in fatigue loading, a spectrum loading that is generated from a distinct set of peak and valley forces into a loading sequence by using a specific random sequencing process; a sequence of finite length is usually repeated identically. **E 1823, E08**

random orientation—a condition of a polycrystalline aggregate in which the constituent crystals have orientations completely random with respect to one another. **E 7, E04**

random sample, *n*—for asbestos, a sample in which each individual bag in the lot examined has an equal chance of being included in the sample. **D 2946, C17**

random sample, *n*—a sample selected from a population using random sampling. **E 1605, E06**

random sampling, *n*—the process of selecting units for a sample of size *n* in such a manner that all combinations of *n* units under consideration have an equal or ascertainable chance of being selected as the sample. **D 123, D13**

random sampling—technique for selecting a sample of *n* elements from a population of elements in such a way that each combination of *n* elements has the same probability of being selected. **E 631, E06**

random sampling—in statistical sampling, the process of selecting sample units in such a way that all units under consideration have the same probability of being selected. **E 631, E06**

random sampling—technique for selecting a sample of *n* elements from a population of elements in such a way that each combination of *n* elements has the same probability of being selected. **E 1605, E06**

random sampling—method of sample selection for fasteners in a lot where each fastener has an equal and independent chance of being selected for the sample. **F 1789, F16**

random variance of increment collection (unitvariance)—See *random variance of increment collection (unit variance)* under **variance**.

D 121, D05

D 1356, D22

range—See **analyzer**.

range, *n*—of a thermometer of thermometric system, a set of temperatures within specified lower and upper temperature limits.

E 344, E20

range, *n*—region between the limits within which a quantity is measured, and is expressed by stating the lower and upper range-values. **E 631, E06**

range—the maximum sound path length that is displayed.

E 1316, E07

range—the absolute value of the algebraic difference between the highest and the lowest values in a set of data. **E 1547, E15**

range, *n*—the region between the limits within which a quantity can be measured, which is expressed by stating the lower and upper limits (adapted from E 344). **E 1605, E06**

range—equipment for cooking food by direct or indirect heat transfer from one or more cooking units, to one or more cooking containers. **F 1827, F26**

range, data, *n*—the absolute value of the difference between the highest and lowest values in a set of data. **A 644, A04**

range, exposure—See **exposure scale**. **E 7, E04**

range (of a deformation-measuring instrument)—the amount between the maximum and minimum quantity an instrument can measure without resetting. In some instances provision can be made for incremental extension of the range. **D 653, D18**

range, *R*, *n*—the largest observation minus the smallest observation in a set of values or observations. **E 456, E11**

range, specification (non-statistical), *n*—the absolute value of the difference between the highest (USL) and lowest (LSL) specified values; for compliance with a non-statistical range, each valid individual test result must lie at, or within, the specification limits.

$$LSL \leq \text{All } x_i \leq USL$$

A 644, A04

range, specification (statistical), *n*—the absolute value of the difference between the highest (USL) and lowest (LSL) specified values; for compliance with a statistical range, all calculated values from the mean (\bar{x}) minus *M* times the standard deviation(s) to the mean plus *M* times the standard deviation, where *M* is a matter of agreement between the supplier and purchaser, must not lie outside of the specification limits.

$$LSL \leq \bar{x} - M \times s \quad \text{and} \quad \bar{x} + M \times s \leq USL$$

A 644, A04

rank, *n*—of coal, a classification designation that indicates the degree of metamorphism, or progressive alteration, from lignite to anthracite.

anthracite, *n*—the rank of coal, within the anthracitic class of Classification D 388, such that on the dry and mineral-matter-free basis, the volatile matter content of the coal is greater than 2 % but equal to or less than 8 % (or the fixed carbon content is equal to or greater than 92 % but less than 98 %), and the coal is nonagglomerating.

anthracitic class, *n*—a class of rank consisting of semianthracite, anthracite, and meta-anthracite.

bituminous class, *n*—a class of rank consisting of high volatile C bituminous coal, high volatile B bituminous coal, high volatile A bituminous coal, medium volatile bituminous coal, and low volatile bituminous coal.

high volatile A bituminous coal, *n*—the rank of coal, within the bituminous class of the Classification D 388, such that on the dry and mineral-matter-free basis, the volatile matter content of the coal is greater than 31 % (or the fixed carbon content is less than 69 %), and its gross calorific value is equal to or greater than 14 000 Btu/lb (32.65 MJ/kg) of coal on the moist, mineral-matter-free basis, and the coal is commonly agglomerating.

high volatile B bituminous coal, *n*—the rank of coal, within the

- bituminous class of Classification D 388, such that, on the moist, mineral-matter-free basis, the gross calorific value of the coal in British thermal units per pound is equal to greater than 13 000 (30.24 Mj/kg) but less than 14 000 (32.54 Mj/kg) and the coal commonly agglomerates.
- high volatile C bituminous coal, *n***—the rank of coal, within the bituminous class of Classification D 388, such that, on the moist, mineral-matter-free basis, the gross calorific value of the coal in British thermal units per pound is equal to or greater than 11 500 (26.75 Mj/kg) but less than 13 000 (30.24 Mj/kg) and the coal commonly agglomerates, or equal to or greater than 10 500 (24.42 Mj/kg) but less than 11 500 (26.75 Mj/kg) and the coal agglomerates.
- lignite A, *n***—the rank of coal, within the lignitic class of Classification D 388, such that, on the moist, mineral-matter-free basis, the gross calorific value of the coal in British thermal units per pound is equal to greater than 6300 (14.65 Mj/kg) but less than 8300 (19.31 Mj/kg), and the coal is nonagglomerating.
- lignite B, *n***—the rank of coal, within the lignitic class of Classification D 388, such that, on the moist, mineral-matter-free basis, the gross calorific value of the coal in British thermal units per pound is less than 6300 (14.65 Mj/kg), and the coal is nonagglomerating.
- lignitic class, *n***—a class of rank consisting of lignite A and lignite B.
- low volatile bituminous coal, *n***—the rank of coal, within the bituminous class of Classification D 388, such that, on the dry and mineral-matter-free basis, the volatile matter content of the coal is greater than 14 % but equal to or less than 22 % (or the fixed carbon content is equal to or greater than 78 % but less than 86 %), and the coal commonly agglomerates.
- medium volatile bituminous coal, *n***—the rank of coal, within the bituminous class of Classification D 388, such that, on the dry and mineral-matter-free basis, the volatile matter content of the coal is greater than 22 % but equal to or less than 31 % (or the fixed carbon content is equal to or greater than 69 % but less than 78 %), and the coal commonly agglomerates.
- meta-anthracite, *n***—the rank of coal, within the anthracite class of Classification D 388, such that, on the dry and mineral-matter-free basis, the volatile matter content of the coal is equal to or less than 2 % (or the fixed carbon is equal to or greater than 98 %), and the coal is nonagglomerating.
- semianthracite, *n***—the rank of coal, within the anthracitic class of Classification D 388, such that, on the dry and mineral-matter-free basis, the volatile matter content of the coal is greater than 8 % but equal to or less than 14 % (or the fixed carbon content is equal to or greater than 86 % but less than 92 %), and the coal is nonagglomerating.
- subbituminous class, *n***—a class of rank consisting of subbituminous C coal, subbituminous B coal, and subbituminous A coal.
- subbituminous C coal, *n***—the rank of coal, within the subbituminous class of Classification D 388, such that, on the moist, mineral-matter-free basis, the gross calorific value of the coal in British thermal units per pound is equal to greater than 8300 (19.31 Mj/kg) but less than 9500 (22.10 Mj/kg), and the coal is nonagglomerating.
- subbituminous B coal, *n***—the rank of coal, within the subbituminous class of Classification D 388, such that, on the moist, mineral-matter-free basis, the gross calorific value of the coal in British thermal units per pound is equal to greater than 9500 (22.10 Mj/kg) but less than 10 500 (24.42 Mj/kg) and the coal is nonagglomerating.
- subbituminous A coal, *n***—the rank of coal, within the subbituminous class of Classification D 388, such that, on the moist, mineral-matter-free basis, the gross calorific value of the coal in British thermal units per pound is equal to greater than 10 500 (24.42 Mj/kg) but less than 11 500 (26.75 Mj/kg) and the coal is nonagglomerating.
- ranked set sampling, *n***—a sampling method in which samples are ranked by the use of auxiliary information on the samples and only a subset of the samples are selected for the measurement of the primary variable. **D 5681, D34**
- ranking, *n***—a method in which an assessor arranges a set of samples in order of a defined criterion. **E 253, E18**
- ranney collector**—an underground water collection system sometimes called ranney wells. **D 6161, D19**
- RAP**—reclaimed asphalt pavement **D 8, D04**
- rappel, *n***—the set up of anchors and equipment used to rappel. **F 1773, F08**
- rappel, *v***—to descend by sliding down a rope using equipment or special technique, or both, which applies friction, thereby controlling the speed of descent. **F 1773, F08**
- rappel device, *n***—a friction device used on a rope to control the speed while rappelling. **F 1773, F08**
- rare earth screens**—see **intensifying screen**. **E 1316, E07**
- raspberry**—See **strawberry**. **D 1079, D08**
- raster**—SIMS, the two-dimensional pattern swept out by the deflection of a primary ion beam. **E 673, E42**
- raster output scanner, *n***—an output peripheral, that converts computer data into a bit mapped image, which is sent to the host for storage or a printer for output. (See **ROS**.) **F 1457, F05**
- ratchet lock slider, *n***—a slider with a locking mechanism that permits the slider to slip along the chain upon application of a predetermined force so as to prevent damage that would impair either the service or use of either the slider or chain. **D 123, D13**
- ratchet lock slider, *n***—a slider with a locking mechanism that permits the slider to slip along the chain upon application of a predetermined force so as to prevent damage that would impair either the service or use of either the slider or chain. **D 2050, D13**
- ratchet nail**—bright, regular-stock-steel, $\frac{3}{4}$ to 2 by 0.120-in. nails with single-crest annular ratchet thread, flat $\frac{3}{8}$ -in. head and medium diamond point. **F 547, F16**
- ratchets**—the portion of both the female and the male members possessing inclined teeth that forms the locking mechanism. **F 921, F04**
- ratchet thread**—type of buttress thread, usually annular for engagement with nailing channels, retaining clips, etc. **F 547, F16**
- ratch-setting by number ($L1 \% N$), *n***—the basis for setting roll spacing in the drafting zone, namely, the length exceeded by 1 % of the number of fibers in a test specimen. **D 123, D13**
- ratch-setting by number ($L1 \% N$), *n***—the basis for setting roll spacing in the drafting zone, namely, the length exceeded by 1 % of the number of fibers in a test specimen. **D 7139, D13**
- rate**—the quantity of pesticide applied per unit treated. **E 609, E35**
- rated power, *n***—See **reported power**. **E 1328, E44**
- rated strength**—the strength in tension of a stranded conductor calculated in accordance with specification requirements. **B 354, B01**
- rate, event count (\dot{N}_e)**—the time rate of the event count. **E 1316, E07**
- rate of creep, *n***—the slope of the creep-time curve at a given time. **D 907, D14**
- rate of creep, *n***—the slope of the creep-time curve at a given time. **D 4439, D35**
- rate of creep, *n***—the slope of the creep-time curve at a given time. **E 6, E28**
- rate of growth**—the rate at which a tree has grown. The unit of measure is the number of annual growth rings per inch, measured radially in the trunk or in lumber cut from the trunk. **D 9, D07**
- rate-of-oil flow, *n***—the rate at which a specified oil will pass through a sintered porous compact under specified test conditions. **B 243, B09**

- rate of return**—the percentage yield on an investment per unit time. **E 631, E06**
- rate of return, n** —the percentage yield on an investment per unit time. **E 833, E06**
- rate of rise**—in leak testing, the time rate of pressure increase at a given time in a vacuum system which is suddenly isolated from the pump by a valve. The volume and temperature of the system are held constant during the rate of rise measurement. (See **isolation test**.) **E 1316, E07**
- rate of roughness**—sum of the roughness divided by longitudinal distance covered by the blanking band. **E 867, E17**
- rater, n** —a person having primary responsibility for organizing and conducting the rating process for a building or building-related facility. **E 631, E06**
- rating, n** —a quantitative or qualitative scale for evaluation of a specific property. **D 123, D13**
- rating, n** —statement that, as part of a certificate, sets forth special conditions, privileges, or limitations. See 14 CFR Part 1. **F 2395, F38**
- rating curve, sediment**—a graph of the relationship between stream discharge and sediment discharge at a stream cross section. The graph is sometimes called a *sediment transport curve*. **D 4410, D19**
- rating process, n** —the process of determining the serviceability of a facility for a specified purpose. **E 631, E06**
- rating process, n** (processus d'évaluation)—the process of determining the serviceability of a facility for a specified purpose. **E 1480, E06**
- rating scale, n** —for a topic of facility serviceability, a set of descriptions of combinations of features, in which each description has been selected to indicate a specific level of serviceability on a scale from the lowest to the highest level likely to be encountered. **E 631, E06**
- rating scale (échelle d'évaluation)**—(for an aspect of facility serviceability) set of descriptions of combinations of features, in which each combination has been selected to indicate a specific level of serviceability on a scale from the lowest to the highest level likely to be encountered. **E 631, E06**
- rating scale (échelle d'évaluation)**—(for an aspect of facility serviceability) set of descriptions of combinations of features, in which each combination has been selected to indicate a specific level of serviceability on a scale from the lowest to the highest level likely to be encountered. **E 1480, E06**
- rating score (résultat d'évaluation)**—result (expressed as a number) of finding the combination of features described in a specified rating scale (for one aspect of serviceability) that matches most closely the attributes present in a facility. **E 631, E06**
- rating score (résultat d'évaluation)**—result (expressed as a number) of finding the combination of features described in a specified rating scale (for one aspect of serviceability) that matches most closely the attributes present in a facility. **E 1480, E06**
- ratioed spectrum, n** —the calculated ratio of two single-beam spectra, one of which is a background spectrum. **E 131, E13**
- rationalized erosion rate, n** —in liquid impingement erosion, an erosion rate for impingement tests expressed in dimensionless form as follows: the volume of material lost per unit volume of (liquid or solid) particles impinging, both determined for the same area. **G 40, G02**
- ratio scaling, n** —scaling method in which values are assigned to the intensity of attributes in proportion to the assessor's perception of the intensity of the attributes with reference to a selected standard. **E 253, E18**
- raveled strip test, n** —in fabric testing, a strip test in which the specimen is cut wider than the specified testing width and an approximately even number of yarns are removed from each side to obtain the required testing width. **D 123, D13**
- raveled strip test, n** —in fabric testing, a strip test in which the specimen is cut wider than the specified testing width and an approximately even number of yarns are removed from each side to obtain the required testing width. **D 4850, D13**
- raveling, n** —loss of pavement surface material involving the dislodging of aggregate particles and degradation of the bituminous binder. **E 867, E17**
- raveling, n** —loss of pavement surface material involving the dislodging of aggregate particles and degradation of the bituminous binder. **E 1778, E17**
- raw batch**—a glass charge without cullet. **C 162, C14**
- raw coal**—for the purpose of Test Method D 4749, any coal, regardless of its topsize, that has not been manually or mechanically cleaned. Crushed coal that has not been mechanically cleaned (including coal that has not been through a breaker which normally rejects oversize) is considered to be raw coal. Coal delivered to the surface from an underground mine is considered to be raw coal even when crushing and grinding is done underground. Coal removed from the pit of a surface mine is considered to be raw coal even when breaking and crushing facilities are provided *in the pit*. **D 121, D05**
- raw cotton, n** —ginned lint that has not been subjected to any textile manufacturing process. (See also **ginned lint**.) **D 123, D13**
- raw cotton, n** —ginned lint that has not been subjected to any textile manufacturing process. (See also **ginned lint**.) **D 7139, D13**
- raw count, n** —the enumeration of the cell population not corrected for coincidence. **F 2312, F04**
- raw cullet**—a glass charge made totally of cullet. **C 162, C14**
- raw glaze**—See **raw glaze** under **glaze**. **C 242, C21**
- rawhide**—cattlehide that has been dehaired, limed, often stuffed with oil or grease, and has sometimes undergone other preparation, but has not been tanned. It is used principally for mechanical purposes, such as belt lacings, loom pickers, gaskets, pinions, gears, and for hand luggage, shoe laces, snowshoes, etc. **D 1517, D31**
- raw material**—material components (tubing, insulators, and wires) as received, prior to any manufacturing procedures. **E 344, E20**
- raw material**—material components (tubing, insulators, and wires) used in fabrication of the sheathed thermocouple material. **E 344, E20**
- raw material, n** —a general term used to denote starting materials, reagents, and solvents intended for use in the production of intermediates, APIs, or products. **E 2363, E55**
- raw material manufacturer**—organization which manufactures rod, wire, or bar, used to produce mechanical fasteners, from raw material it manufactures and controls in terms of chemistry and mechanical properties. **F 1789, F16**
- raw petroleum coke, n** —petroleum coke that has not been calcined. **D 4175, D02**
- raw refractory dolomite, n** —see **dolomite, raw refractory**. **C 71, C08**
- raw streak**—an undertanned center layer of leather, visible in cross section as a light-colored streak, especially as applied to heavy leather. **D 1517, D31**
- raw water**—water which has not been treated. Untreated water from wells, surface sources, the sea or public water supplies. **D 6161, D19**
- raw wool, n** —wool or hair of the sheep in the grease, pulled, or scoured state. **D 123, D13**
- raw wool, n** —wool or hair of the sheep in the grease, pulled, or scoured state. **D 4845, D13**
- Rayleigh wave**—an ultrasonic surface wave in which the particle motion is elliptical and the effective penetration is approximately one wavelength. **E 1316, E07**
- Rayleigh wave, v_R (LT^{-1})**—dispersive surface wave in which element has retrograding elliptic orbit with one major vertical and one minor horizontal component both in plane of propagation velocity:

$$v_R = \alpha v_t \text{ with } 0.910 < \alpha < 0.995 \text{ for } 0.25 < v < 0.5$$

rayon—a manufactured fiber composed of regenerated cellulose, as well as manufactured fibers composed of regenerated cellulose in which substituents have replaced not more than 15 % of the hydrogens of the hydroxyl groups.

***rubber**—a manufactured fiber in which the fiber-forming substance is comprised of natural or synthetic rubber, including the following categories:

1. A manufactured fiber in which the fiber-forming substance is a hydrocarbon such as natural rubber, polyisoprene, polybutadiene, copolymers of dienes and hydrocarbons, or amorphous (noncrystalline) polyolefins.

2. A manufactured fiber in which the fiber-forming substance is a copolymer of acrylonitrile and a diene (such as butadiene) composed of not more than 50 % but at least 10 % by weight of acrylonitrile units ($(\text{CzCH}_2\text{CzCH}(\text{Cz}))_n$).

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The term "lastrile" may be used as a generic description for fibers falling within this category.

3. A manufactured fiber in which the fiber-forming substance is a polychloroprene or a copolymer of chloroprene in which at least 35 % by weight of the fiber-forming substance is composed of chloroprene units ($(\text{CzCH}_2\text{CzClC}_x\text{CH}(\text{Cz})\text{CH}_2\text{Cz})_n$).

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D 123, D13

rayon pulps—pulps used in the manufacture of rayon, and subject to various specifications by the manufacturers, including those of purity, moisture content, sheet properties, and viscosity.

D 1695, D01

RCRA—Resource Conservation and Recovery Act of 1976.

E 631, E06

RCRA generators—those persons or entities that generate hazardous wastes, as defined and regulated by RCRA.

D 5681, D34

RCRA generators list—list kept by EPA of those persons or entities that generate hazardous wastes, as defined and regulated by RCRA.

D 5681, D34

RCRA TSD facilities—those facilities on which treatment, storage, or disposal, or a combination thereof, of hazardous wastes takes place, as defined and regulated by RCRA.

D 5681, D34

RCRA TSD facilities list—list kept by EPA of those facilities on which treatment, storage, or disposal, or a combination thereof, of hazardous wastes takes place, as defined and regulated by RCRA.

D 5681, D34

R-curve, *n*—a plot of crack-extension resistance as a function of stable crack extension.

C 1145, C28

R-curve—a plot of crack-extension resistance as a function of stable crack extension, Δa_p or Δa_e .

E 1823, E08

R_a and b , *n*—for the purpose of this test method for color, the daylight color of opaque cotton specimens represented by points in a space as described by Hunter in terms of three color scales: reflectance, R_d , and the chromaticity coordinates for redness or greenness, $+a$ and yellowness or blueness, $+b$.

D 123, D13

R_d and $+b$, *n*—for the purpose of this test method for color, the daylight color of opaque cotton specimens represented by points in a space as described by Hunter in terms of three color scales: reflectance, R_d , and the chromaticity coordinates for redness or greenness, $\pm a$ and yellowness or blueness, $\pm b$.

D 7139, D13

RDF-5—solid fuel derived from municipal solid waste in which the processed combustible fraction is densified (compressed) into the form of pellets, cubettes or briquettes.

D 5681, D34

reach—the section of a sewer between structures.

C 896, C04

reactant—in grouting, a material that reacts chemically with the base component of grout system.

D 653, D18

reaction—any change in chemical composition accompanied by a change of enthalpy.

E 1142, E37

reaction, *n*—any transformation of material accompanied by a change of enthalpy which may be endothermic or exothermic.

E 1445, E27

reaction effect, *n*—the personnel injury, facility damage, product loss, downtime, or mission loss that could occur as the result of an oxygen fire.

G 126, G04

reaction hydrogen embrittlement (RHE)—hydrogen can react with itself, with the matrix, or with a foreign element in the matrix and form new phases that are usually quite stable, and embrittlement is not reversible.

F 2078, F07

reaction induction time (RIT) value, *n*—the time a chemical compound or mixture may be held under isothermal conditions until it exhibits a specified exothermic reaction.

E 1445, E27

reaction isotherm—in a temperature-concentration phase diagram, a tie-element at constant temperature, representing univariant equilibrium among three or more phases.

E 7, E04

reaction isotherm—a temperature-concentration phase diagram, a tie-element at constant temperature representing univariant equilibrium among three or more phases, (E 7, E04).

E 1142, E37

reaction rate—the number of a given reaction that occur per target nucleus per unit time. When appropriate this term may be interpreted as a probability of reaction per unit time.

E 170, E10

reaction to fire, *n*—response of a material in contributing by its own decomposition to a fire to which it is exposed, under specified conditions.

E 176, E05

reactivation (revivification)—oxidation processes for restoring the adsorptive properties of a spent sorbent.

D 2652, D28

reactive aggregate—an aggregate containing siliceous material (usually in amorphous or crypto-crystalline state) which can react chemically with free alkali in the cement.

D 653, D18

reactive monomer, *n*—in solventless electrical varnish, a substance that, when added to a resin, will combine chemically with that resin under specified conditions.

D 1711, D09

reactive particulates, *n*—a particle or particles present in a clay body, which when near the surface may flake off or cause an eruption (pop-outs) of the surface when exposed to the weather.

C 43, C15

reactivity—reactivity is the reaction between substances, which can be monitored by some measure, either qualitative or quantitative. In the Lime Industry, it is commonly used to refer to the reaction between limestone, quicklime and/or a related material and another substance such as water, acid or SO_x .

C 51, C07

reactivity, *n*—rate at which another material will form compounds with carbon or graphite.

C 709, D02

reactivity—the ability to react. For proper use of the term, the reaction in question and the conditions should be stated and the parameter used in measuring reactivity indicated, such as rate, uniformity, or the like.

D 1695, D01

reactivity, *n*—rate at which another material will form compounds with carbon or graphite.

D 4175, D02

read area—one of several terms used to refer to the scan path or scan area.

F 149, F05

read area, *n*—area covered by a scanner. Bar codes must reliably pass through the read area with the length of the symbol parallel to the scan plane.

F 1294, F05

reader, *n*—a device used for machine reading of bar codes that usually consists of a scanner, a decoder, and a data communications interface.

F 1294, F05

reading, *n*—in dataacquisition, the reduction of data points that represent the operating conditions observed in the time period as defined in the test procedure.

D 4175, D02

reading, *n*—numerical value obtained from a digital display or indicated on a scale or dial of an apparatus or instrument.

E 631, E06

reading, *n*—numerical value obtained from a digital display or indicated on a scale or dial of an apparatus or instrument.

E 1605, E06

- read ink*—See **scan ink**. F 149, F05
- read only memory, *n***—a form of electronic memory from which the system can extract information, but which cannot be altered or added to. F 1457, F05
- readout instrumentation*—See **analyzer**. D 1356, D22
- read-through, *n***—an effect observed on thin surfaces coated with leaded paint on the far side that falsely increases an XRF measurement on the near side. E 1605, E06
- ready-mixed plaster, *n***—a calcined gypsum plaster with aggregate added during manufacture. C 11, C11
- ready temperature**—a predetermined starting temperature point for the washing energy test, which may vary with each dishwasher. F 1827, F26
- reagent**—a chemical used to react with another chemical, often to confirm or deny the presence of the second chemical. E 1605, E06
- reagent blank**—a reference standard or correction factor obtained by subjecting one or more reagents to test conditions. D 4790, D16
- reagent blank**—a digestate that reflects the maximum treatment given any one sample within a sample batch except that it has no sample initially placed into the digestion vessel. (The same reagents and processing conditions that are applied to field samples within a batch are also applied to the reagent blank.) E 631, E06
- real area of contact, *n***—*in tribology*, the sum of the local areas of contact between two solid surfaces, formed by contacting asperities, that transmit the interfacial force between the two surfaces. (Contrast with **apparent area of contact**.) G 40, G02
- real discount rate**—the rate of interest reflecting that portion of the time value of money related to the real earning power of money over time.
- real dollars*—See **constant dollars**.
- rebuild*—See **building modification**. E 631, E06
- real discount rate, *n***—the rate of interest reflecting that portion of the time value of money related to the real earning power of money over time. E 833, E06
- real dollars, *n**—See **constant dollars**. E 833, E06
- real image**—a reproduction of an object by an optical system which gathers light from an object point and transforms it into a beam that converges toward another point. E 1316, E07
- real property**—land and rights in land, ground improvements, utility distribution systems, and buildings and other structures, including any fixtures permanently installed therein. Real property is tangible property other than moveable property or tangible intellectual property. E 2135, E53
- real-time radioscopy**—radioscopy that is capable of following the motion of the object without limitation of time. E 1316, E07
- real-time radioscopy**—radioscopy that is capable of following the motion of the object without limitation of time. E 1316, E07
- ream**—in flat glass, layers of glass that are not homogeneous with the main body of the glass. C 162, C14
- ream of paper (news and wrapping), *n***—500 sheets each 610 by 914 mm (24 by 36 in.). D 4175, D02
- rearfoot stability**—the stability of the heel seat. (See **stability**) F 869, F08
- rearm delay time*—see **time, rearm delay**. E 1316, E07
- reboil**—reappearance of bubbles in molten glass after it previously appeared plain. C 162, C14
- reboiling**—gas evolution occurring and recurring during repeated firing of the ground coat; sometimes a defect. C 286, B08
- rebonded fused grain refractory, *n***—a fired refractory brick or shape made predominantly or entirely from fused grain. C 71, C08
- rebound, *n***—the gunned material not adhering to the gunned or shotcreted surface during the gunning process. C 71, C08
- rebuild, *v**—to return to **building** to its previous state or condition. E 631, E06
- recalcitrant**—a substance that is resistant to microbial degradation. F 1600, F20
- recalescence**—the increase in temperature which occurs after under-
- cooling because the rate of liberation of heat during transformation of a material exceeds the rate of dissipation of heat. E 7, E04
- recalescence, *n***—the sudden increase in temperature of reference material in the supercooled state upon nucleation and crystal growth, due to the release of latent heat of fusion of the reference material. E 344, E20
- receiver, *n***—any individual or organization who receives or accepts the product delivered by the supplier. D 4175, D02
- receiver, *n***—the portion of a photometric instrument that receives the viewing beam from the specimen, including a collector such as an integrating sphere, if used, often the monochromator or spectral filters, the detector, and associated optics and electronics. E 284, E12
- receiver**—in solar energy systems, that part of the solar collector to which the solar irradiance is finally directed or redirected, and includes the absorber and any associated glazings through which the redirected energy must pass. E 772, E44
- receiver plane, *n***—the plane containing the specimen normal and the axis of the receiver. E 284, E12
- receiving room**—*in architectural acoustical measurements*, the room in which the sound transmitted from the source room is measured. C 634, E33
- receptor, *n***—humans or other species potentially at risk from exposure to contaminant(s) at the point(s) of exposure. D 5681, D34
- receptor, *n***—a cellular structure that mediates the physiological response to the presence of physical or chemical agents. E 253, E18
- receptor, *n**—see **receiver**. E 284, E12
- receptor**—the component of the carbonless papers which is chemically coated or treated to develop or receive the colorless dyes or pigments respectively. F 549, F05
- receptor, *n***—the material which receives on its surface an image from a thermal printing process. F 1623, F05
- recessed edge, *n**—see **tapered edge**. C 11, C11
- recipe, *n***—a formula, mixing procedure, and any other instructions needed for the preparation of a product. D 1566, D11
- recipient, *n***—the individual or organism into whom materials are grafted or implanted. F 2312, F04
- reciprocal lattice**—a lattice of points each of which represents a set of planes in the crystal lattice, such that a vector from the origin of the reciprocal lattice to any point is normal to the crystal planes represented by that point and has a length which is the reciprocal of the plane spacing. E 7, E04
- reciprocal linear dispersion, *n***—the derivative $d\lambda/dx$ where λ is the wavelength and x is the distance along the spectrum. E 135, E01
- reciprocity**—bilateral relationship where both parties have the same rights and obligations towards each other, (ISO Guide 2). E 1187, E36
- reciprocity law, *n***—the statement that in a photochemical reaction a constant effect is produced if the product of time and radiant power is a constant. E 135, E01
- recirculating dip tank**—a dip tank provided with a means for keeping the slip in constant circulation. C 286, B08
- recirculating nozzle*—see **by-pass nozzle**. E 1620, E29
- reclaim**—overspray that is removed from the spray booth and reconditioned for use. C 286, B08
- reclaim, *n**—See **reclaimed rubber**, the preferred term. D 1566, D11
- reclaimed asphalt pavement (RAP), *n***—asphalt pavement or paving mixture removed from its original location for use in recycled asphalt paving mixture. D 8, D04
- reclaimed, rosin, *n***—rosin that has been recovered or reclaimed by any means from waste or deteriorated material, provided that the concentration of rosin acids is not below that normal for rosin, and any residual or contaminating component from the waste material itself or from any article used in the recovery process is not in sufficient quantity to cause the physical or chemical properties of the reclaimed product to differ materially from those of rosin. D 804, D01

reclaimed rubber, n

reclaimed rubber, n—vulcanized rubber treated by a combination of heat, chemical agents, and intense kneading to give a material with essentially its pre-vulcanized plasticity, which is useful as a rubber compounding material. **D 1566, D11**

reclaiming—the removal of contaminants and products of degradation such as polar, acidic, or colloidal materials from used electrical insulating liquids by chemical or adsorbent means. **D 2864, D27**

reclaiming, n—the use of cleaning methods during recycling primarily to remove insoluble contaminants, thus making the oil suitable for further use. The methods may include settling, heating, dehydration, filtration, and centrifuging. **D 4175, D02**

reclamation, n—actions taken to restore mined land to a post mining land use approved by the regulatory authority. **E 2201, E50**

recoatability—the application characteristics of a polish and the appearance of the film after successive coatings to a surface. **D 2825, D21**

recognition agreement—agreement that is based on the acceptance by one party of results, presented by another party, from implementation of one or more designated functional elements of a certification system, (ISO Guide 2). **E 1187, E36**

recognition test, n—a family of procedures that are based exclusively on responses that are elicited by the examinee's identification of crime-related stimuli that have been imbedded among irrelevant but similar stimuli. Among the more common recognition tests are: the Peak of Tension, Concealed Information Test, reaction time tests, saccadic eye movement test, and evoked potentials P300 odd-ball paradigm tests. The acquaintance (or stimulus) test could also be considered a recognition test. Recognition tests require that the test developer know the crime-related information so that it can be determined whether the examinee also knows this information. This limitation restricts the usefulness of recognition tests to only those circumstances. In contrast to deception tests, recognition tests are not designed to test for involvement in a crime, but only whether the examinee is familiar with the crime details. **E 2035, E52**

recognized laboratory—a laboratory recognized under an Accreditation Program. **E 1605, E06**

recoil implantation or knock-on—the injection, due to collisions caused by incident particles, of surface or near surface atoms into the bulk along the path of the incident beam. **E 673, E42**

recommendation, n—in building constructions, a written suggestion for policy, practice, conduct, design, or material, implying endorsement but not requiring compliance (see **guideline**). **E 631, E06**

reconciliation—a comparison of two or more estimate values by independent cost professionals for the purpose of reaching consistency in the estimate assumptions, parameters, and scope of work. **reconstruct**—See **building modification**.

reconstruction—See **building modification**. **record set drawing**—See **drawing**. **E 631, E06**

reconciliation, n—a comparison of two or more estimate values by independent cost professionals for the purpose of reaching consistency in the estimate assumptions, parameters, and scope of work. **E 833, E06**

reconditioning—the removal of insoluble contaminants, moisture, and dissolved gases from used electrical insulating liquids by mechanical means. **D 2864, D27**

reconstituted sample—a sample of frozen ground which has been permitted to thaw before being refrozen for the performance of mechanical and other tests. **D 7099, D18**

reconstruct, v—to reproduce in the exact form and detail a **building**, structure, or **artifact** as it appeared at a specific period in time. **E 631, E06**

reconstruction, n—the act or process of reproducing by new construction the exact form and detail of a vanished **building**, other structure, or **artifact** as it appeared at a specific period in time. **E 631, E06**

record, n—a document stating results achieved or providing evidence of activities. **E 1605, E06**

recorded land title records—records to be searched during a chain of title search, including records of fee ownership, leases, land contracts, easements, liens, and other encumbrances on or of the property recorded in the place where land title records are recorded, by law or custom, for the local jurisdiction in which the property is located. (Such records are commonly kept by a municipal or county recorder or clerk.) Such records may be obtained from title companies or from the local government agency directly. **D 5681, D34**

recorded land title records—records of fee ownership, leases, land contracts, easements, liens, and other encumbrances on or of the property recorded in the place where land title records are, by law or custom, recorded for the local jurisdiction in which the property is located. (Commonly, such records are kept by a municipal or county recorder or clerk.) Such records may be obtained from title companies or directly from the local government agency. Information about the title to the property that is recorded in a U.S. district court or any place other than where land title records are, by law or custom, recorded for the local jurisdiction in which the property is located, are not considered part of recorded land title records. **D 5681, D34**

recording media—material capable of capturing or storing, or both, a radiological image in digital or analog form. **E 1316, E07**

recording medium—a film or detector that converts radiation into a visible image. **E 1316, E07**

recording medium—a light-sensitive material which detects the interference between the object beam and the reference beam. Typical recording media used in holography are silver halide film, thermoplastic film and electronic detectors, such as video tubes and CCD arrays. **E 1316, E07**

record set drawing—See **drawing**. **E 1480, E06**

record set drawing (as-built drawing), n (dessin de l'ouvrage fini (dessin d'après exécution))—construction drawing revised to show changes made during the construction process, usually based on marked-up prints, drawings, and other data furnished by the contractor. **E 631, E06**

records of emergency release notifications (SARA § 304)—Section 304 of EPCRA or Title III of SARA requires operators of facilities to notify their local emergency planning committee (as defined in EPCRA) and State emergency response commission (as defined in EPCRA) of any release beyond the facility's boundary of any reportable quantity of any extremely hazardous substance. Often the local fire department is the local emergency planning committee. Records of such notifications are "records of emergency release notifications" (SARA § 304). **D 5681, D34**

recoverable elongation (CE), n—of rope, elongation which may be reclaimed after a period of relaxation after the rope was cyclic tensioned. **D 123, D13**

recovered material, n—materials and byproducts that have been separated, diverted, or removed from the solid waste stream, but not including those materials and byproducts generated from and reused within an original manufacturing process. **D 1968, D06**

recovered materials, n—waste material and by-products which have been recovered or diverted from the waste stream, but such term does not include those materials and by-products generated from, and commonly used within, an original manufacturer process. **E 2114, E06**

recovered paper material, n—paper materials that have been separated, diverted, or removed from the solid waste stream excluding the virgin content of mill broke, for the purpose of use, reuse, or recycling, whether or not such materials require subsequent separation and processing. **D 1968, D06**

recovering—the process of covering an existing roofing system with a new roofing system. **D 1079, D08**

recovery, n—the percent of the valuable component (that is, Btu or combustible) from the feed that reports to the froth concentrate product. **D 121, D05**

recovery, *n*—the degree to which a rubber product returns to its normal dimensions after being distorted. **D 1566, D11**

recovery, *n*—the obtaining of cells or tissues which may be used for the production of TEMPs. **F 2312, F04**

recovery, *delayed elastic*—See **delayed elastic recovery**.
D 4848, D13

recovery *immediate elastic*—See **immediate elastic recovery**.
D 4848, D13

recovery, percent, *n*—the amount of a material actually recovered by an assay using a prescribed procedure, or obtained from a process, as a percentage of the as-received material. **D 5681, D34**

recovery *tensile strain*—See **tensile strain recovery**. **D 4848, D13**

recovery time—the time required for a test system to return to its original state after it has received a signal. **E 1316, E07**

recovery time—the time from the removal of the food product from the cooking equipment until the cooking medium, cavity, or surface (see **cooking medium, cooking cavity, or cooking surface**) is back up to temperature as indicated by thermostat(s) controlling the cooking medium, cavity, or surface cycling at their set point(s), *t_{recovery}*. **F 1827, F26**

recovery—Y (conversion)—the ratio of product quantity (permeate stream flow rate) over the feed quantity (feed stream flow rate), given as fraction or in percent. **D 6161, D19**

recrystallization, *n*—the formation of a new grain structure through a nucleation and growth process. **A 941, A01**

recrystallization—the formation of a new grain structure through nucleation and growth commonly produced by subjecting a metal, that may be strained, to suitable conditions of time and temperature. **E 7, E04**

recrystallization annealing, *n*—**annealing** a cold-worked steel object to produce a new grain structure without a change in phase. **A 941, A01**

recrystallization temperature, *n*—the approximate minimum temperature at which recrystallization of a cold-worked steel object occurs within a specified time. **A 941, A01**

recrystallized grain size—(1) the grain by heating following cold work where the time and temperature are so chosen that, while recrystallization is complete, essentially no grain growth has occurred.

(2) in aluminum and magnesium alloys, the grain size after recrystallization, without regard to grain growth or the recrystallization conditions. **E 7, E04**

recrystallized limestone—a limestone in which a new pattern of crystallinity has pervasively replaced the crystal orientation in the original clastic particles, fossils or fossil fragments, and interstitial cement. The new generation of crystals, encompassing both fragmental and matrix materials, extends across boundaries between former crystals. The new crystals generally are larger than those of the original rock. Evidence of original textures may or may not be retained. See also **marble** (next section). **C 119, C18**

rectal temperature, *t_{br}*, *n*—temperature in the anal canal as measured by a **contact thermometer**. **E 344, E20**

rectification—the conversion of alternating into direct current. **B 374, B08**

rectifier—a device that converts alternating into direct current by virtue of a characteristic permitting appreciable flow of current in only one direction. **B 374, B08**

recuperative furnace—a melting furnace having a recuperator. **C 162, C14**

recuperator—a continuous heat exchanger in which heat from exhaust gases is conducted through flue walls to incoming air. **C 162, C14**

recyclable, *adj*—capable of being removed, separated, or diverted from the solid waste stream in an available program, established by, but not limited to, manufacturers, retailers, or municipalities; processed and returned to use in the form of raw materials or products. **D 996, D10**

recyclable cartridge—a cartridge that is recyclable by its manufac-

turer through an established recycling program that the manufacturer makes available to the majority of its customers. **F 335, F05**

recycle, *v*—a multiphased processing that includes removal, separation, and/or diversion, of materials from the solid waste stream; use of such materials as raw materials for the manufacture of new products; and the use of the new product. **D 1968, D06**

recycle, *v*—recovering or reprocessing materials for use in the form of raw materials in the manufacture of new products other than fuel for producing heat or power by combustion. **E 2114, E06**

recycled, *adj*—diverted, separated, or removed from the solid waste stream, processed and returned to use in the form of raw materials or products. **D 996, D10**

recycled asphalt paving mixture, *n*—a mixture of reclaimed asphalt pavement with the inclusion, if required, of asphalt cement, emulsified asphalt, cut-back asphalt, recycling agent, mineral aggregate, and mineral filler. **D 8, D04**

recycled cartridge—a used cartridge that contains some or all parts that have been reused. **F 335, F05**

recycled content, *n*—the percent of a packaging material that is composed of recycled material. **D 996, D10**

recycled content, *n*—the sum, normally expressed as a percent by weight, of post-industrial or pre-consumer recycled material plus post-consumer recycled material. **F 141, F06**

recycled content paper, *n*—a paper product containing recycled fiber expressed as a percentage of total fiber weight, or a paper product containing recovered material (excluding wood residues and sawdust) expressed as a percentage of total product weight. **D 1968, D06**

recycled content products, *n*—products that contain **pre-consumer** or **post-consumer** materials as all or part of their feedstock. **E 2114, E06**

recycled engine coolant, *n*—engine coolant formulated using other than virgin materials. **D 4725, D15**

recycled fiber, *n*—*in paper*, fiber derived from recovered material, excluding wood residues and sawmilling residues, which has been repulped or reintroduced into the paper manufacturing process and made into a product or form usable in the manufacture of a product. **D 1968, D06**

recycled fiber content, *n*—the percentage of recycled fiber, by total fiber weight, of a paper product. **D 1968, D06**

recycled paper, *n*—a paper product whose fiber content consists totally of recycled fiber. **D 1968, D06**

recycled plastic, *n*—those plastics composed of post-consumer material or recovered material only, or both, that may or may not have been subject to additional processing steps of the types used to make products such as recycled-regrind or reprocessed or reconstituted plastics. **D 883, D20**

recycled wool, *n*—*as defined in the Wool Products Labeling Act as amended in 1980*, “the resulting fiber when wool has been woven or felted into a wool product which, without ever having been utilized in any way by the ultimate consumer, subsequently has been made into a fibrous state, or the resulting fiber when wool or reprocessed wool has been spun, woven, knitted, or felted into a wool product which, after having been used in any way by the ultimate consumer, subsequently has been made into a fibrous state.” **D 123, D13**

recycled wool, *n*—*as defined in the Wool Products Labeling Act as amended in 1980*, “the resulting fiber when wool has been woven or felted into a wool product which, without ever having been utilized in any way by the ultimate consumer, subsequently has been made into a fibrous state, or the resulting fiber when wool or reprocessed wool has been spun, woven, knitted, or felted into a wool product which, after having been used in any way by the ultimate consumer, subsequently has been made into a fibrous state.” **D 4845, D13**

recycling, *n*—*in petroleum technology*, the acquisition of oil that has become unsuitable for its intended use, and processing it to regain useful materials. **D 4175, D02**

recycling agent (RA), *n*—a blend of hydrocarbons with or without

recycling agent (RA), *n*

minor amounts of other materials that is used to alter or improve the properties of the aged asphalt in a recycled asphalt paving mixture. **D 8, D04**

red—that temperature at which the intensity of 650 nm light reflected by the liquid crystal is maximum, symbolized as T^{*650} . **E 344, E20**

red edge—{archaic} numerous rouge pits located around the edges of a large sheet of polished plate glass. **C 162, C14**

redox (ORP) electrode—a metallic electrode, usually platinum, used to follow reversible oxidation-reduction reactions. The potential developed between the redox electrode and reference electrode is a Nernstian function of the ratio of a species in two different oxidation states. Redox (ORP) electrodes are primarily used to determine a species in one oxidation state by titration with a reagent that oxidizes or reduces the species being determined. **D 4127, D19**

redox (ORP) potential—the potential developed by a metallic electrode when placed in a solution containing a species in two different oxidation states. Some sensing electrodes, notably the early silver billet electrodes, act as redox (ORP) electrodes as well as sensing electrodes in certain types of solutions, leading to measurement errors. **D 4127, D19**

redox (ORP) titration—a titration in which the ratio of two different oxidation states of a species is changed by the incremental addition of an oxidizing or reducing agent. A redox (ORP) electrode, which responds to the logarithm of the ratio of the activities of the two oxidation states, is used to follow the titration. Among the many substances that can be determined in this manner are H_2O_2 , I_2 , Fe^{+3} , MnO_4^- , and Sn^{+4} . Differential titrations are possible in some cases. **D 4127, D19**

redox potential—the potential of a reversible oxidation-reduction electrode measured with respect to a reference electrode, corrected to the hydrogen electrode, in a given electrolyte. **G 15, G01**

reduced diameter body—fastener having a body diameter not less than the minimum pitch diameter of its thread nor more than its minimum full body diameter. **F 1789, F16**

reduced metal powder, *n*—metal powder produced, without melting, by the chemical reduction of metal oxides or other compounds. **B 243, B09**

reduced viscosity—see **viscosity, reduced**. **D 1695, D01**

reducible sulfur—any form of sulfur or sulfur compounds in paper or paperboard that can be converted to hydrogen sulfide on treatment with a metal such as aluminum and an acid under the conditions of a specified test; it is a measure of the quantity of sulfur compounds in the paper or paperboard that may react with metals to cause tarnishing. **D 1968, D06**

reducing agent—a compound that causes reduction, thereby itself becoming oxidized. **B 374, B08**

reducing agent—a batch ingredient that lowers the state of oxidation of the melt. **C 162, C14**

reducing end groups—those terminal glucose units in cellulose or its derivatives in which the 1-position is not substituted or involved in a glycosidic linkage. These end groups will reduce Fehling's solution or similar reagents. **D 1695, D01**

reducing substances—impurities in pyridine that decolorize a solution of potassium permanganate of specified composition in Method D 2031. **D 4790, D16**

reduction—a reaction in which electrons are added to a reactant. More specifically, the addition of hydrogen or the abstraction of oxygen. Such a reaction takes place, for example, at the cathode in electrolysis. **B 374, B08**

reduction—the gain of electrons by a constituent of a chemical reaction. **G 15, G01**

reduction of area, *n*—the difference between the original cross-sectional area of a tension test specimen and the area of its smallest cross section. The reduction of area is usually expressed as a percentage of the original cross-sectional area of the specimen. **E 6, E28**

reduction of area—difference, expressed as a percentage, of the

original cross sectional area of a tensile test specimen at its minimum cross section after fracture. **F 1789, F16**

reed mark, *n*—*inwoven fabrics*, a crack between groups of warp ends, either continuous or at intervals. **D 123, D13**

reed mark, *n*—*inwoven fabrics*, a crack between groups of warp ends, either continuous or at intervals. **D 3990, D13**

reedy warp—See **reed mark**. **D 3990, D13**

reel—a cylindrical device that has a rim at each end and an axial hole for a shaft or spindle, and on which the product is wound to facilitate handling and shipping. (Also called a “spool.”) **B 846, B05**

reentrant corner—an inside corner of a surface, producing stress concentrations in the roofing or waterproofing membrane. **D 1079, D08**

reevaluation—a visual evaluation/risk assessment that is performed according to a Standard Reevaluation Schedule. **E 1605, E06**

referee sample, *n*—*for asbestos*, a sample on which acceptability is based. Acceptability shall be based on a composite sample if the lot is 200 bags or less, or on a master composite sample if over 200 bags, but not in excess of 2000 bags. **D 2946, C17**

referee test—a test made to settle a disagreement as to conformance to specified requirements. **F 412, F17**

reference beam—laser radiation impinging directly upon the recording medium through optical components and which typically does not contain information about the test object. In some tests, the reference beam may be reflected or scattered from a portion of the object surface. In this case, any object information contained in the reference beam is cancelled in the object beam by the interference between the object beam and the reference beam. **E 1316, E07**

reference beam angle—the angle formed between the center line of the reference beam and the normal to the recording medium. **E 1316, E07**

reference block—a block that is used both as a measurement scale and as a means of providing an ultrasonic reflection of known characteristics. **E 1316, E07**

reference cell calibration constant, *n*—a number that expresses the calibration of a photovoltaic reference cell in terms of short-circuit current per unit incident irradiance at a given temperature. **E 1328, E44**

reference coil—a coil or probe, which may be used in conjunction with the appropriate material, to electrically balance a comparative system. **E 1316, E07**

reference compound (NMR)—a selected material to whose signal the spectrum of a sample may be referred for the measurement of chemical shift (see also **chemical shift**). **E 131, E13**

referenced standards—those which contain guidelines or nondated requirements germane to one or more elements of the host standard. **F 1789, F16**

reference edge—the edge of the form used to align the form so that the nominal reading line will be parallel to the direction of scanning. Depending on the equipment used, this may be any edge of the form. **F 149, F05**

reference electrode—that half of the electrode pair which provides a constant potential regardless of solution composition. The potential developed by the sensing electrode is measured against this reference potential to give an overall system potential which can be converted to the level of the species sensed. **D 4127, D19**

reference electrode—the electrode (for example, hydrogen electrode, normal calomel electrode, or saturated calomel electrode) against which the electrical potential of a specimen is measured. **E 1823, E08**

reference electrode—electrode having a stable and reproducible potential, which is used in the measurement of other electrode potentials. **G 15, G01**

reference electrode filling solution—a concentrated salt solution contacting the internal reference element and the sample solution. The composition of the filling solution is chosen to maximize stability of the potentials developed at the internal reference element/filling solution interface and the filling solution/sample

- junction. In general, filling solutions for AgCl internal construction reference electrodes should: (1) contain Cl^- and be saturated with AgCl to prevent the reference element from dissolving; (2) be at least ten times higher in total ionic strength than the sample; (3) be equitransferent; (4) not contain the ion being measured or an ion that interferes with the measurement. **D 4127, D19**
- reference facility**, *n*—NIST, or a testing laboratory whose physical standards are traceable to NIST or another national standards laboratory. **E 344, E20**
- reference junction**—that junction of a thermocouple which is held at a known temperature. **E 7, E04**
- reference junction**, *n*—that junction of a thermocouple which is at a known temperature. **E 344, E20**
- reference junction**—that junction of a thermocouple which is maintained at a known temperature. **E 1142, E37**
- reference junction correction**—a correction in terms of electromotive force (millivolts) to be applied to the electromotive force generated by a thermocouple to compensate for the difference between the actual temperature of the reference junction and that used as the basic reference junction temperature in standard conversion tables. **E 7, E04**
- reference junction correction**—correction in the terms of electromotive force to be applied to the electromotive force generated by a thermocouple to compensate for the difference between the actual temperature of the reference junction and that used as the basic reference junction temperature in the standard conversion tables, (E 7, E04). **E 1142, E37**
- reference load [F]**—*forspectrum loading*, used in Practices E 1049 to denote the loading level that represents a steady-state condition upon which load variations are superimposed. The reference load may be identical to the mean force of the history, but this is not required. **E 1823, E08**
- reference material**—a material or substance, one or more properties of which are sufficiently well established to be used for the assessment of a measurement method or for assigning values to materials. **E 7, E04**
- reference material**—a material or substance one or more properties of which are sufficiently well established to be used for the calibration of an apparatus, the assessment of a measurement method, or for assigning values to materials (ISO Guide 30–1981 (E)). **E 131, E13**
- reference material**, *n*—the material in a freezing-point cell that melts and freezes during use, the freezing point of which can establish a reference temperature. **E 344, E20**
- reference material**—material of definite composition that closely resembles in chemical and physical nature the material with which the analyst expects to deal, and that is employed for calibration or standardization. **E 631, E06**
- reference material**—material or substance, one or more properties of which are sufficiently well established to be used for the calibration of an apparatus, the assessment of a measurement method, or for assigning values to materials, (ISO Guide 2, A). **E 1187, E36**
- reference material**—for lead hazard control, a paint, dust, soil or air particulate material having a known lead level as certified by the material supplier. See **Certified ReferenceMaterial**. **E 1605, E06**
- reference material**, *n*—a material or substance, one or more of whose property values are sufficiently homogeneous and well established to be used for the calibration of an apparatus, the assessment of a measurement method, or for assigning values to materials. **E 1732, E30**
- reference material**, *n*—a material with known performance. **G 113, G03**
- reference material (RM)**, *n*—a material or substance of which one or more properties are sufficiently well established to enable the material to be used for the calibration of an apparatus, the assessment of a method, or the assignment of values to similar materials. **D 4175, D02**
- reference material (RM)**—the generic term referring to a certified material. **D 5681, D34**
- reference material (RM)**, *n*—material or substance one or more of whose property values are sufficiently homogeneous and well established to be used for the calibration of an apparatus, the assessment of a measurement method, or for assigning values to materials. **E 135, E01**
- reference materials**—the standard penetrant materials against which candidate materials for qualification are compared. **E 1316, E07**
- reference material (standard reference material) (SRM)**—a material of known composition where the lead level is certified by the manufacturer. **E 631, E06**
- reference mortar**, *n*—mortar of the same composition as an admixed mortar except that the reference mortar does not include the admixture and may contain a different amount of water to obtain an equivalent flow or penetration as the admixed mortar. **C 1180, C12**
- reference neutron field*—see **benchmark neutron field**. **E 170, E10**
- reference oil**, *n*—an oil of known performance characteristics, used as a basis for comparison. **D 4175, D02**
- reference point**, *n*—a temperature at which a thermometer is checked for changes in the bulb volume. **E 344, E20**
- reference sample**, *n*—a matrix whose analytes of interest are of known or accepted concentration or property. **D 1129, D19**
- reference sample**, *n*—a sample designated as the one to which all others are to be compared. **E 253, E18**
- reference sediment**—a whole sediment near an area of concern used to assess sediment conditions exclusive of material(s) of interest. **E 943, E47**
- reference specimen**, *n*—a portion of the reference material that is to be exposed. **G 113, G03**
- reference spectrum**, *n*—an established sample spectrum. **E 131, E13**
- reference standard**, *n*—*in cotton testing*, a homogeneous lot of cotton having a known or accepted value for one or more physical properties. **D 123, D13**
- reference standard**—primary or secondary standards used to calibrate testing apparatus and methods. **D 4790, D16**
- reference standard**, *n*—*in cotton testing*, a homogeneous lot of cotton having a known or accepted value for one or more physical properties. **D 7139, D13**
- reference standard**—a material or device whose properties are determined by comparison to another standard, such as a certified reference material. **E 7, E04**
- reference standard**, *n*—a physical standard used to calibrate a group of laboratory standards. **E 284, E12**
- reference standard**—a tube, plate or part with artificial discontinuities used for establishing the test sensitivity setting and for periodically checking and adjusting sensitivity setting as required. (See also **standard**.) (E 215) **E 1316, E07**
- reference standard**, *n*—a material or object for which all relevant chemical and physical characteristics are known and measurable, used as a comparison for, or standardization of, equipment or instruments used for nondestructive testing. (See also **standardization, instrument**.) **E 1316, E07**
- reference-standard dosimeter**—a dosimeter of high metrological quality, used as a standard to provide measurements traceable to and consistent with measurements made using primary-standard dosimeters. **E 170, E10**
- reference standard, primary**, *n*—a substance that has been shown by an extensive set of analytical tests to be authentic material that should be of high purity. **E 2363, E55**
- reference standard, secondary**, *n*—a substance of established quality and purity, as shown by comparison to a primary reference standard, used as a reference standard for routine laboratory analysis. **E 2363, E55**
- reference temperature**, *n*—a fixed, reproducible temperature, to which a value is assigned, that can be used for the calibration of thermometers or other purposes. **E 344, E20**
- reference temperature**, *n*—a fixed, reproducible temperature, to

reference temperature, n

which a value is assigned, that can be used for the calibration of thermometers or other purposes. E 344, E20

reference temperature, n —the temperature of a phase equilibrium state of a pure substance at a specified pressure, for example, the assigned temperature of a fixed point. E 344, E20

reference temperature source, n —a source of thermal radiant power of known temperature or emissivity, or both, used in the testing of radiation thermometers. E 344, E20

reference tension, n —a low tensile force, generally about 1 % of the rope breaking strength, and used for initial rope tension determination. D 123, D13

reference test fluid, n —a standard glycol-base test fluid, described in Specification D 3585, used by laboratories to evaluate test methods and procedures. D 4725, D15

reference thermometer—a thermometer whose calibration is known within a certain specified accuracy. E 344, E20

reference tire, n —a special tire included in a test program; the test results for this tire have significance as a base value or internal benchmark. F 538, F09

reference viscosity, n —the viscosity of Newtonian standard reference fluids certified at each of several temperatures by the supplier. D 4175, D02

refillable, *adj*—intended to be refilled for its original purpose one or more times in an available program established by, but not limited to, manufacturers, distributors, or retailers. D 996, D10

refilled cartridge—a used cartridge in which the toner has been replaced but none of the other components have been replaced or refurbished. F 335, F05

refined—treated to reduce impurities. D 4790, D16

refined tar, n —tar freed from water by evaporation or distillation which is continued until the residue is of desired consistency; or a product produced by fluxing tar residuum with tar distillate. D 8, D04

refiner—a component of a melting furnace, for the purpose of conditioning the glass. See **nose**. C 162, C14

refiner, n —a two-roll mill with a high friction ratio, used for such operations as processing of reclaimed rubber or slightly scorched mixes and the crushing of impurities. D 1566, D11

refining—See **fining**. C 162, C14

reflectance, n —the fraction of the incident radiation upon a surface that is reflected from the surface. C 168, C16

reflectance—the fraction of incident light that is diffusely reflected, measured relative to magnesium oxide under standard conditions. C 286, B08

reflectance, n —in optical measurement of paper, the ratio of the reflected radiant of luminous flux to the incident flux, measured under specified conditions, expressed as a percentage. D 1968, D06

reflectance, ρ , n —ratio of the reflected radiant or luminous flux to the incident flux in the given conditions. E 284, E12

reflectance, n —ratio of the reflected radiant or luminous flux to the incident flux. Symbol: ρ_e , ρ_v , ρ ; $\pi = \rho_r + \rho_d$.

NOTE—When mixed reflection occurs, the (total) reflectance may be divided into two parts, regular (ρ_r) and diffuse reflectance (ρ_d), corresponding, respectively, to the two modes of reflection referred to above.

In general, the values of the various reflectances depend upon the mode of irradiation, the spectral composition, and state of polarization of the incident radiation. E 349, E21

reflectance—a measurement technique (subset of spectrophotometry; see 3.5) in which light is reflected off of a reflecting surface and measured by a detector. The amount of reflected light may be a function of analyte concentration. E 631, E06

reflectance—the ratio of the radiant flux reflected from a surface to that incident upon it. E 1316, E07

reflectance—the ratio of the response of a light sensor illuminated by diffuse reflection from the paper compared to that when the paper

is replaced by a perfect diffuse reflector. A specially prepared surface of *barium sulfate* is considered to be a perfect diffuse reflector. F 149, F05

reflectance, n —the percentage of incident light reflected from an image area, where zero percent reflectance is black. (See **image density**.) F 1457, F05

reflectance, absolute—the ratio of the total reflectance by a document to the total light incident on the document. F 149, F05

reflectance, absolute, n —the ratio of the total reflectance from a document to the total light incident on that document. F 1294, F05

reflectance density, D_p , n —the negative logarithm to base ten of the reflectance. E 284, E12

reflectance, diffuse—reflected light whose angle of reflection varies from the angle of incidence of the illuminating light, such as reflection from a rough surface. F 149, F05

reflectance, diffuse, n —reflected light whose angle of reflection varies from the angle of incidence of the illuminating light, such as in reflection from a rough surface. F 1294, F05

reflectance, diffuse, or R_d , n —a type of reflectance wherein, on an uneven surface, the angle of reflection is random and independent of the angle of incidence. This is in contrast to directional reflectance where the incident light is reflected in a specific direction that is dependent upon the angle of incidence giving the surface a glossy appearance. E 253, E18

reflectance, directional, n —light energy reflected from a surface at a specified, characteristic angle at greater intensity than at other angles. E 253, E18

reflectance factor, n —ratio of the flux reflected from the specimen to the flux reflected from the perfect reflecting diffuser under the same geometric and spectral conditions of measurement. E 284, E12

reflectance factor at a point on a surface, for the part of the reflected radiation contained in a given cone with apex at the point of the surface, and for incident radiation of given spectral composition and geometric distribution, n —ratio of the radiant flux reflected in the directions delimited by the cone to that reflected in the same directions by a perfect reflecting diffuser identically irradiated.

NOTE—For specularly reflecting surfaces that are irradiated by a source of small solid angle, the reflectance factor may be much larger than unity if the cone includes the mirror image of the source.

NOTE—If the solid angle of the cone approaches zero, or 2π sr, the reflectance factor approaches radiance factor or reflectance, respectively. In instruments called “reflectance spectrophotometers,” the geometrical distribution is, in general, intermediate between these two extreme cases. The readings of these instruments, corrected for photometric-scale errors, wavelength-scale errors, and for deviations of the reflecting standard used from a perfect reflecting diffuser, are spectral reflectance factors. For a given sample, these values depend on the geometrical characteristics of the instrument.

NOTE—The term “directional reflectance” is used currently in the United States in this sense. E 349, E21

reflectance, luminous, n —see **luminous reflectance**. D 2946, C17

reflectance, p —the ratio of the reflected flux to the incident flux. See **radiometric properties and quantities**. E 772, E44

reflectance, R —the ratio of the radiant power reflected by the sample to the radiant power incident on the sample. E 131, E13

reflectance, specular—reflected light whose angle of reflection is equal, or nearly equal, to the angle of incidence of the illuminating light, such as in reflectance from a mirror. F 149, F05

reflectance, specular, n —reflected light whose angle of reflection is equal, or nearly equal, to the angle of incidence of the illuminating light, such as in reflection from a mirror. F 1294, F05

reflected (or refracted) wave—components of wave incident upon second medium and reflected into first medium (or refracted) into second medium. D 653, D18

reflected temperature—the temperature of the energy incident upon and reflected from the measurement surface of a specimen. E 1316, E07

reflecting stem—stem glass containing a colored stripe along its length in a location which, when reflected on the mercury column, allows greater contrast and enables the column to appear tinted.

E 344, E20

reflection, *n*—processes by which incident flux leaves a surface from the incident side.

D 2946, C17

reflection, *n*—of radiant energy, the process by which radiant energy is returned from a material or object. See also **diffuse reflection, mixed reflection, specular reflection.**

E 284, E12

reflection, *n*—return of radiation by a surface without change of frequency of the monochromatic components of which the radiation is composed.

E 349, E21

reflection—the process by which incident flux is returned from the surface of incidence of a stationary sample, without change in frequency.

E 772, E44

reflection—see **echo.**

E 1316, E07

reflection—the process by which the incident flux leaves a surface or medium from incident side, without a change in frequency, but may change polarity. Reflection is usually a combination of specular and diffuse reflection.

E 1316, E07

reflection and refraction loss—that part of transmitted energy lost due to nonuniformity of mediums.

D 653, D18

reflection angle—angle of reflection.

E 772, E44

reflection cracking at joints, *n*—cracks in bituminous overlay surfaces that occur over concrete pavements at joints.

E 867, E17

reflection cracking at joints, *n*—cracks in bituminous overlay surfaces that occur over concrete pavements at joints.

E 1778, E17

reflection density, D_R , *n*—the negative logarithm to base ten of the reflectance factor.

E 284, E12

reflection method—the technique of producing a diffraction pattern by X-rays or electrons which have been reflected from a specimen surface.

E 7, E04

reflection (optical) density, *n*—logarithm to the base 10 of the reciprocal of the reflectance. Symbol: D , $D = -\log_{10} \rho$.

E 349, E21

reflection overspill, *n*—in bispectral photometry, the contribution of reflection to off-diagonal values of the discrete bispectral radiance factor matrix, due to the partial overlap of irradiation and viewing wavebands when nominal irradiation and viewing wavelengths are not equal ($\mu \neq \lambda$).

E 284, E12

reflection (X-ray)—See **diffraction.**

E 7, E04

reflective ink—ink not sensed by the optical scanner, but visible to the human eye. Syn. *blind ink, drop-outcolors, drop-out ink, nonread ink, nonscan ink.*

F 149, F05

reflective insulation, *n*—insulation depending for its performance upon reduction of radiant heat transfer across air spaces by use of one or more surfaces of high reflectance and low emittance.

C 168, C16

reflectivity—the reflectance of a coating so thick that additional thickness does not change the reflectance.

NOTE—See Test Method C 347.

C 286, B08

reflectivity, *n*—reflectance of a layer of material of such a thickness that there is no change of reflectance with increased thickness. Symbol: ρ_∞ .

E 349, E21

reflectivity, ρ_∞ , R_∞ —the reflectance of a material represented by a specimen so thick that further increase in thickness does not significantly change the reflectance.

E 284, E12

reflectivity, R_∞ —the reflectance of a microscopically homogeneous sample with a clean optically smooth surface and of thickness sufficient to be a completely opaque.

NOTE—Reflectivity is a property of a material and reflectance is a property of a sample of the material, with no restriction on thickness or surface topography.

E 772, E44

reflectometer, *n*—instrument for the measurement of quantities pertaining to reflection.

E 284, E12

reflectometer, *n*—instrument for the measurement of quantities pertaining to reflection.

E 349, E21

reflectometer—an instrument for measuring reflectance.

E 772, E44

reflectometry, *n*—technique for measurement of reflectance or reflectance factor.

E 284, E12

reflector, *n*—See **area reflector, line reflector, point reflector.**

E 284, E12

reflector—an interface at which an ultrasonic beam encounters a change in acoustic impedance and at which at least part of the energy is reflected.

E 1316, E07

reflowing—See **flow brightening.**

B 374, B08

reflux, in distillation processes—reflux is the liquid condensate recycle to the top of a distillation column to aid in purification of the overhead product (ethanol).

E 1705, E48

reflux ratio, *R*, *n*—in a distillation column, the ratio of the condensate at the head of the column that is returned to the column (*reflux*) to that withdrawn as product.

D 4175, D02

reflux ratio, *R*, *n*—the ratio of reflux to distillate.

D 4175, D02

refraction, *n*—the deflection from a straight path undergone by a light ray in passing obliquely from one medium (as air) into another (as glass) in which its velocity is different.

D 123, D13

refraction, *n*—change in the direction of propagation of radiation determined by change in the velocity of propagation in passing from one medium to another.

E 284, E12

refraction, *n*—change in the direction of propagation of radiation determined by change in the velocity of propagation in passing from one medium to another.

E 349, E21

refraction angle—see **angle of refraction.**

E 772, E44

refractive dispersion, *n*—the difference between the refractive indexes of a substance for light of two different wavelengths, both indexes being measured at the same temperature. For convenience in calculations, the value of the difference thus obtained is usually multiplied by 10 000.

D 4175, D02

refractive index, *n*—the ratio of the velocity of light (of specified wavelength) in air, to its velocity in the substance under examination. This is the relative index of refraction. If absolute refractive index (that is, referred to vacuum) is desired, this value should be multiplied by the factor 1.00027, the absolute refractive index of air.

D 4175, D02

refractive index, *n*—the ratio of the velocity of light (of specified wavelength) in air, to its velocity in the substance under examination. It may also be defined as the sine of the angle of incidence divided by the sine of the angle of refraction, as light passes from air into the substance. This is the relative index of refraction. If absolute refractive index (that is, referred to vacuum) is desired, this value should be multiplied by the factor 1.00027, the absolute refractive index of air. The numerical value of refractive index of liquids varies inversely with both wavelength and temperature.

D 4175, D02

refractive index, *n*—the phase velocity of radiant power in a vacuum divided by the phase velocity of the same radiant power in a specified medium. When one medium is a vacuum, *n* is the ratio of the sine of the angle of incidence to the sine of the angle of refraction.

E 131, E13

refractive index (electrons)—the ratio of electron wavelength in free space to its wavelength in a material medium.

E 7, E04

refractive index (index of refraction), *n*—the ratio of the velocity of radiation (as light) in the first of two media to its velocity in the second as it passes from one into the other.

D 123, D13

refractometer, *n*—an instrument used to indicate the freezing point of engine coolants by refractive index.

D 4725, D15

refractories, acid, *n*—refractories containing a substantial amount of silica that may react chemically with basic refractories, basic slags, or basic fluxes at high temperatures.

C 71, C08

refractories, basic, *n*—refractories whose major constituent is lime, magnesia, or both, and which may react chemically with acid refractories, acid slags, or acid fluxes at high temperatures.

C 71, C08

refractories, neutral, *n*—refractories that are resistant to chemical attack by both acid and basic slags, refractories, or fluxes at high temperatures.

C 71, C08

refractoriness, *n*

refractoriness, *n*—*in refractories*, the capability of maintaining a desired degree of chemical and physical identity at high temperatures and in the environment and conditions of use. **C 71, C08**

refractory, *adj*—resistant to high temperature. **C 71, C08**

refractory block, *n*—a generally rectangular refractory shape of a size larger than usually can be laid with one hand. All sides may not be plane and parallel. **C 71, C08**

refractory brick, *n*—a generally rectangular refractory shape with one dimension greater than the other two and of a size that usually can be laid with one hand. All sides may not be plane and parallel such as wedges, arches, keys, and circle brick, as shown in Specification C 909. **C 71, C08**

refractory composite coating—a combination of heat-resistant ceramic materials applied to a metallic substrate which may or may not require heat treatment prior to service. This term may also be used for coatings applied to nonmetallic substrates, for example, graphite. **C 286, B08**

refractory fibers, *n*—nonmetallic, inorganic, continuous, or non-continuous filaments having those chemical and physical properties that make them applicable for structures, or as components of systems, that are exposed to environments above 1000°F (538°C). **C 71, C08**

refractory lime—lime (usually of a dolomitic type) that has been extremely hard burned so that it will possess little or no tendency for conversion of the oxides to hydroxides. **C 51, C07**

refractory metal thermocouple, *n*—(1) one whose thermoelements have melting points above 1935 °C (3515 °F), (2) thermocouple whose thermoelements are composed primarily of refractory metals and their alloys. (See also **base metal thermocouple; noble metal thermocouple**.) **E 344, E20**

refractory (pl. -ies), *n*—nonmetallic materials having those chemical and physical properties that make them applicable for structures, or as components of systems, that are exposed to environments above 1000°F (538°C). **C 71, C08**

refractory shape, *n*—any refractory piece forming a stable mass with specific dimensions. **C 71, C08**

refurbish, *v*—*as applied to textile products*, to brighten or freshen up and restore to wearability or use by cleaning such as drycleaning, laundering, or steam cleaning. **D 123, D13**

refurbish, *n*—*as applied to textile products*, to brighten or freshen up and restore to wearability or use by cleaning such as drycleaning, laundering, or steam cleaning. **D 3136, D13**

refurbish—to renovate or return property to, at, or near its original condition. **E 2135, E53**

refurbished component—a used component that has been restored to its original function. **F 335, F05**

refusal—*in grouting*, when the rate of grout take is low, or zero, at a given pressure. **D 653, D18**

refuse-derived fuel (RDF)—RDF-1—Waste used as a fuel in as-discarded form.

RDF-2—Waste processed to coarse particle size with or without ferrous metal separation.

RDF-3—shredded fuel derived from municipal solid waste (MSW) that has been processed to remove metal, glass, and other inorganics. This material has a particle size such that 95 weight % passes through a 2-in. square mesh screen.

RDF-4—Combustible waste processed into powder form—95 weight % passing a 10-mesh screen.

RDF-5—Combustible waste densified (compressed) into the form of pellets, slugs, cubettes or briquettes.

RDF-6—Combustible waste processed into liquid fuel.

RDF-7—Combustible waste processed into gaseous fuel.

D 5681, D34

refuse-derived fuel (RDF-3)—refuse-derived fuel-3 (RDF-3) is defined as a shredded fuel derived from municipal solid waste (MSW) which has been processed to remove metal, glass, and

other inorganic materials. This material has a particle size such that 95 weight % passes through a 2-in. square mesh screen.

NOTE—Other refuse-derived fuel may be classified as follows:

RDF-1—Wastes used in as-discarded form.

RDF-2—Wastes processed to coarse particle size with or without ferrous metal separation.

RDF-4—Combustible waste processed into powder form, 95 weight % passing 10-mesh screening.

RDF-5—Combustible waste densified (compressed) into the form of pellets, slugs, cubettes, or briquettes.

RDF-6—Combustible waste processed into liquid fuels.

RDF-7—Combustible waste processed into gaseous fuel. **E 856, D34**

refuse-derived fuel (RDF)—fuel processed from industrial waste, municipal waste, garbage, or sewage sludge. **E 1705, E48**

refuse derived fuel 3 (RDF-3)—as defined by Committee E38 on Resource Recovery, RDF-3 is a shredded fuel derived from municipal solid waste (MSW) that has been processed to remove metal, glass, and other inorganics. The material has a particle size such that 95 % weight passes through a 2 in. square mesh screen. **E 1705, E48**

regain—see **moisture regain**.

regenerable fiber optic chemical sensor, *n*—an active fiber optic chemical sensor that can be used for repetitive measurements by reviving an otherwise permanently depleted or degraded transduction element by chemical or physical means. **E 131, E13**

regenerated cellulose—cellulose regenerated from a solution of cellulose or from a cellulose derivative. **D 1695, D01**

regeneration, *n*—that part of the operating cycle of an ion-exchange process in which a specific chemical solution is passed through the ion-exchange bed to prepare it for a service run. **D 1129, D19**

regeneration—distillation or elution-type processes for restoring the adsorptive properties of a spent sorbent. **D 2652, D28**

regeneration—in ion exchange systems, the process of using either an acid, alkali, or salt solution to remove the accumulated cations or anions. The cation exchange resins take on hydrogen or sodium ions and the anion exchange resins take on hydroxide ions to restore themselves to the original hydrogen or hydroxide form when using strong acid and strong alkali solutions for the process. **D 6161, D19**

regeneration level, *n*—the total weight of regenerant used per unit quantity of ion-exchange material in a single regeneration. **D 1129, D19**

regenerative biology, *n*—the scientific discipline that endeavors to understand how tissues and organs are replaced naturally. The principles of regenerative biology can be applied in tissue engineering to generate TEMPs. **F 2312, F04**

regenerative furnace—a melting furnace having regenerators. **C 162, C14**

regenerative medicine, *n*—a branch of medical science that applies the principles of regenerative biology to specifically restore or recreate the structure and function of human cells, tissues, and organs that do not adequately regenerate. **F 2312, F04**

regenerator—a cyclic heat interchanger that alternately receives heat from gaseous combustion products and transfers heat to air or gas before combustion. **C 162, C14**

regimen of a stream—characteristics of a stream with respect to flow duration, form of and changes in channel, capacity to transport sediment, and amount of material supplied for transportation. **D 4410, D19**

registered quality assurance system—system that a registration body has found to be in compliance with a designated quality system standard. **F 1789, F16**

registration—procedure by which a body indicates relevant characteristics of a product, process or service, or particulars of a body or person, in an appropriate, publicly available list, (ISO Guide 2). **E 1187, E36**

registration—evaluation of a fastener manufacturing facility's quality assurance system by an accredited registration body resulting in

a certification of full compliance with a designated quality system standard; the registration body shall be accredited by a third party registration accreditation body, for example, ANSI/RAB.

F 1789, F16

reglet, *n*—a continuous groove, slot or recess within a building component surface which receives other components such as flashing, gaskets or anchors; a continuous prefabricated metal or plastic device containing a groove, slot or recess which can be cast into (as a form) or mounted onto a building component surface.

C 717, C24

reglet—a groove in a wall or other surface adjoining a roof surface for the attachment of counterflashing.

D 1079, D08

reglet gasket—See **gasket, lock-strip, reglet type**.

C 717, C24

regression line slope—the slope of a linear regression fit of acceptable *J* and Δ *a* values.

E 1823, E08

regular, *adj*—*for color determination*, used to indicate flux transmitted or reflected in the image-forming state.

D 2946, C17

regular, *adj*—denoting flux reflected or transmitted without diffusion in accordance with the laws of optics.

E 284, E12

regular (direct) transmission, *n*—transmission without diffusion.

E 349, E21

regular point—denoting medium diamond point.

F 547, F16

regular reflection, *n*—see the preferred term, **specular reflection**.

E 284, E12

regular (specular) reflection, *n*—reflection without diffusion in accordance with the laws of optical reflection.

E 349, E21

regular transmission, *n*—transmission without diffusion.

E 284, E12

regular transmittance—ratio of the light flux transmitted without diffusion to the flux incident.

D 883, D20

regular transmittance factor, *T_r*, *n*—the ratio of the flux transmitted by a specimen and evaluated by a receiver to the flux passing through the same optical system and evaluated by the receiver when the specimen is removed from the system.

E 284, E12

regular transmittance, τ_r , *n*—ratio of undiffused transmitted flux to incident flux.

E 284, E12

regular wear, *n*—synonym for *uniform wear*.

F 538, F09

regulation, *n*—a rule prescribing a set of conditions and requirements that have been made mandatory for those under its control, by an executive (administrative) authority.

rehabilitation—See **preservation**.

E 631, E06

regulation, *n* (*règlement*)—rule prescribing a set of conditions and requirements that have been made mandatory for those under its control, by an executive (administrative) authority.

E 1480, E06

reheat behavior, *n*—the changes in length or volume taking place in a fired refractory when subjected to a reheat test.

C 71, C08

reheat test, *n*—the prescribed heat treatment of a fired refractory free of externally applied stresses to determine its linear or volume stability by measurements before and after the heating.

C 71, C08

rehydrated mashed potato dispenser—commercial equipment designed to deliver whipped or mashed potatoes.

F 1827, F26

reinforced base coat, *n*—base coat that has been reinforced with the nonmetallic reinforcing mesh.

E 2110, E06

reinforced concrete pipe—a pipe structure comprised of concrete and steel reinforcement. Such reinforcement is comprised of steel wire, welded wire fabric, or bars, of known strength, formed into a cage and positioned in the concrete wall in a specific location in such a manner that the two materials act together to resist stresses.

C 822, C13

reinforced gummed tape—See **tape**.

D 996, D10

reinforced joint, *n*—a concrete joint bridged by reinforcing steel embedded in both joining parts.

C 717, C24

reinforced membrane—a roofing or waterproofing membrane reinforced with felts, mats, fabrics, or chopped fibers.

D 1079, D08

reinforced plastic—a plastic with high strength fillers imbedded in the composition, resulting in some mechanical properties superior to those of the base resin. (See also **filler**.)

D 883, D20

reinforced plastic—a plastic with high-strength fillers imbedded in

the composition, resulting in some mechanical properties superior to those of the base resin. (See also **filler**.)

F 412, F17

reinforced plastic, *n*—a plastic with high strength fillers imbedded in the composition, resulting in some mechanical properties superior to those of the base resin. (See also **filler**.)

F 1251, F04

reinforced reaction injection molding (RRIM), *n*—the process of using solid reinforcements, such as, glass fiber, mica, or talc in the reaction injection molding process.

D 883, D20

reinforced seam, *n*—*in sewn seams*, a seam that includes an additional layer of material on the face or back side of the seam allowance.

D 123, D13

reinforced seam, *n*—*in sewn seams*, a seam that includes an additional layer of material on the face or back side of the seam allowance.

D 4850, D13

reinforcement—steel in the form of continuous wire, welded wire fabric, or bars embedded in concrete in such a manner that the above referenced concrete and steel act together to resist stresses.

C 822, C13

reinforcement, *n*—the act of increasing the mechanical performance capability of a rubber by the incorporation of materials that do not participate significantly in the vulcanization process.

D 1566, D11

reinforcement, *n*—*in a composite material*, the discrete constituent of a composite material, either fiber or particle, which is contained within the matrix, with a purpose of increasing the strength, or stiffness, or both.

D 3878, D30

reinforcement distortion—knotted, tangled, widely spaced, or otherwise abnormal but local irregularities in reinforcement distribution throughout the pultruded cross section.

NOTE—This condition usually causes noticeable changes in the local reinforcement content with crushing of the reinforcement or resin-richness in isolated areas.

D 3918, D20

reinforcement-rich area—an over-concentration of reinforcement in the pultruded cross section.

NOTE—This usually occurs where mat or other reinforcement is folded, creased, or bunched in a portion of the cross section.

D 3918, D20

reinforcing agent, *n*—a material, not basically involved in the vulcanization process, used in rubber to increase the resistance of the vulcanizate to mechanical forces.

D 1566, D11

reinforcing cord, *n*—a cord made from industrial yarns and used to provide added support to other materials, such as tires, hose, belting, protective coverings, webbing, etc.

D 123, D13

reinforcing cord, *n*—a cord made from industrial yarns and used to provide added support to other materials, such as tires, hose, belting, protective coverings, webbings, and so forth.

D 6477, D13

reinforcing resin, *n*—a resin that associates with the aromatic blocks of block co-polymers and raises the upper service temperature of an adhesive blend.

D 6440, D01

rejection/injection, *n*—the process of conveying geothermal fluids to sub-surface formations through wells.

E 957, E44

reins, *n*—a solid or pseudosolid organic material often of high molecular weight, which exhibits a tendency to flow when subjected to stress, usually has a softening or melting range, and usually fractures conchoidally.

F 1251, F04

reinspection—inspection of a fastener lot that has been sorted, reworked, or reprocessed, or a combination thereof, for the characteristic(s) originally found nonconforming and also those characteristics that would be affected by reworking or reprocessing operations.

F 1789, F16

reject—portion of the feed stream that does not pass through the membrane. Concentrate stream from a desalination device (brine).

D 6161, D19

reject—a character located but not identified by an optical scanner.

F 149, F05

rejection factor, R—parameter equal to one minus the ration of the concentration of a component on the downstream and upstream sides of a membrane. Concentrations may be either in the bulk

rejection factor, R

(Apparent Rejection Factor or at the membrane surface (Intrinsic Rejection Factor). **D 6161**, D19

rejection level—the value established for a test signal above or below which test specimens are rejectable, or otherwise distinguished from the remaining specimens. **E 1316**, E07

rejection number, n—*in acceptance sampling*, the minimum number of nonconforming items in a sample that requires the conclusion that the lot does not conform to specification. **D 123**, D13

rejection number—a number R , such that if the number of defective units in the sample is equal to or greater than R , the lot shall be rejected. **D 1517**, D31

rejection number, n—the minimum number of nonconformities for a given AQL and sample size (lot sample size) which will subject a lot to rejection. **D 1711**, D09

rejection of a lot—the disapproval of a lot as not conforming to contract or specification or both. **D 1517**, D31

reject rate—the number of rejects stated as a percentage of total items. Scanner items can be characters, marks, fields, documents, pages, etc. **F 149**, F05

reject (suppression)—a control for minimizing or eliminating low amplitude signals (electrical or material noise) so that larger signals are emphasized. **E 1316**, E07

related color, n—color perceived to belong to an area seen in relation to other colors. **E 284**, E12

related standards—those standards which possess certain relevance to the host standard in terms of understanding its concepts, but do not of necessity specify any mandated requirements. **F 1789**, F16

relative complex permittivity (relative complex dielectric constant) (relative complex capacitivity), κ^* , ϵ_r^* , n —the ratio of the admittance of a given configuration of the material to the admittance of the same configuration with vacuum as dielectric:

$$\kappa^* = Y/Y_v = Y/j\omega C_v = \kappa' - j\kappa''$$

where Y is the admittance with the material and $j\omega C_v$ is the admittance with vacuum. **D 1711**, D09

relative consistency, I_c , C_r (D)—ratio of: (1) the liquid limit minus the natural water content, to (2) the plasticity index. **D 653**, D18

relative density, n—see **density ratio**. **B 243**, B09

relative density, n—see **specific gravity**. **C 125**, C09

relative density, n—the ratio of the density of a material at a stated temperature to the density of water at a stated temperature. **D 4175**, D02

relative density, n—the ratio of the mass of a given volume of liquid to the mass of an equal volume of pure water at the same temperature. **D 4725**, D15

relative density, D_d , I_D (D)—the ratio of (1) the difference between the void ratio of a cohesionless soil in the loosest state and any given void ratio, to (2) the difference between the void ratios in the loosest and in the densest states. **D 653**, D18

relative density (specific gravity)—the ratio of a mass of a given volume of liquid at a given temperature to the mass of an equal volume of pure water at the same temperature. When reporting results, explicitly state the standard reference temperature, for example, relative density 15/15°C. **D 2864**, D27

relative density (specific gravity)—ratio of the density of the gaseous fuel, under specified conditions of temperature and pressure, to the density of normal dry air, at the same temperature and pressure. **D 4150**, D03

relative density (specific gravity), n—the ratio of the mass (weight in vacuo) of a given volume of material at a temperature, t_1 , to the mass of an equal volume of water at a reference temperature, t_2 ; or it is the ratio of the density of the material at t_1 to the density of water at t_2 . When the reference temperature is 4.00°C, the temperature at which the relative density of water is unity, relative density (specific gravity) and density are numerically equal. **D 4175**, D02

relative density (specific gravity)—the ratio of the mass of a given

volume of liquid at 15.56°C (60°F) to the mass of an equal volume of pure water at the same temperature. **D 4790**, D16

relative efficiency—the rating of the adsorptive capacity of an adsorbent based on a comparison of its performance with that of a reference adsorbent in a defined test. **D 2652**, D28

relative humidity, n—the ratio of actual water vapor pressure to the saturation water vapor pressure at the same temperature, expressed as a percentage. **C 11**, C11

relative humidity, n—of air, the ratio of the pressure of water vapor present to the pressure of saturated water vapor at the same temperature. (See **absolute humidity, humidity**.) **D 123**, D13

relative humidity—the ratio of the mass per unit volume (or partial pressure) of water vapor in an air-vapor mixture to the saturated mass per unit volume (or partial pressure) of the water vapor at the same temperature, expressed as a percentage. **D 1079**, D08

relative humidity, n—of air, the ratio of the pressure of water vapor present to the pressure of saturated water vapor at the same temperature. **D4920**, D13

relative humidity, n—the ratio of the actual pressure of existing water vapor to the maximum possible (saturation) pressure of water vapor in the atmosphere at the same temperature, expressed as a percentage. **G 113**, G03

relative humidity with respect to ice—See **relative humidity**. **D 1356**, D22

relative humidity with respect to ice—See **humidity**. **D 1356**, D22

relative humidity with respect to water—See **relative humidity**. **D 1356**, D22

relative humidity with respect to water—See **humidity**. **D 1356**, D22

relative molar response, n—the measured area of a compound divided by the moles present in the synthetic mixture relative to an arbitrarily chosen component. **D 4175**, D02

relative permittivity—the relative permittivity of a soil is the ratio of the permittivity of the soil to the permittivity of a vacuum. It is also known as the **dielectric constant**. **D 7099**, D18

relative permittivity (relative dielectric constant) (SIC) $\kappa'(\epsilon_r)$, n —the real part of the relative complex permittivity. It is also the ratio of the equivalent parallel capacitance, C_p , of a given configuration of electrodes with a material as a dielectric to the capacitance, C_v , of the same configuration of electrodes with vacuum (or air for most practical purposes) as the dielectric:

$$\kappa' = C_p/C_v$$

D 1711, D09

relative retention ratio, n—in chromatography, the column retention time of a component divided by the column retention time of a standard. **D 1129**, D19

relative retention time (RRT)—See **retention time**. **D 1356**, D22

relative rigidity—indynamic mechanical measurement, ratio of modulus at any temperature, frequency, or time to the modulus at a reference temperature, frequency, or time. **E 1142**, E37

relative rigidity (in dynamic mechanical measurement)—the ratio of modulus at any temperature, frequency, or time to the modulus at a reference temperature, frequency, or time. **D 4092**, D20

relative span—dimensionless parameter indicative of the uniformity of the distribution, and defined as follows:

$$\text{relative span} = (D_{v0.9} - D_{v0.1})/D_{v0.5}$$

E 1620, E29

relative spectral energy (power) distribution, n—description of the spectral character of a radiation (description of an illuminant) by the way in which the relative spectral concentration of radiant energy varies throughout the spectrum. Symbol: $S(\lambda)$. **E 349**, E21

relative spectral response, $R_r(\lambda)$, n—of a photovoltaic device, the absolute spectral response of a photovoltaic device where the irradiance is measured in relative units. **E 1328**, E44

relative standard deviation—the coefficient of variation expressed as a percentage. **E 2161**, E37

relative standard deviation (RSD)—a generic continuous monitoring parameter used to quantify the fluctuation of the particulate light scatter baseline from a laser-based incident light source.
D 6161, D19

relative viscosity—see **viscosity, relative**.
D 1695, D01

relative water content—see **liquidity index**.
D 653, D18

relaxation—reduction in anchor prestress and associated clamping force over time.
E 2265, E06

relaxation energy—XPS, the energy associated with intra-atomic or extra-atomic electronic readjustment to the removal of an atomic electron, so as to minimize the energy of the final state of the system.
E 673, E42

relaxation rate, n —the absolute value of the slope of the relaxation curve at a given time.
E 6, E28

relaxed stress, n —the initial stress minus the remaining stress at a given time during a stress-relaxation test.
E 6, E28

relay steel—soft magnetic iron-based alloy used in the construction of electromechanical relays and solenoid switches. High flux densities, low coercive fields, suitable mechanical hardness, and ease of fabrication are primary concerns.
A 340, A06

release, n —any spilling, leaking, pumping, emitting, emptying, discharging, injecting, escaping, leaching, dumping, and disposing into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles) of any hazardous chemical, extremely hazardous substance, or CERCLA hazardous substance.
D 5681, D34

release, n —any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment (including the abandonment or discarding of barrels, containers, and other closed receptacles) of any hazardous chemical, extremely hazardous substance, or CERCLA hazardous substance.
D 5681, D34

release agent, n —a material added to a compound or applied to the mold cavity, or both, to reduce parts sticking to the mold.
D 883, D20

release agent—See **parting agent**.
D 1079, D08

release agent, n —a material used to keep a molding material from adhering to a mold. (D20)
F 412, F17

release agent (mold), n —a substance applied to the inside surface of a mold or added to a material to be molded, to facilitate removal of the product from the mold.
D 1566, D11

release characteristic—see **sensitivity range**.
F 221, F05

release paper, n —a sheet, serving as a protectant or carrier, or both, for an adhesive film or mass, which is easily removed from the film or mass prior to use.
D 907, D14

releasing slider, n —*in zippers*, a slider with a mechanical means for loosening the slider on the chain.
D 123, D13

releasing slider, n —a slider with a mechanical means for loosening the slider on the chain.
D 2050, D13

releasing stop, n —*in zippers*, a device attached at or near the top of the stringer on the separable pin side which limits the travel of the slider at the open end of the chain under normal closing operations.
D 123, D13

releasing stop, n —a device attached at or near the top of the stringer on the separable pin side which limits the travel of the slider at the open end of the chain under normal closing operations.
D 2050, D13

relevant and appropriate requirements—those cleanup standards, standards of control, and other substantive requirements, criteria, or limitations promulgated under federal environmental or state environmental or facility siting laws that, while not “applicable” to a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance at a CERCLA site, address problems or situations sufficiently similar to those encountered at the CERCLA site that their use is well suited to the particular site. Only those state standards that are identified in a timely manner and are more stringent than federal requirements may be relevant and appropriate.
D 5681, D34

relevant indication, n —an NDT indication that is caused by a condition or type of discontinuity that requires evaluation.
E 1316, E07

relevant question, n —a question that pertains directly to the matter under investigation or to the issue(s) for which the examinee is being tested.
E 2035, E52

reliability—the probability of performing without failure a specified function under normal conditions for a specified period of time.
E 344, E20

reliability, n (fiabilité)—the probability of performing without failure a specified function under normal conditions for a specified period of time.

remodel—See **building modification**.

repair—See **building modification**.
E 631, E06

reliability, n (fiabilité)—the probability of performing without failure a specified function under normal conditions for a specified period of time.
E 1480, E06

relict active layer—a layer of ground, now perennially frozen, lying immediately below the modern active layer. Its thickness indicates the greater annual depth of thaw that occurred during a previous warmer climatic period.
D 7099, D18

relict ice—ice formed in, and remaining from, the recent geological past.
D 7099, D18

relict permafrost—permafrost that reflects past climatic conditions differing from those of today, and which must have formed when the ground surface temperature was different than it is now, as these are not in thermal equilibrium with the present mean annual ground surface temperature.
D 7099, D18

relieving—the removal of material from selected portions of a colored metal surface by mechanical means, to achieve a multicolored effect.
B 374, B08

relocking device—a mechanism separate from the combination lock designed to block the safe bolt work if the lock is punched. It may also incorporate a thermal or shock-releasing device.
F 471, F12

relocking trigger—a component of the combination lock designed to block the bolt if the spindle is punched.
F 471, F12

reluctance, \mathcal{R} —that quantity which determined the magnetic flux, ϕ , resulting from a given magnetomotive force, \mathcal{F} , around a magnetic circuit.

$$\mathcal{R} = \mathcal{F}/\phi$$

where:

\mathcal{R} = magnetic reluctance,

\mathcal{F} = magnetomotive force, and

ϕ = flux.

The reluctance is measured in gilberts per maxwell (magnetic ohms) in the cgs-emu system and in ampere-turns per weber in the SI system.
A 340, A06

reluctivity, ν —the reciprocal of the permeability of a medium.
A 340, A06

remaining ligament, b [L]—the difference between the width of the specimen (w) and the physical crack size (a_p) that is,

$$b = W - a_p$$

E 1823, E08

remaining stress, n —the stress remaining at a given time during a stress-relaxation test.
E 6, E28

remenance, B_{dm} —the maximum value of the remanent induction for a given geometry of the magnetic circuit.

NOTE—If there are no gaps or other inhomogeneities in the magnetic circuit the remenance, B_{dm} , is equal to the retentivity, B_{rs} ; if air gaps or other inhomogeneities are present, B_{dm} will be less than B_{rs} .

A 340, A06

remanent induction, B_d —See **induction, remanent.** A 340, A06

remanufactured cartridge—a cartridge that has had all parts that materially affect function replaced or refurbished so that its original performance has been restored. F 335, F05

re-mass, v —to form, during storage, massive blocks from particulate forms, such as flakes, pastilles, or powder. D 6440, D01

remedial actions—those actions consistent with a permanent remedy taken instead of, or in addition to, removal action in the event of a release or threatened release of a hazardous substance into the environment, to prevent or minimize the release of hazardous substances so that they do not migrate to cause substantial danger to the present or future public health or welfare or the environment. D 5681, D34

remediation, n —to restore or clean up, or both, sites contaminated with hazardous, toxic, or radioactive substances or wastes, or any combination thereof. E 833, E06

remelted heat, n —the product of the remelting of a **primary heat**, in whole or in part. A 941, A01

remodel, v —to replace or improve a **building** or its parts. E 631, E06

remodel, v —to replace or improve a building or its parts. E 1605, E06

remodeled soil—soil that has had its natural structure modified by manipulation. D 653, D18

remodeling sensitivity (sensitivity ratio), S_r (D)—the ratio of: (1) the unconfined compressive strength of an undisturbed specimen of soil, to (2) the unconfined compressive strength of a specimen of the same soil after remodeling at unaltered water content. D 653, D18

remolding index, I_R (D)—the ratio of: (1) the modulus of deformation of a soil in the undisturbed state, to (2) the modulus of deformation of the soil in the remolded state. D 653, D18

remote fire tool—remotely controlled tool. F 592, F16

remotely operated aircraft, ROA, n —UAV that complies with the applicable parts of 14 CFR (airworthiness type certificate, operated by certified pilot) and is approved for routine, integrated operations similar to a manned aircraft of the same class and category. See R-103-2004. F 2395, F38

removable dial—a dial that is removable from the spindle. F 471, F12

removal, n —the cleanup or removal of released hazardous substances from the environment; such actions as may be necessary to take in the event of the threat of release of hazardous substances into the environment; such actions as may be necessary to monitor, assess, and evaluate the release or threat of release of hazardous substances; the disposal of removed material; or the taking of such other actions as may be necessary to prevent, minimize, or mitigate damage to the public health or welfare or to the environment, which may otherwise result from a release or threat of release. D 5681, D34

removal—the cleanup or removal of released hazardous substances from the environment; such actions as may be necessary to take in the event of the threat of release of hazardous substances into the environment; such actions as may be necessary to monitor, assess, and evaluate the release or threat of release of hazardous substances; the disposal of removed material; or the taking of such other actions as may be necessary to prevent, minimize, or mitigate damage to the public health or welfare or to the environment, which may otherwise result from a release or threat of release. D 5681, D34

removal extractor—a series of horizontal baffles, usually constructed of stainless steel, designed to remove grease and drain it away to a container. They are cleaned by running them through a dishwasher or by soaking and rinsing. See *grease extractors*. F 1827, F26

remove loose soil, v —subject textile to agitation, impact, and suction to remove dust and particulate soil. D 5253, D13

renewable energy, n —energy obtained from renewable resources, including wind, solar, tidal, and forestry and agricultural products and by products. E 2114, E06

renewable energy resources—sources of energy that are regenera-

tive or virtually inexhaustible, such as solar, wind, ocean, biomass, municipal wastes, and hydropower energy. Geothermal energy is sometimes also included in the term. E 1705, E48

renewable resource, n —a resource that is grown, naturally replenished, or cleansed, at a rate which exceeds depletion of the usable supply of that resource. E 2114, E06

repair, v —to replace or correct damaged or faulty **components** or **subsystems** of a **building** to **maintain** operating capability. E 631, E06

repair, v —to replace or correct damaged or faulty components or subsystems of a building to maintain operating capability. E 1605, E06

repair—to restore to a sound or good state after wear, partial destruction, or damage. E 2135, E53

repairable—a state in which normal repair is reasonable from a standpoint of cost, accessibility, and technical involvement. E 2135, E53

repairable item—an item that can be reconditioned or economically repaired for reuse. E 2135, E53

reparative medicine, n —a branch of medical science whereby clinicians use surgical methods to repair or modify the structure and function of patient's cells, tissues, or organs. The principles of reparative medicine can be applied in tissue engineering to generate TEMPs. F 2312, F04

repeatability—the standard deviation of results obtained by the same operator using the same instrument in successive measurements on the same sample. C 242, C21

repeatability, n —a measure of the precision of the analyzer to repeat its results on independent introductions of the same sample at different time intervals. D 1356, D22

repeatability, n —the quantitative expression of the random error associated with a single operator in a given laboratory obtaining repetitive results by applying the same test method with the same apparatus under constant operating conditions on identical test material within a short interval of time on the same day. It is defined as the difference between two such results at the 95 % confidence level. D 4175, D02

repeatability—the precision of a test method expressed in terms of the agreement attainable between measurements made by a single operator using the same apparatus and techniques. D 4790, D16

repeatability, n —see **within-laboratory standard deviation.**

E 135, E01

repeatability, n —the closeness of agreement between the results of successive measurements of the same test specimen, or of test specimens taken at random from a homogeneous supply, carried out on a single laboratory, by the same method of measurement, operator, and measuring instrument, with repetition over a specified period of time. See also **reproducibility.** E 284, E12

repeatability, n —of results of temperature measurements, closeness of agreement between the results of successive measurements of the same temperature carried out under the same conditions of measurement. E 344, E20

repeatability, n —precision under repeatability conditions.

E 456, E11

repeatability—the precision of a method expressed as the agreement attainable between independent determinations performed at essentially the same time (duplicates) by one analyst using the same apparatus and techniques. E 1547, E15

repeatability—a quantitative measure of the precision of the results by a single analyst in a given laboratory using a given apparatus. E 2161, E37

repeatability—variation in the values of measurement obtained when one operator uses the same gage for measuring identical characteristics of the same parts. F 1789, F16

repeatability conditions, n —conditions where mutually independent test results are obtained with the same test method in the same laboratory by the same operator with the same equipment within short intervals of time, using test specimens taken at random from a single sample of material. D 4175, D02

repeatability conditions, *n*—conditions under which test results are obtained with the same test method in the same laboratory by the same operator with the same equipment in the shortest practical period of time using test units or test specimens taken at random from a single quantity of material that is as nearly homogeneous as possible (see 10.3 of Practice E 691). **D 4175, D02**

repeatability conditions, *n*—conditions where independent test results are obtained with the same method on identical test items in the same laboratory by the same operator using the same equipment within short intervals of time. **E 456, E11**

repeatability index, *r, n*—an estimate of the maximum difference expected for results on the same test material on different days in the same laboratory, a difference not expected to be exceeded an average of more than once in 20 comparisons (95 % probability). **E 135, E01**

repeatability limit (*r*)—The value below which the absolute difference between two results from separate and consecutive test determinations, carried out on the same sample in the same laboratory by the same operator using the same apparatus on the samples taken at random from a single quantity of homogeneous material, may be expected to occur with a probability of approximately 95%. **D 121, D05**

repeatability limit (*r*), *n*—the value below which the absolute difference between two individual test results obtained under repeatability conditions may be expected to occur with a probability of approximately 0.95 (95 %). **E 456, E11**

repeatability, *r, n*—an established value, below which the absolute difference between two “within-laboratory” or “within test-site” test results may be expected to lie, with a specified probability. **F 538, F09**

repeatability, relative (*r*), *n*—a repeatability estimate expressed as percentage of the average of the property for which the estimate was obtained. **F 538, F09**

repeatability standard deviation, *n*—see **within-laboratory standard deviation**. **E 135, E01**

repeatability standard deviation, *n*—the standard deviation of test results obtained under repeatability conditions. **E 456, E11**

repertoire—includes all of the characters and graphic shapes in an OCR imaging device system. **F 149, F05**

repetitive diving, *n*—any dive conducted while the decompression model being followed for the dives indicates that inert gases are still present in the tissues from a previous dive. This is within the context of a fixed time period, usually 12 to 24 h, depending on the model being followed. **F 1549, F32**

repetitive group designation, *n*—an assigned letter on a decompression table that relates directly to the amount of residual inert gas in the diver’s tissues following a dive. This group changes with time as the diver’s body off-gases. **F 1549, F32**

repetitive impact erosion test, *n*—in *impingement erosion testing*, an apparatus or method that produces a controlled or countable number of impacts by liquid or solid particles of uniform size, shape, and impact velocity, all on the same location of the test specimen. One example of such a test is the “wheel-and-jet” type of liquid impact apparatus. **G 40, G02**

replacement cost—building component replacement and related costs, included in the capital budget, that are expected to be incurred during the study period. **E 631, E06**

replacement cost, *n*—building component replacement and related costs, included in the capital budget, that are expected to be incurred during the study period. **E 833, E06**

replacement disc, *n*—a structure intended to restore support and motion between adjacent vertebral bodies. **F 1582, F04**

replenisher—a toning material added to the developer mix to replace that which is consumed during the copying process. **F 335, F05**

replica—a reproduction of a surface in a material, for example, a plastic.

(1) *atomic*—a thin replica devoid of structure on the molecular level, prepared by the vacuum or hydrolytic deposition of metals or simple compounds of low molecular weight.

(2) *cast*—a reproduction of a surface in plastic made by the evaporation of the solvent from a solution of the plastic or by polymerization of a monomer on the surface.

(3) *collodion*—a replica of a surface cast in nitro-cellulose.

(4) *Formvar*—a reproduction of a surface in a plastic Formvar film.

(5) *gelatin*—a reproduction of a surface prepared in a film composed of gelatin.

(6) *impression*—a surface replica which is made by impression. The results of making an impression.

(7) *molecular*—the reproduction of a surface in a high polymer such as collodion and other plastics.

(8) *negative*—that replica which is obtained by the direct contact of the replicating material with the specimen. In it, the contour of the replica surface is reversed with respect to that of the original.

(9) *oxide film*—a thin film of an oxide of the specimen to be examined. The replica is prepared by air, oxygen, chemical, or electrochemical oxidation of the parent metal and is subsequently freed either mechanically or chemically for purposes of examination.

(10) *plastic*—a reproduction in plastic of the surface to be studied, prepared by evaporation of the solvent from a solution of plastic, by polymerization of a monomer, or solidification of a plastic on the surface.

(11) *positive*—a replica, the contours of which correspond directly to the surface being replicated; that is, elevations on the surface are elevations on the replica.

(12) *preshadowed*—a replica formed by the application of the shadowing material to a surface to be replicated, before the thin replica film is cast or otherwise deposited on the surface.

(13) *pseudo*—a replica which has portions of the material being replicated embedded in it.

(14) *tape replica method* (faxfilm)—a method of producing a replica by pressing the softened surface of a tape or sheet of a plastic material on the surface to be replicated.

(15) *vapor deposited*—a replica formed of a metal or a salt by the condensation of the vapors of the material onto the surface to be replicated. **E 7, E04**

replicate, *n*—*inexperimenting or testing*, one of two or more runs with the same specified experimental or test conditions and with each experimental or test condition being established independently of all previous runs. (Compare **duplicate**.) **D 123, D13**

replicate, *v*—*inexperimenting or testing*, to repeat a run so as to produce a replicate. (Compare **duplicate**.) **D 123, D13**

replicate—in electron microscopy, to reproduce by means of a replica. **E 7, E04**

replicate, *n*—each of several experimental units that are tested simultaneously using the same experimental conditions. **E 943, E47**

replicate, *n*—either (1) an individual test object from a sample of *n* objects or (2) one of *m* individual test values for a test object. **F 538, F09**

replicate (repeat) tests—nominally identical tests on different randomly selected test specimens conducted at the same nominal value of the independent variable *X*. **E 1823, E08**

replicates—two or more repetitions of a test determination. **E 1547, E15**

replication, *v*—the act of selecting and testing a number of replicates. **F 538, F09**

repoint, *v*—to remove defective mortar and place properly prehydrated plastic mortar into mortar joints. **C 1180, C12**

reported power, *n*—of a *photovoltaic device*, the output power at a selected test voltage. **E 1328, E44**

reporting bases:

as-determined basis, n—analytical data obtained from the analysis sample of coal or coke after conditioning and preparation to No. 60 (250- μ m) sieve in accordance with Practice D 2013. As-determined data represents the numerical

reporting bases:

values obtained at the particular moisture level in the sample at the time of analysis. These are normally converted, according to formulae contained in Practice D 3180, to conventional reporting bases.

as-received basis, n—analytical data calculated to the moisture condition of the sample as it arrived at the laboratory and before any processing or conditioning. If the sample has been maintained in a sealed state so that there has been no gain or loss, the as-received basis is equivalent to the moisture basis as sampled.

dry, ash-free basis, n—data calculated to a theoretical base of no moisture or ash associated with the sample. Numerical values as established by Test Methods D 3173 and D 3174 are used for converting the as-determined data to a moisture- and ash-free basis.

dry basis, n—data calculated to a theoretical base of no moisture associated with the sample. The numerical value as established by Test Method D 3173 is used for converting the as-determined data to a dry basis.

equilibrium moisture basis, n—data calculated to the moisture level established as the equilibrium moisture. Numerical values as established by Test Method D 1412 are used for the calculation. **D 121, D05**

reporting limit, n—the lowest level of an **analyte** in a sample that an individual laboratory can confidently report for a particular **matrix**. **E 1605, E06**

representative quality indicator (RQI)—an actual part or similar part of comparable geometry and attenuation characteristics to that of the test part(s), that has known or measurable features, or both, representing the facets of nonconformance for which the test part is to be examined. **E 1316, E07**

representative sample—See *representative sample* under **sample**. **D 121, D05**

representative sample, n—a part of a homogeneous material, or a part of the composited and mixed portions of a material, which carries all the true properties and physical characteristics of the whole material. **D 4175, D02**

representative sample, n—a sample collected in such a manner that it reflects one or more characteristics of interest (as defined by the project objectives) of a population from which it is collected. **D 5681, D34**

representative sample, n—a sample collected such that it reflects one or more characteristics of interest of the lot or population from which it was collected. **D 5681, D34**

representative sample, n—a sample collected such that it reflects one or more characteristics of interest (as defined by the project objectives) of a population from which it was collected. **D 5681, D34**

representative sample—a sample collected in such a manner that it has characteristics equivalent to the material being sampled. **D 5681, D34**

representative sample—sample of a universe or whole (for example, waste sample pile, lagoon, ground water, or waste stream), selected in a random sampling process, which represents the total properties in the universe or whole. **E 631, E06**

representative sample—a sample collected in such a manner that it has characteristics equivalent to the lot. **E 856, D34**

representative sample—sample of a universe or whole (for example, waste sample pile, lagoon, ground water, or waste stream), selected in a random sampling process, which represents the total properties in the universe or whole. **E 1605, E06**

representative sample—a sample containing enough measured elements that the effect of random fluctuations is acceptably small. **E 1620, E29**

representative sample, n—a sample taken from a quantity of material that exhibits the characteristics of the original material from which it was taken. **E 1638, E29**

representative sampling, n—the process of obtaining a representative sample or a representative set of samples. **D 5681, D34**

representative set of samples, n—a set of samples that collectively reflect one or more characteristics of interest of a population from which they were collected. See *representative sample*. **D 5681, D34**

representative subsample, n—a subsample collected in such a manner that it reflects one or more characteristics of interest (as defined by the project objectives) of the laboratory sample from which it was collected. **D 5681, D34**

repress, v—to apply pressure to a previously pressed and either sintered or presintered compact. It includes **restrike, coin, and size**. **B 243, B09**

reprocess—repeating of a process that has already been conducted on a fastener as part of the standard requirement. **F 1789, F16**

reprocessed plastic—a thermoplastic prepared from usually melt processed scrap or reject parts by a plastics processor, or from non-standard or non-uniform virgin material. **D 883, D20**

reprocessed plastic—a thermoplastic prepared from usually melt processed scrap or reject parts by a plastics processor, or from non-standard virgin material or non-uniform virgin material. **F 412, F17**

reprocessing, vt—the reworking of cells, tissues, and organs of unacceptable quality from a defined stage of processing, so that the quality may be rendered acceptable by one or more additional operations. **F 2312, F04**

reproducibility—the standard deviation of results obtained by different operators using the same or different instruments in different laboratories on the same sample. **C 242, C21**

reproducibility, n—a measure of the precision of different analyzers to repeat results on the same sample. **D 1356, D22**

reproducibility, n—a quantitative expression of the random error associated with different operators from different laboratories, using different apparatus, each obtaining a single result by applying the same method on an identical test sample. It is defined as the 95 % confidence limit for the difference between two such single and independent results. **D 4175, D02**

reproducibility—the precision of a test method expressed in terms of agreement expected between measurements made in different laboratories using similar apparatus and the same procedure. **D 4790, D16**

reproducibility, n—see **between-laboratory standard deviation**. **E 135, E01**

reproducibility, n—the closeness of agreement between the results of successive measurements of the same test specimen, or of test specimens taken at random from a homogeneous supply, but changing conditions such as operator, measuring instrument, laboratory, or time. The changes in conditions must be specified. See also **repeatability**. **E 284, E12**

reproducibility, n—of *results of temperature measurements*, closeness of agreement between the results of measurements of the same temperature carried out under changed conditions of measurement. **E 344, E20**

reproducibility, n—precision under reproducibility conditions. **E 456, E11**

reproducibility—the precision of a method expressed as the agreement attainable between determinations performed in different laboratories. **E 1547, E15**

reproducibility, n—the closeness of agreement between test results obtained under reproducibility conditions (that is, conditions under which test results are obtained with the same test method on identical material in different laboratories). **E 1732, E30**

reproducibility—a quantitative measure of the precision of the results between two laboratories. **E 2161, E37**

reproducibility—variation in average measurements obtained when two or more people measure the same parts or items using the same measuring technique. **F 1789, F16**

reproducibility conditions, n—conditions under which test results are obtained in different laboratories with the same test method, using test specimens taken at random from the same sample of material. **D 4175, D02**

reproducibility conditions, *n*—conditions where test results are obtained with the same method on identical test items in different laboratories with different operators using different equipment.

E 456, E11

reproducibility index, *R*, *n*—an estimate of the maximum difference expected for results on the same material in two laboratories, a difference not expected to be exceeded an average of more than once in 20 comparisons (95 % probability).

E 135, E01

reproducibility limit, *n*—the value below which the absolute difference between two test results obtained under reproducibility conditions may be expected to occur with a probability of approximately 0.95 (95 %).

D 121, D05

reproducibility limit, *n*—(*R*) the value below which the absolute difference between two test results obtained under reproducibility conditions may be expected to occur with a probability of approximately 0.95 (95 %).

E 456, E11

reproducibility, *R*, *n*—quantitative expression of the random error associated with operators working in different laboratories, each obtaining single results on identical test material when applying the same method.

D 4175, D02

reproducibility, *R*, *n*—an established value, below which the absolute difference between two “between-laboratory” or “between test-site” test results may be expected to lie, with a specified probability.

F 538, F09

reproducibility, relative (*R*), *n*—a reproducibility estimate expressed as percentage of the average of the property for which the estimate was obtained.

F 538, F09

reproducibility standard deviation, *n*—the standard deviation of test results obtained under reproducibility conditions.

D 121, D05

reproducibility standard deviation, *n*—see **between-laboratory standard deviation**.

E 135, E01

reproducibility standard deviation (S_R), *n*—the standard deviation of test results obtained under reproducibility conditions.

NOTE—Other measures of the dispersion of test results obtained under reproducibility conditions are the “reproducibility variance” and the “reproducibility coefficient of variation.”

E 456, E11

request to send, *n*—an electronic signal sent by one component to another to determine if the second component is ready to receive a transmission from the first.

F 1457, F05

required remedial actions—remedial actions determined necessary to comply with the requirements of CERCLA § 120(h)(3)(B)(i).

D 5681, D34

required response actions—removal or remedial actions, or both, determined necessary to comply with the requirements of CERCLA § 120(h)(3)(B)(i).

D 5681, D34

requirement—a translation of the needs into a set of individual quantified or descriptive specifications for the characteristics of an entity in order to enable its realization and examination, (ISO Guide 25).

E 1187, E36

requirement, *n*—need or expectation that is generally implied or obligatory.

E 1605, E06

requirement scale, *n*—for a topic of facility serviceability, a set of descriptions of requirements for serviceability in which each description has been selected to indicate a specific level of serviceability on a scale from the lowest to the highest level likely to be encountered.

E 631, E06

requirements determination—identifying needs for assets and materials through the planning process. Also may refer to identifying needs for a property or asset management system to help meet organizational goals and objectives.

E 2135, E53

requirement statement (enoncé de boisons)—for a facility, the serviceability requirements for a facility, together with applicable performance criteria, performance test methods, and optional explanatory comments.

criterion, *n* (critéré)—an established precedent, rule, measure, norm, or code upon which a decision may be based.

performance criterion, *n* (critère de rendement)—a quantitative statement of the level of performance needed to satisfy a

serviceability requirement.

performance test method, *n* (méthode d'essai de rendement)—a method of determining whether the performance of a facility is in accordance with a specified performance criterion.

serviceability requirement, *n* (besoin de fontionalité)—for a facility, a qualitative statement of the serviceability required from a facility.

E 631, E06

requirement statement (enoncé de boisons)—for a facility, the serviceability requirements for a facility, together with applicable performance criteria, performance test methods, and optional explanatory comments.

criterion, *n* (critéré)—an established precedent, rule, measure, norm, or code upon which a decision may be based.

performance criterion, *n* (critère de rendement)—a quantitative statement of the level of performance needed to satisfy a serviceability requirement.

performance test method, *n* (méthode d'essai de rendement)—a method of determining whether the performance of a facility is in accordance with a specified performance criterion.

serviceability requirement, *n* (besoin de fontionalité)—for a facility, a qualitative statement of the serviceability required from a facility.

score, *n*—See **serviceability score**.

E 1480, E06

reradiation—loss of energy by radiation from a surface previously heated by absorption.

E 772, E44

rerefining—the use of primary refining processes on used electrical insulating liquids to produce liquids that are suitable for further use as electrical insulating liquids.

D 2864, D27

re-refining, *n*—the use of refining processes during recycling to produce high quality base stocks for lubricants or other petroleum products. Re-refining may include distillation, hydrotreating, or treatments employing acid, caustic, solvent, clay, or other chemicals, or combination thereof.

D 4175, D02

reroofing—the process of recovering or replacing an existing roofing system. See **recovering**.

D 1079, D08

resale value—the monetary sum expected from the disposal of an asset at the end of its economic life, its useful life, or at the end of the study period.

E 631, E06

resale value, *n*—the monetary sum expected from the disposal of an asset at the end of its economic life, its useful life, or at the end of the study period.

E 833, E06

resawn lumber—See **lumber**.

D 996, D10

Research octane number, *n*—for spark-ignition engine fuel, the numerical rating of knock resistance obtained by comparison of its knock intensity with that of primary reference fuel blends when both are tested in a standardized CFR engine operating under the conditions specified in this test method.

D 4175, D02

reserve, *n*—in construction design planning and estimating, an allocation of money held by management (Client) to be disbursed for changed project requirements.

E 833, E06

reserve alkalinity, *adj*—a term applied to engine coolant concentrates and antirusts to indicate the amount of alkaline inhibitors present in the product.

D 4725, D15

reserve buoyancy—gross buoyancy minus boom weight.

F 818, F20

reserve buoyancy to weight ratio—reserve buoyancy divided by boom weight.

F 818, F20

reservoir—a man-made impounded body of water or controlled lake where water is collected and stored.

D 4410, D19

residential dwelling—(1) a detached single family dwelling unit, including attached structures such as porches and stoops; or (2) a single family dwelling unit in a structure that contains more than one separate residential dwelling unit, which is used or occupied, or intended to be used or occupied, in whole or in part, as the home or residence of one or more persons.

E 1605, E06

resident species—a species that is regularly present at a specified site for some portion of its life span.

E 943, E47

residual—property remaining from a work effort for which no known requirement exists within that work effort.

E 2135, E53

residual contamination, R_c, n

residual contamination, R_c, n —the absolute mass of contaminant remaining after a cleaning process, expressed in milligrams per square centimeter of area or optionally as milligrams per square metre. **G 126, G04**

residual deflection—permanent deformation of a building element, component, or structure after complete or partial removal of applied force. Also called **permanent set** or **residual deformation**.

residual deformation—See **residual deflection**. **E 631, E06**

residual density, n —optical density of image after exposure to light or water. **F 1857, F05**

residual drawdown—the difference between the projected prepumping water-level trend and the water level in a well or piezometer after pumping or injection has stopped. **D 653, D18**

residual element, n —*in steel*, a specified or unspecified element, not intentionally added, originating in the raw materials, refractories, or surrounding atmospheres used in steel making. **A 941, A01**

residual elongation (RE), n —*of rope*, elongation after cyclic tensioning the rope to a specified force for a specified period of time. **D 123, D13**

residual error, n —the difference between the observed result and the predicted value (estimated treatment response); Observed Result minus Predicted Value. **E 456, E11**

residual error, n —the difference between the observed result and the predicted value (estimated treatment response); Observed Result minus Predicted Value. **E 1325, E11**

residual fiber shrinkage, n —*of textured yarns*, the shrinkage that remains in a yarn after texturing; the difference between the original length and the length after developed crimp has been removed. **D 4849, D13**

residual fuel, n —a liquid fuel containing bottoms remaining from crude distillation or thermal cracking; sometimes referred to as heavy fuel oil. **D 4175, D02**

residual fuel oil, n —any liquid or liquefiable petroleum product having a kinematic viscosity at 100°C between 5.0 and 50.0 mm²/s, inclusive, burned for the generation of heat in a furnace or firebox or for the generation of power in an engine. **D 4175, D02**

residual fuel oil, n —a fuel oil comprising a blend of viscous long, short, or cracked residue from a petroleum refining process and lighter distillates blended to a fuel oil viscosity specification. **D 4175, D02**

residual induction, B_r —See **induction, residual**. **A 340, A06**

residual magnetic field—the field that remains in ferromagnetic material after the magnetizing force has been removed. **E 1316, E07**

residual mercury column—the mercury that lies in the bore of the stem above the constriction. **E 344, E20**

residual moisture—See *residual moisture* under **moisture**. **D 121, D05**

residual moisture—the moisture content remaining in an RDF sample after it has been air-dried and milled down to an analysis sample. **E 856, D34**

residual nitrogen, n —nitrogen gas that is still dissolved in a diver's tissues after he has surfaced from a dive using compressed air as a breathing gas. **F 1549, F32**

residual potential—apparent surface voltage remaining in light exposed areas of the photoconductive surface. **F 335, F05**

residuals—measurable elements present in a metal or alloy which were not intentionally added to meet a specification requirement. **F 1789, F16**

residual shear strength, n —value of shear stress at sufficiently large displacement where the stress remains constant with continued shearing. **D 4439, D35**

residual soil—soil derived in place by weathering of the underlying material. **D 653, D18**

residual strain—the strain in a solid associated with a state of residual stress. (ISRM) **D 653, D18**

residual strain, n —strain associated with residual stress. **E 6, E28**

(residual) strain gradient, s_g [L⁻¹]—a through-thickness linear gradient (of residual strain) in the structural layer of interest before it is released that is used to represent the actual strain gradient. It is calculated to be the positive difference in the residual strain between the top and bottom of a cantilever divided by its thickness. Directional information is assigned to the value of 's'. **E 2444, E08**

residual strain, ϵ_r —in a surface-micromachining process, the strain present in the structural layer of interest after fabrication yet before the sacrificial layer is removed. In a bulk-micromachining process, the strain present in the suspended layer after fabrication yet before the substrate is removed at specified locations. **E 2444, E08**

residual strength, σ_r [FL⁻²]—the maximum value of the gross stress, neglecting the area of the crack, that a cracked specimen is capable of sustaining. **E 1823, E08**

residual stress—stresses that remain within a body as the result of plastic deformation or casting. **B 846, B05**

residual stress—stress remaining in a solid under zero external stress after some process that causes the dimensions of the various parts of the solid to be incompatible under zero stress, for example, (1) deformation under the action of external stress when some parts of the body suffer permanent strain; or (2) heating or cooling of a body in which the thermal expansion coefficient is not uniform throughout the body. (ISRM) **D 653, D18**

residual stress—the effective stress generated in a thawing soil if no change of volume is permitted during the thaw. **D 7099, D18**

residual stress—an initial, state of stress on unloaded, unglazed glass resulting from manufacturing process (heat-strengthening, tempering). **E 631, E06**

residual stress [FL⁻²], n —stress in a body which is at rest and in equilibrium and at uniform temperature in the absence of external and mass forces. **E 6, E28**

residual technique—the application of the magnetic particles after the magnetizing force has been discontinued. **E 1316, E07**

residual thaw layer—a layer of thawed or unfrozen ground between seasonally frozen ground and the permafrost table. **D 7099, D18**

residual torsion, n —revolutions made by a specified length of steel tire cord when one end is held in a fixed position and the other is allowed to turn freely. **D 123, D13**

residual torsion, n —revolutions made by a specified length of cord when one end is held in a fixed position and the other allowed to turn freely. **D 6477, D13**

residual value—the proceeds, less removal, and disposal costs, if any, realized upon disposition of an asset. It usually is measured by the net proceeds from the sale or other disposition of the asset, or its fair value if the asset is traded in on another asset. The estimated residual value is a current forecast of the residual value. **E 2135, E53**

residue, n —*for plumage*, quill pith, quill fragments, trash, or foreign matter. **D 123, D13**

residue, n —*for plumage*, quill pith, quill fragments, trash, or foreign matter. **D 7022, D13**

residue—those substances that remain in the sample flask after sample volatilization under the conditions of the test. **E 1547, E15**

residuum, n —a liquid or semi-liquid product obtained as residue from the distillation of petroleum and consisting primarily of asphaltic hydrocarbons. **D 4175, D02**

resilience, n —that property of a material to recover to approximately its original size and shape after deformation. (See also.) **D 123, D13**

resilience, n —the ratio of energy output to energy input in a rapid (or instantaneous) full recovery of a deformed specimen. **D 1566, D11**

resilience, n —that property of a material to recover to approximately its original size and shape after deformation. **D 4850, D13**

resilience—tendency of a material to return to its original shape after the removal of a stress. **F 1789, F16**

resilience, impact, *n*—the ratio of output to input mechanical energy in a rapid deformation and recovery cycle of a rubber specimen.

D 1566, D11

resilient, *adj*—tending or able to recover from strain or deformation caused especially by compressive stress.

F 141, F06

resilient connector—a flexible connection for joining pipe to structures capable of being deformed and deflected without rupture or leakage.

C 822, C13

resilient flooring, *n*—an organic floor surfacing material made in sheet or tile form or formed in place as a seamless material of which the wearing surface is non-textile. The resilient floor covering classification by common usage includes, but is not limited to asphalt, cork, linoleum, rubber, vinyl, vinyl composition, and polymeric poured seamless floors. Resilient in this sense is used as a commonly accepted term, but does not necessarily define a physical property.

F 141, F06

resin—in grouting, a material that usually constitutes the base of an organic grout system.

D 653, D18

resin, *n*—a solid or pseudosolid organic material often of high molecular weight, which exhibits a tendency to flow when subjected to stress, usually has a softening or melting range, and usually fractures conchoidally.

D 883, D20

resin, *n*—solid, semisolid, or liquid, usually organic material that has an indefinite molecular mass and, when solid, usually has a softening or melting range and exhibits a tendency to flow when subjected to stress.

D 907, D14

resin, *n*—an organic material of indefinite and relatively high molecular mass that may be used as a softener, processing aid, vulcanizing agent, or reinforcing agent.

D 1566, D11

resin—a solid or pseudosolid organic material often of high molecular weight, which exhibits a tendency to flow when subjected to stress, usually has a softening or melting range, and usually fractures conchoidally.

D 3878, D30

resin, *n*—a solid or pseudosolid organic material, often of high molecular weight, which exhibits a tendency to flow when subjected to stress, usually has a softening or melting range, and usually fractures conchoidally.

F 412, F17

resinates, metallic—See **metallic resinates**.

D 804, D01

resin batch—the quantity of resin that has been formulated in a single continuous operation and subjected to chemical processing or physical mixing to produce a homogenous material.

E 631, E06

resin batch—the quantity of resin that has been formulated in a single continuous operation and subjected to chemical processing or physical mixing to produce a homogeneous material.

E 1749, E06

resin binder—see **binder**.

F 335, F05

resin bonded batting, *n*—a textile filling material which is stabilized by spraying it with an acrylic, polyvinyl acetate, or other suitable resin emulsion after which the batting is dried and cured.

D 123, D13

resin bonded batting, *n*—a textile filling material which is stabilized by spraying it with an acrylic, polyvinyl acetate, or other suitable resin emulsion after which the batting is dried and cured.

D 7022, D13

resin-coated—covered with natural resin to provide ease of driving, increased holding power, or corrosion resistance, or a combination of these.

F 547, F16

resin content—see **matrixcontent**.

D 3878, D30

resin content—the amount of matrix present in a composite usually expressed in units of weight percent.

resite—See **C-stage**.

resitol—See **B-stage**.

resol—See **A-stage**.

E 631, E06

resin content—the amount of matrix present in a composite usually expressed in units of weight percent.

E 1749, E06

resin grout—a grout system composed of essentially resinous materials such as epoxys, polyesters, and urethanes.

D 653, D18

resinite—See *resinite* under **maceral**.

D 121, D05

resin, natural, *n*—a solid organic substance, originating in the secretion of certain plants or insects, which is thermoplastic, flammable, nonconductive of electricity; breaks with a conchoidal fracture (when hard); and dissolves in certain specific organic solvents but not water.

fossil resin—a natural resin of ancient origin usually found in the earth.

D 16, D01

resinoid, *n*—any of the class of thermosetting synthetic resins, either in their initial temporarily fusible state or in their final infusible state. (See also **novolak** and **thermosetting**.)

D 907, D14

resinous—containing a polymer as a binder that is either hardened by chemical action (thermosetting), by the evaporation of a solvent, or by melting for application (thermoplastic).

C 904, C03

resin particle—specially manufactured polymer beads used in the ion exchange process to remove dissolved salts from water.

D 6161, D19

resin-rich area—an area of the pultrusion that lacks sufficient reinforcement.

NOTE—The fiber pattern may not be visible.

D 3918, D20

resin streak, *n*—a streak of excess resin on the surface of a laminated plastic.

D 883, D20

resin, synthetic, *n*—a synthetic substance physically similar to natural resin.

acrylic resin—a synthetic resin made from derivatives of acrylic acid.

alkyd resin—a synthetic resin made from polyhydric alcohols and polybasic acids; generally modified with resins, fatty oils or fatty acids.

ester gum—a resin made from rosin or rosin acids and a polyhydric alcohol, such as glycerine or pentaerythritol.

maleic resin—a resin made from a natural resin and maleic anhydride or maleic acid.

melamine resin—a synthetic resin made from melamine and aldehyde.

penta resin—ester gum made from rosin and pentaerythritol.

phenolic resin—a synthetic resin made from phenols and aldehydes.

styrene resin—a synthetic resin made from vinyl benzene.

urea resin—a synthetic resin made from urea and an aldehyde.

vinyl resin—a synthetic resin made from vinyl compounds.

D 16, D01

resist, *n*—(1) a material applied to a part of a cathode or plating rack to render the surface nonconductive. (2) A material applied to a part of the surface of an article to prevent reaction of metal from that area during chemical or electrochemical processes.

B 374, B08

resistance—the scalar property of an electric circuit or of any body that may be used as part of an electric circuit which determines for a given current the rate at which electric energy is converted into heat or radiant energy and which has a value such that the product of the resistance and the square of the current gives the rate of conversion of energy.

In a dc circuit:

$$P = I^2 R$$

where:

P = power, W,

I = current, A, and

R = resistance, Ω.

B 354, B01

resistance—the ratio of the potential difference applied to a specimen to the current passed through by the applied potential. It is the reciprocal of **conductance**. The unit is ohm.

D 2864, D27

resistance, abrasion, *n*—the ability to withstand scuffing, scratching, rubbing, or wind-scouring.

C 168, C16

resistance, apparent dc

resistance, apparent dc—the dc resistance measured at the end of a specified electrification time. The “apparent dc resistance” is the reciprocal of the “apparent dc conductance.” The unit is ohm.

D 2864, D27

resistance, core, R_1 —the effective ac resistance of a hypothetical parallel resistor that is considered to carry exclusively the core loss current, I_c , when a voltage is applied to the terminals of a coil encircling a magnetic core.

NOTE—The product, $I_c^2 R_1$, equals the total core loss, P_c . A 340, A06

resistance, dc—the ratio of the dc voltage (in volts) to the total current (in amperes) carried through the material between two electrodes that are in contact with, or immersed in a specimen. The “dc resistance” is the reciprocal of the “dc conductance.” The unit is ohm.

D 2864, D27

resistance, freeze-thaw, n —resistance to cycles of freezing and thawing that could affect application, appearance, or performance.

C 168, C16

resistance, impact (toughness), n —ability to withstand mechanical blows or shock without damage seriously affecting the effectiveness of the material or system.

C 168, C16

resistance, insulation, n —the ratio of the dc voltage applied to two electrodes (on or in a specimen) to the total volume and surface current between them.

D 1711, D09

resistance, surface, n —the ratio of the dc voltage applied to two electrodes (on the surface of a specimen) to the current between them.

D 1711, D09

resistance, thermal—the average temperature difference between two defined surfaces of a particular body or assembly when unit thermal transmission in unit time through unit area is established between the surfaces. $R = K \cdot m^2 / W$ ($R = {}^\circ\text{F} \cdot \text{h} \cdot \text{ft}^2 / \text{Btu}$).

D 1079, D08

resistance, thermal, R , n —the quantity determined by the temperature difference, at steady state, between two defined surfaces of a material or construction that induces a unit heat flow rate through a unit area.

$$R = \Delta T/q$$

A resistance (R) associated with a material shall be specified as a material R . A resistance (R) associated with a system or construction of materials shall be specified as a system R . (R in SI units: $\text{K}/(\text{W}/\text{m}^2) = \text{K} \cdot \text{m}^2/\text{W}$.) (R in inch-pound units: $\text{F}/(\text{Btu}/\text{h}/\text{ft}^2) = \text{F} \cdot \text{ft}^2 \cdot \text{h}/\text{Btu}$.)

C 168, C16

resistance thermometer—an instrument for determining temperature by measuring the electrical resistance of a standardized material exposed to that temperature.

E 7, E04

resistance thermometer, n —a temperature-measuring device comprised of a resistance thermometer element, internal connecting wires, a protective shell with or without means for mounting, a connection head, or connecting wire or other fittings, or both.

E 344, E20

resistance thermometer element, n —the temperature-sensitive portion of the thermometer composed of resistance wire, film or semiconductor material, its supporting structure, and means for attaching connecting wires.

E 344, E20

resistance to bending, n —in paper, the force required to deflect a rectangular test piece of paper, clamped at one end, through a specified angle when the force is applied near the free end of the test piece, normal to the plane which includes the near edge of the test piece, the clamp, and the point or line of application of the force.

D 1968, D06

resistance to breakage—the resistance of the inked ribbon or carbon ribbon to rupture resulting from tension before or after use.

F 221, F05

resistance to delamination, n —for pile yarn floor covering, the force/unit width measured when separating component layers

D 123, D13

resistance to delamination, n —for pile yarn floor covering, the force/unit width measured when separating the secondary backing.

D 5684, D13

resistance (to flow)—the reciprocal of conductance.

E 1316, E07

resistance to slippage, n —the force required to separate the parts of a standard seam by a specified amount.

D 123, D13

resistance to ultraviolet radiation, n —in polyolefin tape yarn, the time-to-failure of yarns exposed to xenon-arc weathering.

D 123, D13

resistance to ultraviolet radiation, n —in polyolefin tape yarn, the time-to-failure of yarns exposed to xenon-arc weathering.

D 4849, D13

resistance to yarn slippage, n —at the seam, the force required to displace one or more yarns in a fabric from the original position, causing differences in alignment, or spacing, or both.

D 123, D13

resistance to yarn slippage, n —at the seam, the force required to displace one or more yarns in a fabric from the original position, causing differences in alignment, or spacing, or both.

D 4850, D13

resistance, volume, n —the ratio of the dc voltage applied to two electrodes (on or in a specimen) to the current in the volume of the specimen between the electrodes.

D 1711, D09

resistance, winding, R_w —the effective ac series resistance of an inductor when no ferromagnetic materials are present.

NOTE—At low frequencies, R_w is only slightly greater than the dc resistance of the winding.

NOTE—The product $I^2 R_w$ equals the sum of the copper, eddy current, and dielectric losses in the winding.

NOTE—The total active power, P , delivered to an inductor having a ferromagnetic core is:

$$P = P_c + I^2 R_w$$

A 340, A06

resistazone counter—the generic name used to describe stream counters in which the interrogation zone is monitored for changes in electrical resistance as a result of the presence of a particle.

C 242, C21

resistivity, ρ —that property of a material which determines its resistance to the flow of an electric current, expressed by:

$$\rho = R \cdot A / \ell$$

where:

R = resistance of the specimen, Ω ;

A = cross sectional area, cm^2 ; and

ℓ = length of specimen, cm.

Units of electrical resistivity are ohm-centimetre (cgs) and ohm-metre (SI).

NOTE—This value is equivalent to the resistance between opposite faces of a cube of unit dimensions, and is designated “specific resistivity” or, by usage, “volume resistivity.”

A 340, A06

resistivity—the electrical resistance of a body of unit length, and unit cross-sectional area or unit weight.

B 354, B01

resistivity—the ratio of the potential gradient paralleling the current passing through the specimen, to the current density. This is numerically equal to the resistance between opposite faces of a unit cube. It is the reciprocal of **conductivity**. The unit commonly used is: ohm-centimetre. The SI unit is ohm-metre.

D 2864, D27

resistivity—the property of a substance (in this case, water) to resist the flow of electricity; the measurement of that resistance; the inverse of conductivity. Measured by a resistivity monitor, and described in ohms-cm.

D 6161, D19

resistivity, ρ —the reciprocal of conductivity.

E 1142, E37

resistivity—see **apparent surface resistivity** and **volumeresistivity**.

F 335, F05

resistivity, apparent dc volume—the “dc volume resistivity” measured at the end of a specified electrification time. It is the

reciprocal of the "apparent dc volume conductivity." The unit most commonly used is ohm-centimetre. The SI unit is ohm-metre.

D 2864, D27

resistivity, dc—the ratio of the dc potential gradient paralleling the current to the current density at a given instant in time and under prescribed conditions. It is the reciprocal of the "dc conductivity." In common practice the "dc resistivity" is numerically equal to the dc resistance between opposite faces of a centimeter cube of liquid. The unit is ohm-centimetre. The SI unit is ohm-metre.

D 2864, D27

resistivity, dc volume—the property of a material that impedes the flow of electricity through its volume. It is numerically equal to the ratio of: the steady direct voltage gradient parallel to the current; to the steady-state current density within the material. It is the reciprocal of the *dc volume conductivity*. In common usage where the voltage gradient is in volts per centimetre and the current density is in amperes per square centimetre, the unit of dc volume resistivity is (ohm-centimetre). The SI unit is ohm-metre.

D 2864, D27

resistivity, surface, n —the surface resistance multiplied by that ratio of specimen surface dimensions (width of electrodes defining the current path divided by the distance between electrodes) which transforms the measured resistance to that obtained if the electrodes had formed the opposite sides of a square. **D 1711, D09**

resistivity, surface insulation (of a single-strip specimen)—the effective resistivity of a single insulative layer tested between applied bare metal contacts and the base metal of the insulated test specimen. **A 340, A06**

resistivity, surface insulation (of multi-strip specimens)—the resistance of a unit area per test strip calculated from a measurement of the electrical resistance of a stack of strips with test current perpendicular to the strip surface. **A 340, A06**

resistivity, thermal, r, n —the quantity determined by the temperature difference, at steady state, between two defined parallel surfaces of a homogeneous material of unit thickness, that induces a unit heat flow rate through a unit area. (r in SI units: m K/W.) (r in inch-pound units: h ft F/Btu or, h ft² F/Btu in.) **C 168, C16**

resistivity, volume ρ —See **resistivity**. **A 340, A06**

resistivity, volume, n —the ratio of the electric potential gradient to the current density when the gradient is parallel to the current in the material. **D 1566, D11**

resistivity, volume, n —the volume resistance multiplied by that ratio of specimen volume dimensions (cross-sectional area of the electrodes divided by the distance between electrodes) which transforms the measured resistance to that resistance obtained if the electrodes had formed the opposite sides of a unit cube. **D 1711, D09**

resistivity, water vapor—See **water vapor resistivity**. **C 168, C16**

resite—See **C-stage**. **E 1749, E06**

resitol—See **B-stage**. **E 1749, E06**

resol—See **A-stage**. **E 1749, E06**

resolution—the fineness of detail in an object which is revealed by an optical device. Resolution is usually specified as the minimum distance by which two lines or points in the object must be separated before they can be revealed as separate lines or points in the image (see **resolving power** and **shape resolution**). The theoretical limit of resolution is determined from the equation:

$$d = 0.61 \lambda / (n \sin A.A./2)$$

where:

d = minimum distance between object points observed as distinct points in the image.

λ = wavelength of the radiation employed.

n = the minimum refractive index of the media between the object and the objective lens.

A.A. = the angular aperture.

E 7, E04

resolution $\Delta\lambda, \Delta \bar{\nu}, n$ —of a dispersive spectrometer; in mole-

cular spectroscopy, the wavelength interval, $\Delta\lambda$, or wavenumber interval, $\Delta \bar{\nu}$, of radiant energy leaving the exit slit of a monochromator measured at half the peak detected radiant power.

E 131, E13

resolution, n —in atomic spectrometry, the minimum distance by which two spectral lines must be separated before they can be distinguished as being separate. **E 135, E01**

resolution, n —minimum temperature increment displayed by an *IR thermometer* in degrees Celsius or Fahrenheit. **E 344, E20**

resolution:

depth—*EIA*, energy resolution translated into an equivalent resolution of depth in the specimen.

energy—*EIA*, the full width at half-maximum (FWHM) of the measured energy distribution when the energy distribution of the backscattered particles is monoenergetic.

lateral—*EIA*, the distance measured on the surface of a specimen over which changes in composition can be established with confidence by BS. This resolution is generally determined by the size of the beam spot.

system—*EIA*, the energy or depth resolution measured in a BS spectrum for a monoenergetic incident beam. **E 673, E42**

resolution, n —the level of spatial or temporal detail or administrative classification at which a particular data element is collected, archived retrieved, or both, from an ADMS; that is, lane-by-lane versus detector station or intersection approach; a 20-s versus a 15-min time period; or a particular named city versus the generic term of city. **E 867, E17**

resolution—the smallest increment that a characteristic measuring process must distinguish and display. **E 867, E17**

resolution—the ability of ultrasonic equipment to give simultaneous, separate indications from discontinuities having nearly the same range and lateral position with respect to the beam axis. **E 1316, E07**

resolution—a quantitative measure of the ability to separate closely spaced transitions at an appropriate analytic level. **E 2161, E37**

resolution, n —in a bar code system, the narrowest element dimension that can be distinguished by a particular reading device or method. **F 1294, F05**

resolution (of a deformation-measuring instrument)—the ratio of the smallest divisional increment of the indicating scale to the sensitivity of the instrument. Interpolation within the increment may be possible, but is not recommended in specifying resolution. **D 653, D18**

resolving power—the ability of a given lens system to reveal fine detail in an object. (See also **Resolution**.) **E 7, E04**

resolving power, R, n —the ratio $\lambda/\Delta\lambda$ where λ is the wavelength of radiant energy and $\Delta\lambda$ is the resolution expressed in wavelength units; or, alternatively, the ratio $\bar{\nu}/\Delta \bar{\nu}$ where $\bar{\nu}$ is the wavenumber of radiant energy being examined and $\Delta \bar{\nu}$ is the resolution expressed in wavenumber units. **E 131, E13**

resonance—the reinforced vibration of a body exposed to the vibration, at about the frequency, of another body. **D 653, D18**

resonance method—a technique in which continuous ultrasonic waves are varied in frequency to identify resonant characteristics in order to discriminate some property of a part such as thickness, stiffness, or bond integrity. **E 1316, E07**

resonance reaction—*EIA*, a nuclear reaction that has a narrow peak in the nuclear reaction cross section, which is so much larger than the nuclear reaction cross sections at adjacent energies both above and below the peak that essentially all the particles detected from the reaction are due to the peak. **E 673, E42**

resonant forced vibration technique (in dynamic mechanical measurement)—a technique for performing dynamic mechanical measurements, in which the sample is oscillated mechanically at the system's natural resonant frequency. **D 4092, D20**

resonant frequency—a frequency at which resonance exists. **D 653, D18**

resorption, n —the process by which a material that has given

resorption, *n*

material by desorption takes up some more of the material given up. **D 123, D13**

resorption, *n*—the process by which a material that has given up another material by **desorption** takes up some more of the material given up. **D4920, D13**

resource application—use of stabilized products in specific areas such as earth liners, foundations, road base, backfills, embankments, earth dams, etc. **D 5681, D34**

Resource Conservation and Recovery Act of 1976—an amendment to the Solid Waste Disposal Act of 1965.

restoration—See **preservation**.

retaining wall—See **wall**. **E 631, E06**

Resource Conservation and Recovery Act (RCRA), *n*—a congressional mandate that requires the management of regulated hazardous waste and requires that permits be obtained for facilities (both private and public) that treat, store, or dispose of hazardous waste. **E 833, E06**

resource structural products—structural products produced by lime, fly ash, and heavy metal waste; examples are block, brick, aggregates, gabions, and miscellaneous structural shapes. **D 5681, D34**

respiration rate, *n*—in an microbial aqueous system, the quantitative consumption of oxygen, generally expressed as mg O₂/L/h. **D 5681, D34**

respiration rate—the quantitative consumption of oxygen by an aqueous microbial system. The consumption is generally expressed as mg O₂/L/h. **D 5681, D34**

respiratory tracing, *n*—a display of physiological patterns of the subject's breathing activity as recorded by the pneumograph component. **E 2035, E52**

respondent, *n*—See **assessor**. **E 253, E18**

response—the motion (or other output) in a device or system resulting from an excitation (stimulus) under specified conditions. **D 653, D18**

response, *n*—a physiological change that occurs following, and is attributable to, the presentation of an applied stimulus (for example, reviewed test question). **E 2035, E52**

response curve for *N* cycles—a curve fitted to observed values of percentage survival at *N* cycles for several stress levels, where *N* is the preassigned number such as 10⁶, 10⁷, and so forth. It is an estimate of the relationship between applied stress and the percentage of the population that would survive *N* cycles. **E 1823, E08**

response factor, *n*—a constant of proportionality that converts area to liquid volume. **D 4175, D02**

response factor—in leak testing, the response of the halogen leak detector 0.3 MPa·m³/s of refrigerant-12 (dichlorodifluoromethane, CCl₂F₂) or less, divided by the response to the same quantity of another halogen test gas. Thus, the actual leak rate of a detected leak will be the indication of the detector multiplied by the response factor. The response of mixture of a tracer and nonhalogen gases will be the response factor of the tracer divided by the fraction of tracer gas in the test gas. **E 1316, E07**

response position—the area designated to mark information on a mark read form. **F 149, F05**

response surface, *n*—the pattern of predicted responses based on the empirical model derived from the experiment observations. **E 456, E11**

response surface, *n*—the pattern of predicted responses based on the empirical model derived from the experiment observations. **E 1325, E11**

response time, *n*—in *tensile testing machines*, the time required by the indicating or recording device to reflect an instantaneous change in force, usually 0 to 90 % of full scale. **D 123, D13**

response time—See **analyzer**. **D 1356, D22**

response time—the length of time necessary to obtain a stable electrode potential when the electrode is removed from one solution and placed in another of different concentration. Response

time depends on the electrode type, the magnitude and direction of the concentration change, temperature, and the presence of electrode interferences, if any. After exposure to a change in concentration, values of apparent concentration asymptotically approach the true concentration. Under most conditions, an electrode will exhibit a value within 1 mV of the final value within 1 min. **D 4127, D19**

response time, *n*—in *tensile testing machines*, the time required by the indicating or recording device to reflect an instantaneous change in force, usually 0 to 90 % of full scale. **D 4849, D13**

response time, *n*—the time required for a sensor to change a specified percentage of the total difference between its initial and final temperatures as determined from zero-power resistances when the sensor is subjected to a step function change in temperature. **E 344, E20**

response time—the time required for a leak detector or leak testing system to yield a signal output equal to 63 % of the maximum signal attained when tracer gas is applied continuously to the system under test. Also called **response**. **E 1316, E07**

response to molten substance pour—in *testing thermal protective material*, the observed effect of molten substance contact on textile properties or deterioration of the material. **F 1494, F23**

response-type system number (RTSN), *n*—the raw measured output from a response-type system. **E 867, E17**

response type system number (RTSN)—the raw measured output from a response type system being calibrated. Units are arbitrary, being whatever the road meter in the response type system measures. (See Terminology E 867, Section 5). **E 867, E17**

response variable, *n*—the variable that shows the observed results of an experimental treatment. Synonym: dependent variable. **E 456, E11**

response variable, *n*—the variable that shows the observed results of an experimental treatment. Synonym: dependent variable. **E 1325, E11**

responsibility for the fastener—party responsible for the fastener shall be the organization that supplies the fastener to the purchaser and certifies that the fastener was manufactured, sampled, tested, and inspected in accordance with the specification and meets all of its requirements. **A 563 F 1789, F16**

responsible party—responsible party for the fastener shall be the organization that supplies the fastener to the purchaser and certifies that the fasteners were manufactured, sampled, tested, and inspected in accordance with applicable specifications and meets all of the requirements. **F 1789, F16**

responsivity, *s*, *n*—quotient of the output of a detector *Y* by its input *X*: $s = Y/X$. (See also **spectral responsivity**.) **E 284, E12**

rest conductivity, *n*—the reciprocal of the resistivity of uncharged fuel in the absence of ionic depletion or polarization. **D 4175, D02**

restoration, *n*—action directed towards returning the condition of an object to its original state. **D 123, D13**

restoration, *n*—treatment procedures intended to return cultural property to a known or assumed state, often through the addition of nonoriginal material. **D 5038, D13**

rest potential—See **open-circuit potential**. **G 15, G01**

restriction endonuclease—a bacterial enzyme that cuts double-stranded DNA at positions consisting of specific short sequences of nucleotides. **E 1705, E48**

restrike, *v*—to repress for the purpose of increasing the density of a sintered compact (not to be confused with **coin** or **size**). **B 243, B09**

result, *n*—the outcome of a measurement. **D 1129, D19**

result, *n*—the value obtained by following the complete set of instructions of a test method. **D 4175, D02**

result, *n*—the value obtained by following the complete set of instructions of a test method. It may be obtained from a single determination or several determinations, depending on the instruction of the test method. **D 4175, D02**

- result**, *n*—value representing the quantity of analyte that is obtained by applying a method one time to a test material. **E 135**, E01
- result**—a value, that is, a single determination, an average of duplicates, or other specified grouping of replicates, obtained by carrying out the test method. **E 1547**, E15
- resultant field**—see **field, resultant**. **E 1316**, E07
- resultant traction force** [*MLT*²], *n*—the vector sum of lateral and longitudinal traction forces. **F 538**, F09
- resultant yarn number**, *n*—the yarn number based on the observed mass per unit length of a plied yarn, a cabled yarn, or a yarn whose number has been changed by processing such as twisting or bulking. **D 123**, D13
- resultant yarn number**, *n*—the yarn number based on the observed mass per unit length of a plied yarn, a cabled yarn, or a yarn whose number has been changed by processing such as twisting or bulking. **D 4849**, D13
- retainer basket**, *n*—in sampling, a one-way gate on a sampling device that minimizes loss of sample when retrieving a sampler; also called a core catcher. **D 5681**, D34
- retainer, fixed**—See **fixed retainer**. **D 2050**, D13
- retainer, movable**—See **movable retainer**. **D 2050**, D13
- retainer pin**, *n*—in *zippers*, a tube-like element, similar to the separable pin, attached over the bead at the bottom end of the stringer opposite to the separable pin and that is designed to hold the fixed retainer in position. **D 123**, D13
- retainer pin**, *n*—a tube-like element, similar to the separable pin, attached over the bead at the bottom end of the stringer opposite to the separable pin and that is designed to hold the fixed retainer in position. **D 2050**, D13
- retaining ring**—a component that holds the tumbler pack on the tumbler post. **F 471**, F12
- retannage**—a modifying second tannage, applied after intermediate operations following the primary tannage. **D 1517**, D31
- retard**—bank-protection structure designed to reduce the riparian velocity and induce silting or accretion. **D 653**, D18
- retardation**—delay in deformation. (ISRM) **D 653**, D18
- retardation**, δ —optical path difference between two beams in an interferometer; also known as “optical path difference” or “optical retardation”. **E 131**, E13
- retardation, maximum**, Δ —the greatest retardation generated by an interferometer in a given scan. **E 131**, E13
- retardation plate**—a plate placed in the path of a beam of polarized light for the purpose of introducing a difference in phase. Usually quarter-wave or half-wave plates are used, but if the light passes through them twice the phase difference is doubled. **E 7**, E04
- retarder**, *n*—a material that extends setting time. **C 11**, C11
- retarder**—a material that slows the rate at which chemical reactions would otherwise occur. **D 653**, D18
- retarder**, *n*—Synonym for **inhibitor**. **D 907**, D14
- retarder**, *n*—a material used to reduce the tendency of a rubber compound to vulcanize prematurely. **D 1566**, D11
- re-temper**, *v*—to add more water to a hydraulic-setting compound after the initial mixing, but before partial set has occurred.
- retrofit**—See **building modification**. **E 631**, E06
- retentate**—see **concentrate**. **D 6161**, D19
- retention of prime**, *n*—ability of a pump to retain its prime and dispense a full dose without re-priming after a period of non-use. **D 6655**, D10
- retention time**, *n*—the time that elapses from the introduction of the sample until the component peak maximum is reached. **D 1129**, D19
- retention time**—the duration of time that the optimal signal for reading persists. **E 344**, E20
- retention time (RT)**, *n*—time to elute a specific chemical from a gas chromatographic column, for a specific carrier gas flow rate, measured from the time the chemical is injected into the gas stream to when it appears in the detector.
- relative retention time (RRT)**, *n*—a ratio of RTs for two chemicals for the same chromatographic column and carrier gas flow rate, where the denominator represents a reference chemical. **D 1356**, D22
- retentivity**—the ability of an adsorbent to resist desorption of an adsorbate. **D 2652**, D28
- retentivity**—the ability of a material to retain a portion of the applied magnetic field after the magnetizing force has been removed. **E 1316**, E07
- retentivity**, B_{rs} —the property of a magnetic material which is measured by its maximum value of the residual induction.
- NOTE—Retentivity is usually associated with saturation induction. **A 340**, A06
- retest**—the tests given after the initial acceptance test, usually performed at regular periodic intervals or as required because of physical inspection. **F 819**, F18
- retest date**, *n*—the date when a material should be re-examined to ensure that it is still suitable for use. **E 2363**, E55
- reticle**—a system of lines, circles, dots, cross hairs or wires, or some other pattern, placed in the eyepiece or at an intermediate plane on the optic axis which is used as a measuring reference, focusing target, or to define a camera field of view (a reticle is different than a graticule, see **graticule**). **E 7**, E04
- reticulate-blocky cryostructure**—the structure of frozen soils in which horizontal and vertical veins of ice form a three-dimensional, irregular rectangular lattice. **D 7099**, D18
- reticulate cryostructure**—the structure of frozen soils in which horizontal and vertical veins of ice form a three-dimensional rectangular or square lattice. **D 7099**, D18
- reticulated foam**, *n*—in *carbon and graphite technology*, a foam with a ligamentous structure rather than a spherical pore structure. **C 709**, D02
- reticulated foam**, *n*—in *carbon and graphite technology*, a foam with a ligamentous structure rather than a spherical pore structure. **D 4175**, D02
- reticulate(d) ice**—a network of horizontal or vertical ice veins forming a three-dimensional rectangular lattice within frozen fine-grained sediments. **D 7099**, D18
- reticulation**, *n*—the cracking of a print (mud cracking) due to poorly plasticized ink, over-thinning of an ink or too little print pressure. **D 6488**, D01
- retortable**—capable of withstanding specified thermal processing in a closed retort at temperatures above 100°C. **F 17**, F02
- retortable**—See **Terminology F 17**. **F 1327**, F02
- retorts**—containers fabricated from various metals in which parts are loaded to be diffusion coated or diffusion heat treated. **B 374**, B08
- retrace**, *n*—a stroke written back over the preceding stroke in the reverse direction. **E 2195**, E30
- retractable anvil**—curved clincher used in stapling from outside of container. **F 592**, F16
- retracted spew**, *n*—deprecated term, see **backrinding**. **D 1566**, D11
- retraction**, *n*—in *yarns and cords*, the reduction in length when previous restraint is removed and relaxation is allowed, thus causing a directionally proportional increase in linear density. **D 123**, D13
- retraction**, *n*—in *yarns and cords*, the reduction in length when previous restraint is removed and relaxation is allowed, thus causing a directionally proportional increase in linear density. **D 6477**, D13
- retreating index thermometer**—a thermometer in which the constriction is not sufficiently small to prevent the passage of mercury back to the bulb (or the mercury index from falling) without shaking when heat is removed from the bulb. **E 344**, E20
- retrieval**—removing a deployed boom from the water. **F 818**, F20
- retrieving**, *v*—extracting from the ADMS one or more data values or information sets of interest to a user where the format of that may be one or more sets of text, tables, charts, graphs, schematic

- diagrams, or maps, using one or more varieties of media such as print, electronic files, electronic mail, or storage media such as CD ROMs or DVDs. **E 867, E17**
- retrofit, v—in building*, to add new materials or equipment not provided at the time of original construction. **E 631, E06**
- retrofit**—the modification of an existing building or facility to include new systems or components. **E 631, E06**
- retrofit, n**—the modification of an existing building or facility to include new systems or components. **E 833, E06**
- retrogradation, n**—gradual and irreversible insolubilization of an aqueous dispersion of starch or its derivatives with the formation of either a precipitate or a gel, depending on the concentration. **D 907, D14**
- retrograde condensation**—where the critical point of multicomponent liquid-vapor equilibrium occurs below the maximum in temperature and pressure of the two-phase region, a sequence of increasing pressure change, at a temperature between the temperature maximum and the critical point, will cause a partial condensation of the vapor to liquid and then a full return to the vapor state, called retrograde condensation. **E 7, E04**
- retrograde vaporization**—the inverse of retrograde condensation. **E 7, E04**
- retrogressive thaw slump**—a slope failure resulting from thawing of ice-rich permafrost. It consists of a steep headwall, containing ice or ice-rich sediment, which retreats in a retrogressive manner through melting, and a debris flow formed from the retrogressive thawed sediment and ice, which slides down from the face of the headwall to its base. **D 7099, D18**
- retroreflection, n**—reflection in which the reflected rays are preferentially returned in directions close to the opposite of the direction of the incident rays, this property being maintained over wide variations of the direction of the incident rays. **E 284, E12**
- retroreflection; reflex reflection, n**—reflection in which light is returned in directions close to the direction from which it came, this property being maintained over wide variations in the direction of incident light. **E 349, E21**
- retro-reflective, adj**—a characteristic of material that reflects light back to its source regardless of the angle of incidence. **F 1294, F05**
- retroreflectivity, n**—property of a material or device in which, when directionally irradiated, the reflected rays are preferentially returned in directions close to the opposite of the direction of the incident rays, this property being maintained over wide variations in the direction of the incident rays. **E 284, E12**
- retroreflector, n**—a reflecting surface or device from which, when directionally irradiated, the reflected rays are preferentially returned in directions close to the opposite of the direction of the incident rays, this property being maintained over wide variations of the direction of the incident rays. **E 284, E12**
- retroreflector axis, n**—a designated line segment from the retroreflector center that is used to describe the angular position of the retroreflector. **E 284, E12**
- retroreflector center, n**—a point on or near a retroreflector that is designated to be the center of the device for the purpose of specifying its performance. **E 284, E12**
- retting, n—in flax**, the process of partial biological or chemical decomposition of pectins and other components which bind the fiber, fiber bundles, and the non-fiber structures, thereby facilitating removal of bast fibers from stems.
- under-retting, n—in flax*, indicates that decomposition is insufficient to allow fiber bundles to be easily removed from the non-fibrous parts of the stem.
- over-retting, n—in flax*, indicates that decomposition has caused excessive deterioration of bast fibers. **D 123, D13**
- retting, v—in flax**, the process of partial biological or chemical decomposition of pectins and other components which bind the fiber, fiber bundles, and the non-fiber structures, thereby facilitating removal of bast fibers from stems. (See under-retting and over-retting) **D 6798, D13**
- returnable, adj**—intended to be returned one or more times in an available program established by, but not limited to manufacturers, distributors or retailers. **D 996, D10**
- returnable container**—See **container**. **D 996, D10**
- return flow nozzle**—see **by-pass nozzle**. **E 1620, E29**
- reusable, adj**—intended to be used for its original purpose one or more times in an available program established by, but not limited to, manufacturers, distributors, or retailers (see also **refillable** and **available program** for further clarification). **D 996, D10**
- reusable, adj**—capable of being used again or repeatedly. **D 1968, D06**
- reusable container**—See **container**. **D 996, D10**
- reusable pallet**—See **pallet**. **D 996, D10**
- reuse, v**—using a material, product or component of the waste stream in its original form more than once. **E 2114, E06**
- reverberant sound field**—the sound in an enclosed or partially enclosed space that has been reflected repeatedly or continuously from the boundaries. **C 634, E33**
- reverberation**—the persistence of sound in an enclosed or partially enclosed space after the source of sound has stopped; *by extension*, in some contexts, the sound that so persists. **C 634, E33**
- reverberation room**—a room so designed that the reverberant sound field closely approximates a diffuse sound field, both in the steady state when the sound source is on, and during decay after the source of sound has stopped. **C 634, E33**
- reverberatory wires, n**—a wire mesh located in front of, but close to, the radiating surface of the panel heat source which serves to enhance the combustion efficiency and increase the radiance of the panel. **E 176, E05**
- reversal developer (negative developer)**—uncharged area development by means of toner particles having appropriate charge polarity so that dark areas of the print correspond to light areas of the original. **F 335, F05**
- reversal development (negative development)**—uncharged area development by means of toner particles having appropriate charge polarity so that dark areas of the print correspond to light areas of the original. **F 335, F05**
- reversal plate, film, or paper**—a photographic material which, after exposure to a subject, is processed to give a positive reproduction without transfer of the image to another sheet material. **E 7, E04**
- reversal (slope reversal)**—*in fatigue loading*, the occurrence where the first derivative of the force-time (strain-time) history changes sign. **E 1823, E08**
- reverse**—to reverse the direction of flow of gas and air in a regenerative furnace. **C 162, C14**
- reverse circulation**—a drilling system in which the circulating medium flows down through the annulus and up through the drill rod, that is, in the reverse of the normal direction of flow. **D 653, D18**
- reversed calf**—a term applied to calf leather of heavier weight, suede finished on the flesh surface, containing oils to increase water-resistance, used for shoes where a nappy leather is required. Originally called “trench calf” in England, the term “hunting calf” is also used in that country. The term “service leather” may also be used though this term is usually reserved for sueded split and side leather. **D 1517, D31**
- reversed print**—a print prepared from a positive transparency. (See also **negative print**.) **E 7, E04**
- reversed transparency**—See **positive transparency**. **E 7, E04**
- reverse image, n**—a symbol in which the dark areas are represented by the material substrate (background) and the light areas are represented by the printed portion of the symbol. **F 1294, F05**
- reverse osmosis (RO)**—the separation process where one component of a solution is removed from another component by flowing the feed stream under pressure across a semipermeable membrane that causes selective movement of solvent against its osmotic pressure difference. RO removes ions based on electro chemical forces, colloids, and organics down to 150 molecular weight. May also be called hyperfiltration. **D 6161, D19**

reverse retan—a term applied to leather tanned first with vegetable tannin and then with chromium compounds. **D 1517, D31**

reversible adsorption—adsorption in which the desorption isotherm approximates the adsorption isotherm. **D 2652, D28**

reversible fiber optic chemical sensor, n—a fiber optic chemical sensor in which the transduction element does not undergo a permanent depletion or degradation as a result of the transduction process. **E 131, E13**

reversion, n—*inbuilding construction in joint sealing*, a loss of elastomeric properties and a decrease in durometer hardness of a seal or cured sealant following environmental exposure. **C 717, C24**

reversion—in general, the tendency of pulp or paper properties to return to those of the material at some other stage. It is frequently specifically applied to the loss of brightness with time, after bleaching has produced a high brightness. **D 1695, D01**

reversion (vulcanization), n—deterioration of vulcanizate properties that may occur when vulcanization time is extended beyond the optimum. **D 1566, D11**

revetment—bank protection by armor, that is, by facing of a bank or embankment with erosion-resistant material. **D 653, D18**

review—deliberately critical examination, including observation of plant operation, evaluation of audit results, procedures, certain contemplated actions, and after-the-fact investigations of abnormal conditions. **F 1789, F16**

revivification—see **reactivation**. **D 2652, D28**

revolving drum test—See **package testing**. **D 996, D10**

revolving pot—{archaic} a rotating circular container from which the Owens machine gathers glass. **C 162, C14**

revolving tube—a hollow cylinder, concentric with the needle of a feeder, revolving in the glass. **C 162, C14**

rework, n—*for inflatable restraints*, the deviation from normal process flow remedially altering finished fabric, coated fabric, or cut pieces for the purpose of minimizing or removing a major imperfection. **D 6799, D13**

reworked plastic, n—a plastic from a processor's own production that has been reground, pelletized, or solvated after having been previously processed by molding, extrusion, etc. See **recycled plastic and reprocessed plastic**. **D 883, D20**

rework plastic (thermoplastic)—a plastic from a manufacturer's own production that has been reground or pelletized for reuse by that same manufacturer. **F 412, F17**

REX hardness—*in sealants*, the hardness of a sealant as measured by a REX hardness gage. **E 631, E06**

REX hardness—*in sealants*, the hardness of a sealant as measured by a REX hardness gage. **E 1749, E06**

reynolds number—a dimensionless number expressing the ratio of inertia forces to viscous forces in a moving fluid. The number is given by VL/μ where "V", is the fluid's velocity, "L" is a characteristic length or distance such as pipe diameter, "r" is the fluid's mass density, and "m" is the fluid's dynamic viscosity. **D 4410, D19**

rhBMP, n—recombinant human bone morphogenetic protein. **F 2312, F04**

rheology—the science of measuring the flow and deformation properties of matter. For porcelain enamel slips, the most important parameter is their yield point. **C 286, B08**

rhodizonate spot test method—*for lead detection*, the use of a dilute solution of rhodizonate ion to test a painted surface or paint chip for the qualitative presence of lead (1). A color change from yellow/orange to pink or red indicates the presence of lead above the level of detection of the test kit. **E 631, E06**

rhomboidal—having three equal axes, with the included angles equal to each other but not equal to 90°. **E 7, E04**

rib, n—a continuous circumferential projection. **F 538, F09**

ribbon—in some slate, narrow bands of contrasting color or appear-

ance differing in some degree in chemical composition from the main body. **C 119, C18**

ribbon—a continuous strip of glass in process. **C 162, C14**

ribbon, n—a fine-textured, narrow fabric which weighs less than 510 g/m² (approximately 2.6 lb/100 yd per inch of width or 15 oz/yd²) and which is used primarily for trimming or decorative purposes. (See also **narrow fabric**.) **D 123, D13**

ribbon, n—a fine-textured, narrow fabric which weighs less than 510 g/m² (approximately 2.6 lb/100 yd per inch of width or 15 oz/yd²) and which is used primarily for trimming or decorative purposes. (See also **narrow fabric**.) **D 4850, D13**

ribbon anisotropic phase, n—*as used in Test Method D 5061*, a group of binder-phase anisotropic carbon textures distinguished by their ribbon-like domains (that is, length (*L*) to width (*W*) ratio of $L > 4W$), and subdivided based on domain width as fine ribbon (2.0- to 12.0- μ m), medium ribbon (12.0- to 25.0- μ m), and coarse ribbon (>25.0- μ m) size categories. **D 121, D05**

ribbon machine—a forming machine for the manufacture of blown glass products from a ribbon of molten glass. **C 162, C14**

ribbon process—a process whereby molten glass is delivered to a forming unit in a ribbon form. **C 162, C14**

ribbon wire—box stay wire of nominal 0.103 in. (2.62 mm) in width. **F 592, F16**

rib or element area [*L*²], n—that area within the outer periphery of a tire footprint that is contacted by ribs or elements. **F 538, F09**

Richard's outflow principle—the principle that states that pore-liquid will not generally flow into an air-filled cavity (at atmospheric pressure) in unsaturated soil. **D 653, D18**

rich gas—natural gas containing commercially recoverable amounts of condensable hydrocarbons. **D 4150, D03**

ride—the edge which acts as a cam. **F 1078, F04**

rideability, n—a subjective judgement of the comparative discomfort induced by traveling over a specific section of highway pavement in a vehicle. **E 867, E17**

rideability index (RI), n—an index derived from controlled measurements of the longitudinal profile in the wheel tracks and correlated with panel ratings of rideability. **E 867, E17**

ride number (RN), n—rideability index of a pavement using a scale of 0 to 5, with 5 being perfect and 0 being impassable. **E 867, E17**

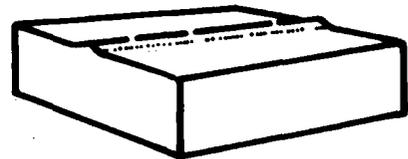
ride quality rating, n—a numerical value subjectively assigned to a section of highway pavement by an individual quantifying his judgement of the level of ride quality for that section based on a psychophysical scale. **E 867, E17**

ride quality rating panel, n—a group of highway users, statistically representative of the total expected highway user population, in rating the ride quality of pavements. **E 867, E17**

rider arch—one of a series of arches that support the checkerwork in a regenerator. **C 162, C14**

ride relief—the contoured area between the shank and ride **F 1078, F04**

ridge—long, narrow protrusion on any surface.



F 109, C21

ridge roll, n—a half-round section applied along the hips and ridge of a roof to conceal and waterproof the apex joint of the roofing material. **C 1154, C17**

ridging—an upward, tenting displacement of a membrane, frequently over an insulation joint. **D 1079, D08**

ridging indentation

ridging indentation—a hardness indentation around which metal has been piled up above the plane of the specimen. E 7, E04

riebeckite asbestos, *n*—a member of the mineral group of monoclinic amphiboles derived from riebeckite (glaucophane) of the alkali amphibole series. D 2946, C17

rifle, *n*—a hand-fed sample divider device that divides the sample into two parts of approximately the same weight. D 121, D05

rift—(1) a consistent direction or trend in a rock body along which the rock is most easily split or broken.

(2) The grain orientation in stone, particularly in sedimentary stones, showing more or less clearly how the stone was originally bedded, and with or without color or grain-size changes, or voids and hollow. C 119, C18

rift sawn—a synonym for *edge grain*. D 9, D07

rigging leather—a strong, flexible, vegetable-tanned leather. D 1517, D31

right-angle chisel point—chisel point with beveled point faces parallel to staple-crown axis. (See **cross-cut chisel point**.) F 592, F16

right side, *n*—See **face side**. D 4965, D13

rigid cellular polystyrene thermal insulation (RCPS)—rigid thermal insulation board formed by expansion of polystyrene resin beads or granules in a closed mold (EPS), or by the expansion of polystyrene resin in an extrusion process (XPS). E 631, E06

rigid grinding disk—a non-fabric support surface, such as a composite of metal/ceramic or metal/polymer, charged during use with an abrasive (usually 6 to 15 micrometer diamond particles) and used for grinding operations in a metallographic preparation. E 7, E04

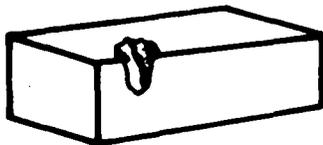
rigid layer—provides mechanical support for the membrane switch. F 2112, F01

rigid plastic, *n*—for purposes of general classification, a plastic that has a modulus of elasticity, either in flexure or in tension, greater than 700 MPa (100 000 psi) at 23°C and 50 % relative humidity when tested in accordance with Test Method D 747, Test Methods D 790, Test Method D 638, or Test Methods D 882. D 883, D20

rigid plastic—for purposes of general classification, a plastic that has a modulus of elasticity either in flexure or in tension greater than 700 MPa (100 000 psi) at 23°C and 50 % relative humidity when tested in accordance with Test Methods D 747, D 790, D 638, or D 882. F 1251, F04

rim, *n*—the metal support for the tire and tube assembly on the wheel. D 5681, D34

rim—a protrusion, usually of base material, bordering either partially or completely a hole, pit, or pocket.



F 109, C21

rim, *n*—the specially shaped circular periphery to which a tire may be mounted with appropriate bead fitment. F 538, F09

rimmed steel, *n*—a steel that contained sufficient oxygen to generate carbon monoxide at the boundary between the solid metal and the remaining molten metal during solidification, resulting in an outer layer low in carbon. A 941, A01

rim strip, *n*—a layer of compound, with or without fabric reinforcement, that is applied at the bead to protect the carcass plies against damage from mounting tools and from rim chafing during service. F 538, F09

rim, test, *n*—a rim having the configuration and dimensions suitable for use with a test tire in accordance with publications of a tire and rim standards organization current at the time of tire manufacture. F 538, F09

rim thickness—thickness of peripheral part of head, measured parallel to nail axis. F 547, F16

ring—(1) a floating refractory body surrounding a glass surface from which gathers are made.

(2) a mold part that forms the rim of a pressed article. C 162, C14

ring, *n*—in buttons, a split ring used to fasten a staple attached button to the substrate. D 123, D13

ring, *n*—in hosiery, a narrow, visually different horizontal band. D 123, D13

ring, *n*—in hosiery, a narrow, visually different horizontal band. D 3990, D13

ring, *n*—in buttons, a split ring used to fasten a staple attached button to the substrate. D 5497, D13

ring buoy (maritime), *n*—a Type 4 personal floatation device, usually made of a hard buoyant material with a line encircling it. F 1490, F32

ring-down count—see **count, acoustic emission, the preferred term**. E 1316, E07

ringhole—an opening in a melter through which glass is gathered. C 162, C14

ring nail, ring-barbed nail, ring-grooved nail, ring-grip nail, ring-shank nail—terms applied to annularly threaded nail. (See **thread, annular**.) F 547, F16

ring or toggle attached staple button, *n*—a button attached to one part of a flexible substrate by means of a ring or toggle rather than a needle or thread. The staple passes through an eyelet in the flexible substrate and is secured by the ring or toggle that passes through the staple eye. D 5497, D13

ring-porous woods—hardwoods in which the pores of the earlywood are large compared to the latewood, thus forming a distinct zone or ring of pores. D 9, D07

ring section—narrow, peripheral section cut from a glass article for optical examination. C 162, C14

ring thread, ring-barb thread, ring-groove thread, ring-grip thread, ring-shank thread—See **annular thread**. F 547, F16

rinse, *n*—that part of the operating cycle of an ion exchange process in which a specified water is passed through a bed of the ion exchange material to remove the residual regenerant solution. D 1129, D19

rinse—the process of removing liquid penetrant examination materials from the surface of a test part by means of washing or flooding with another liquid, usually water. The process is also termed **wash**. E 1316, E07

rinse additive feeder—a device that automatically feeds rinse additives into recirculated or non-recirculated rinse water of spray-type commercial dishwashing and glasswashing machines. F 1827, F26

rinse, *v* or *n*—a process or treatment in an aqueous solution for the purpose of removing extraneous matter. (See Guide D 5548.) D 459, D12

ripening—in the manufacture of viscose rayon, that stage where the cellulose xanthate solution is stored several days under controlled conditions to reach a state from which coagulation is easier. D 1695, D01

ripped selvage—See **cut selvage**. D 3990, D13

ripple—in dry process enameling, a surface defect characterized by pronounced waviness, uniform over a considerable area. C 286, B08

ripple—small, triangular-shaped bed forms that are similar to dunes but smaller. D 4410, D19

ripple (dc)—regular modulations in the dc output wave of a rectifier unit, or a motor-generator set, originating from the harmonics of the ac input system in the case of a rectifier, or from the harmonics of the induced voltage of a motor generator set. B 374, B08

ripple mark—See **Wallner line**. C 162, C14

ripple plating—a method of electroplating in which the current is changed periodically by superimposing surges, ripples, pulses, or alternating current to the d-c electroplating current. B 374, B08

- riprap stone**—material generally less than 2 tons (1814 kg) in mass, specially selected and graded, when properly placed prevent erosion through minor wave action, or strong currents and thereby preserves the shape of a surface, slope, or underlying structure. **D 653, D18**
- rip-shear shredders, n**—a tire shredder designed to reduce a scrap tire to pieces. The size and shape of the rubber particle is dependent on the processing action of the shredder (that is, by cutting blades, rotary shear, or rip shear). **D 5681, D34**
- rise, n**—the maximum dimension of the cross-sectional profile of the tile measured perpendicular to the roof surface as installed. **C 43, C15**
- riser**—the pipe extending from the well screen to or above the ground surface. **D 653, D18**
- rise time, n**—the time required for a free-rise cellular plastic to achieve its ultimate expansion under controlled conditions. **D 883, D20**
- rise time*—See **analyzer**. **D 1356, D22**
- rise time (pulse rise time)**—the interval of time required for the leading edge of a pulse to rise from some specified small fraction to some specified larger fraction of the maximum value. **D 653, D18**
- rising damp, n**—upward-moving moisture in a wall or other structure standing in water or in wet soil. (Compare: **capillary migration, wicking**). **E 631, E06**
- risk, n**—the probability or an expected loss associated with an adverse effect. **D 5681, D34**
- risk, n**—the probability or likelihood that an adverse effect will occur. **D 5681, D34**
- risk**—the probability or likelihood an adverse effect will occur. **E 943, E47**
- risk, n**—combination of the probability of occurrence of harm and the severity of that harm. **E 2363, E55**
- risk, n**—probability of loss or injury from a hazard. **G 126, G04**
- risk-adjusted discount rate (RADR)**—a discount rate that has been adjusted to account for risk. **E 631, E06**
- risk-adjusted discount rate (RADR), n**—a discount rate that has been adjusted to account for risk. **E 833, E06**
- risk analysis**—the body of theory and practice that has evolved to help decision makers assess their risk exposures and risk attitudes so that the investment that is *best for them* is selected. **E 631, E06**
- risk analysis, n**—the body of theory and practice that has evolved to help decision makers assess their risk exposures and risk attitudes so that the investment that is *best for them* is selected. **E 833, E06**
- risk analysis, n**—systematic use of available information to identify hazards and to estimate risk. **E 2363, E55**
- risk assessment**—(1) an on-site investigation to determine the existence, nature, severity, and location of lead-based paint hazards, and (2) the provision of a report by the individual or firm conducting the risk assessment, explaining the results of the investigation and options for reducing lead-based paint hazards. **E 1605, E06**
- risk assessment, n**—overall process comprising a risk analysis and a risk evaluation. **E 2363, E55**
- risk assessment screen (deprecated)**—alternative form of **lead hazard screen**. Use of this term is discouraged in order to minimize confusion. **E 1605, E06**
- risk assessor, certified**—an individual who has been trained by an accredited training program to conduct risk assessments or clearance examinations, or both, and certified under regulations promulgated by authorities having jurisdiction. **E 1605, E06**
- risk attitude**—the willingness of decision makes to take chances or gamble on investments of uncertain outcome.
risk averse (RA)—See **risk attitude**. **E 631, E06**
- risk attitude, n**—the willingness of decision makers to take chances or gamble on investments of uncertain outcome. **E 833, E06**
- risk averse (RA), n*—See **risk attitude**. **E 833, E06**
- risk-based criteria**—cleanup levels intended to meet a predetermined level of acceptable risk to human health or the environment. **D 5681, D34**
- risk exposure**—the probability of investing in a project whose economic outcome is different from what is desired (the target) or what is expected.
risk neutral (RN)—See **risk attitude**.
risk taking (RT)—See **risk attitude**. **E 631, E06**
- risk exposure, n**—the probability of investing in a project whose economic outcome is different from what is desired (the target) or what is expected. **E 833, E06**
- risk neutral (RN), n*—See **risk attitude**. **E 833, E06**
- risk screen (deprecated)**—alternative term for **lead hazard screen**. Use of this term is discouraged in order to minimize confusion. **E 1605, E06**
- risk taking (RT), n*—See **risk attitude**. **E 833, E06**
- river boom (aka fast water boom)**—boom intended for use in currents greater than 1 knot. **F 818, F20**
- river talik**—a layer or body of unfrozen ground occupying a depression in the permafrost table beneath a river. **D 7099, D18**
- rivet head*—See **oval head**. **F 547, F16**
- R_{nsb}**—ratio of specimen notched strength to yield strength in bending **F 2078, F07**
- RNT, n**—residual nitrogen time. **F 1549, F32**
- road meter, n**—equipment that measures the vehicle axle vertical motion relative to the vehicle frame during travel to yield a measure of roughness, for example, Mays, PCA, Soiltest, Cox. **E 867, E17**
- roan**—a sheepskin, not split. **D 1517, D31**
- robber*—See **thief**. **B 374, B08**
- robustness, n**—insensitivity of a statistical test to departures from underlying assumptions. **E 456, E11**
- rock**—a naturally occurring, consolidated aggregation of one or more minerals constituting the crust of the Earth. **C 119, C18**
- rock**—natural solid mineral matter occurring in large masses or fragments. **D 653, D18**
- rock**—any naturally formed aggregate of mineral matter occurring in large masses or fragments. (ISRM) **D 653, D18**
- rock anchor**—a steel rod or cable installed in a hole in rock; in principle the same as rock bolt, but generally used for rods longer than about four metres. (ISRM) **D 653, D18**
- rock asphalt*—see **asphalt rock**. **D 8, D04**
- rock bolt**—a steel rod placed in a hole drilled in rock used to tie the rock together. One end of the rod is firmly anchored in the hole by means of a mechanical device or grout, or both, and the threaded projecting end is equipped with a nut and plate that bears against the rock surface. The rod can be pretensioned. (ISRM) **D 653, D18**
- rock burst**—a sudden and violent expulsion of rock from its surroundings that occurs when a volume of rock is strained beyond the elastic limit and the accompanying failure is of such a nature that accumulated energy is released instantaneously. **D 653, D18**
- rock burst**—sudden explosive-like release of energy due to the failure of a brittle rock of high strength. (ISRM) **D 653, D18**
- rock crystal**—(1) transparent quartz.
(2) highly polished blown glassware, hand-cut or engraved. **C 162, C14**
- rockier**—an imperfection; a bottle with bottom deformed so it wobbles (rocks). **C 162, C14**
- rockier bottom*—See **rockier**. **C 162, C14**
- rock face (or rock-pitched)**—a split surface that has been dressed by machine or by hand to produce a convex bold projection along the face of the stone. This finish provides a bolder, more massive appearance than split face.

NOTE—The above rough finishes and other less-common ones can have a different appearance when separated along the bedding,

rock face (or rock-pitched)

stratification, or rift, or perpendicular to it. This applies in particular to finishes sometimes called natural strata and bed face, among others.

C 119, C18

rock flour—see **silt**.

D 653, D18

rock glacier—a mass of rock fragments and finer material on a slope, that contains either interstitial ice or an ice core, and shows evidence of past or present movement.

D 7099, D18

Rockingham ware—a semivitreous ware or earthenware having a brown or mottled brown bright glaze.

C 242, C21

rock mass—rock as it occurs in situ, including its structural discontinuities. (ISRM)

D 653, D18

rock mechanics—the application of the knowledge of the mechanical behavior of rock to engineering problems dealing with rock. Rock mechanics overlaps with structural geology, geophysics, and soil mechanics.

D 653, D18

rock mechanics—theoretical and applied science of the mechanical behaviour of rock. (ISRM)

D 653, D18

rock protection, n—equipment designed to provide protection and delay anchors in rock.

F 1773, F08

Rockwell hardness number, HR, n—a number derived from the net increase in the depth of indentation as the force on an indenter is increased from a specified preliminary test force to a specified total test force and then returned to the preliminary test force. E 6, E28

Rockwell hardness test, n—an indentation hardness test using a verified machine to force a diamond sphero-conical indenter (diamond indenter) or a hard steel ball indenter, under specified conditions into the surface of the material under test in two operations, and to measure the difference in depth of the indentation under the specified conditions of preliminary and total test forces (minor and major loads, respectively).

E 6, E28

Rockwell superficial hardness test, n—same as the Rockwell hardness test except that smaller preliminary and total test forces are used.

E 6, E28

rod, n—solid wrought product that is long in relation to its circular cross section, which is 0.375 in. or greater [over 10.00 mm] in diameter.

cold-finished rod, n—rod brought to final dimensions by cold working to obtain improved surface finish and dimensional tolerances.

cold-heading rod, n—rod of a quality suitable for use in the manufacture of cold-headed products such as bolts and rivets.

extruded rod, n—rod produced by hot extruding.

rivet rod, n—See *cold-heading rod*.

B 881, B07

rod, n—wrought material of round, solid straight lengths.

NOTE—In the following standards the term “rod” has a similar definition, but is worded differently.

B 899, B02

rod, n—a longitudinal element symmetrical in the transverse plane designed to resist tension, compression, bending, and torsion.

F 1582, F04

rod—produced from hot rolled or cast billets, usually rolled in a multiple strand mill to a round cross section then coiled into one continuous length.

F 1789, F16

rod cast button, n—a button fabricated from a disc sliced or sawed from a cast rod of formulated styrene modified polyester resin.

D 123, D13

rod cast button, n—a button fabricated from a disk sliced or sawed from a cast rod of formulated styrene-modified polyester resin.

D 5497, D13

rod, for staybolts—a round solid section furnished in straight lengths.

B 846, B05

rod, piston finish—a round rod having a special surface produced by turning or grinding to close tolerances for diameter and straightness.

B 846, B05

rod proof—a test specimen taken from the melt on an iron rod.

C 162, C14

rod, shafting—a round rod specially manufactured to the close straightness tolerances required for use in shafting.

B 846, B05

roll—a length of the product 25 ft (7.62 m) to 50 ft (15.24 m) inclusive, spirally wound into a series of connected turns, with successive turns on top of one another.

B 846, B05

roll, v—in a vehicle, the angular motion of a vehicle about its longitudinal axis through the center of gravity.

F 538, F09

roll angle, (rad or degree), n—in a vehicle, the angle between the vehicle y-axis and the ground plane.

F 538, F09

roll compacting, n—the progressive compacting of metal powders by the use of a rolling mill. Synonymous with **powder rolling**.

B 243, B09

rolled clinch—clinch formed by solid clincher against which staple point is driven; obtained normally with desk stapler.

F 592, F16

rolled compact, n—a compact made by passing metal powder continuously through a rolling mill so as to form relatively long sheets of pressed material.

B 243, B09

rolled erosion control product (RECP), n—in erosion control, a material manufactured or fabricated into roll form, and designed to reduce soil erosion and assist in the germination, establishment or protection of vegetation.

D 653, D18

rolled glass—(1) optical glass formed by rolling into plates at time of manufacture, as distinguished from transfer glass.

(2) flat glass formed by rolling.

C 162, C14

rolled seam-finish, n—a finish for the raw edges of the seam allowances of a plain seam, in which both raw edges are enclosed by rolling to one side and hand stitching close to the seam line.

D 123, D13

rolled seam finish, n—in home sewing, a seam finish in which both cut edges are enclosed by rolling them to one side and hand stitching the rolled edge close to the seam line within the seam allowance.

D 4965, D13

rolled selvage—See *curled selvage*.

D 3990, D13

roller—{archaic} a blown cylinder for making window glass by the hand process.

C 162, C14

roller-compacted concrete (RCC), n—concrete compacted while fresh by a roller, often a vibratory roller.

C 125, C09

roller leather—vegetable-tanned sheep or calfskins used for cots or covers on the upper rolls of cotton-spinning machinery.

D 1517, D31

roller spatter resistance, n—the ability of a paint to resist the formation of various size droplets generated during paint roller application, which results in undesirable spots splashing on areas that are not being painted including the person applying the paint.

D 16, D01

roll-grooved nail—bright or plated, helically grooved, round-wire, stiff-stock, 1 by 0.086 to 4 by 0.164-in. drive-screw nails with no clearance between flutes and head, with flat or slightly countersunk head and medium or long diamond point, with crest diameter being referred to as diameter.

F 547, F16

roll-grooved, rolled-grooved—provided with four or more continuous symmetrical, longitudinal or helical flutes; resulting from roll-grooving of round wire prior to heading and pointing of nail. Flutes resulting from this manufacturing process extend all the way from head to point (See **fluted**.)

F 547, F16

rolling—a tannery operation in which the grain surface is compressed and smoothed under pressure by a metal roller.

D 1517, D31

rolling, v—in tribology, motion in a direction parallel to the plane of a revolute body (ball, cylinder, wheel, and so forth) on a surface without relative slip between the surfaces in all or part of the contact area.

G 40, G02

rolling contact fatigue, n—a damage process in a triboelement subjected to repeated rolling contact loads, involving the initiation and propagation of fatigue cracks in or under the contact surface, eventually culminating in surface pits or spalls.

G 40, G02

rolling direction (inrolled metals)—See **longitudinal direction**.

E 7, E04

rolling resistance moment, [FL], *n*—of a tire, the component of a tire moment vector tending to rotate a tire about the Y' -axis, positive clockwise when looking in the positive direction of the Y' -axis.

F 538, F09

rolling shear—in wood, shear in a longitudinal-transverse plane, with stresses perpendicular to the orientation of the fibers lying in the plane. This shearing force tends to roll the fibers.

D 9, D07

rolling wear, *n*—wear due to the relative motion between two non-conforming solid bodies whose surface velocities in the nominal contact location are identical in magnitude, direction, and sense.

G 40, G02

roll response—rotation of the boom from rest due to wave, wind, or current forces.

F 818, F20

roll roofing—coated felts, either smooth or mineral-surfaced.

D 1079, D08

roll straightening—indiffusion coatings, straightening of metal stock of various shapes by passing it through a series of staggered rolls, the rolls usually being in horizontal and vertical planes.

B 374, B08

roll thread—thread produced by action of a form tool which, when pressed into the surface of a blank, displaces material radially.

F 1789, F16

ROM—read only memory.

F 1457, F05

RON—in gasoline knock testing, abbreviation for Research octane number.

D 4175, D02

roof, *n*—the rock material immediately overlying a coal bed.

D 121, D05

roof—top of excavation or underground opening, particularly applicable in bedded rocks where the top surface of the opening is flat rather than arched. (ISRM)

D 653, D18

roof and rock bolts—headed hot-rolled bars with cold-rolled or machine-cut threads at the end to be used with anchorage devices to hold up mine roofs, hold back walls, or hold down equipment or foundations.

F 1789, F16

roof cement—See **flashing cement**.

D 1079, D08

roof-deck nail—galvanized, regular-stock-steel and bright, hardened-steel, plain or annularly threaded, 3 by 0.135 to 4 1/2 by 0.177-in. nails with flat or slightly countersunk 3/32 to 25/64-in. head and medium diamond point.

F 547, F16

roofing fastener—See **purlin nail**.

F 547, F16

roofing nail, asphalt-shingle nail, corrugated-roofing nail, sheet-roofing nail—bright or galvanized, plain-shank, barbed or threaded, regular-stock-steel, 3/4 by 0.092 to 3 by 0.148-in. nails with flat, checkered, large, reinforced, umbrella lead or cast-lead 1/4 to 3/16-in. head and medium or long diamond or needle point, often provided with lead conical neoprene or flat plastic washer. Also, aluminum-alloy, plain-shank or helically threaded, 3/4 by 0.120 to 23/4 by 0.150-in. nails with flat or checkered 3/8 to 3/16-in. head and medium diamond or needle point, often provided with conical neoprene washer. (See **cap nail**.)

F 547, F16

roofing system—an assembly of interacting components designed to weatherproof, and normally to insulate, a building's top surface.

D 1079, D08

roofing system—assembly of interacting components designed to weatherproof, and sometimes to insulate, the roof surface of a building.

E 631, E06

roof insulation board—structural insulating board fabricated for use as above-deck roof insulation.

D 1554, D07

room equivalent, *n*—an identifiable partitioned-interior area of a building that is not usually considered as a room, such as a hallway, stairway, lobby or vestibule.

E 1605, E06

room temperature—a temperature in the range from 20 to 30°C (68 to 86°F).

D 2864, D27

room temperature—a temperature in the range of 20 to 30°C (68 to 85°F).

NOTE—The term “room temperature” is usually applied to an atmosphere of unspecified relative humidity.

E 41, G03

room-temperature-setting adhesive, *n*—an adhesive that sets in the temperature range from 20 to 30°C (68 to 86°F), in accordance with the limits for Standard Room Temperature specified in Practice D 618. (Compare **cold-setting adhesive**, **hot-setting adhesive**, and **intermediate-setting adhesive**.)

D 907, D14

root—innermost part of thread, rounded or flattened; joining flanks of adjacent threads.

F 547, F16

root bend—procedure whereby a loading nose is applied along the weld face such that the weld root is subject to tension.

C 904, C03

root diameter—twice the distance between nail axis and root, measured perpendicular to nail axis.

F 547, F16

root mean square difference, (RMSD)—a measure of accuracy determined by the following equation:

$$RMSD = \left(\frac{1}{n} \sum_{i=1}^n e_i^2 \right)^{1/2}$$

where:

n = the number of observations for which the accuracy is determined, and

e_i = the difference between a measured value of a property and its accepted value.

E 131, E13

root-mean-square strain—the square root of the mean value of the square of the strain, averaged over one cycle of deformation. (ISO)

D 4092, D20

root-mean-square stress—the square root of the mean value of the square of the stress, averaged over one cycle of deformation. (ISO)

D 4092, D20

rope, *n*—a compact and flexible, generally torsionally balanced continuous structure, greater than 4-mm (5/32-in.) diameter capable of applying or transmitting tension between two points.

D 123, D13

rope, *n*—wound or woven length of filaments, provided in various diameters, lengths, and elasticity depending on specific end use.

climbing, *n*—a rope of kernmantle construction, specifically designed to provide support, facilitate movement, and protect a climber by cushioning the impact of a fall. Climbing ropes sometimes are referred to as dynamic ropes.

double, *n*—a half rope.

half, *n*—a climbing rope that must be used with another half rope with one or both ropes being attached to protection anchors.

single, *n*—a climbing rope that may be used alone.

twin, *n*—a special type of half rope in which both rope strands are used as one with both running through the same protection anchors.

F 1773, F08

rope-lay conductor—see **concentric-lay conductor**.

B 354, B01

rope-lay conductor, *n*—a conductor composed of a central core surrounded by one or more layers of helically laid groups of strands.

D 1711, D09

rope mark, *n*—*undyed or finished fabrics*, a long irregularly shifting longitudinal mechanically induced streak.

D 123, D13

rope mark, *n*—*undyed or finished fabrics*, a long irregularly shifting longitudinal mechanically induced streak.

D 3990, D13

roping, *n*—a term used for roving in the woolen system of spinning.

D 123, D13

roping, *n*—a term used for roving in the woolen system of spinning.

D 4845, D13

ROS—abbreviation for **raster output scanner**.

F 1457, F05

rose head—pyramidal head with four triangular faces meeting at common vertex, having a square, rectangular, or circularized flat bearing surface.

F 547, F16

rosin, *n*—a specific kind of natural resin obtained as a vitreous water-insoluble material from pine oleoresin by removal of the

rosin, n

volatile oils, or from tall oil by the removal of the fatty acid components thereof. **D 804, D01**

rosin, n—a resin obtained as a residue in the distillation of crude turpentine from the sap of the pine tree (gum resin) or from an extract of the stumps and other parts of the tree (wood rosin). (Compare **resin**.) **D 907, D14**

rosin, n—a translucent amber to almost black brittle friable resin that is obtained by chemical means from the oleoresin or dead wood of pine trees or from tall oil. **F 141, F06**

rosin acids—acids derived from rosin (colophony) consisting mainly of isomers of abietic acid ($C_{20}H_{30}O_2$) with small amounts of hydroabietic acids ($C_{20}H_{32}O_2$ and $C_{20}H_{28}O_2$). **D 459, D12**

rosin acids or resin acids, n—principally monocarboxylic acids with the empirical formula $C_{19}H_{20}-COOH$. **D 804, D01**

rosin adducts, n—the addition product between rosin and an α , β unsaturated carboxylic acid such as fumaric acid, acrylic acid or maleic anhydride. **D 804, D01**

rosin based resins, n—resinous products derived from rosin or rosin adducts through chemical reaction with raw materials such as alcohols (especially polyhydric alcohols), formaldehyde, α , β unsaturated carboxylic acids, phenols etc., or combinations of these materials. **D 804, D01**

rosin crystallization, n—the formation of rosin acid crystals within rosin. **D 804, D01**

rosin oil, n—the relatively viscous, oily portion of the condensate obtained when rosin is subjected to dry destructive distillation; also used to describe specially compounded oils having a rosin oil base. **D 804, D01**

rosin oil, n—a viscous, oily liquid obtained as a condensate when the residue (rosin) from turpentine production is subjected to dry, destructive distillation. **D 4175, D02**

Rosin-Rammler distribution—drop size distribution described by the following equation:

$$f_v(D) = 1 - \exp[-(D/D_{RR})^n]$$

where:

$f_v(D)$ = the volume fraction of liquid in drops of diameter less than D_{max} ,

D_{RR} = the "Rosin-Rammler" diameter ($D_{V0.632}$ from "Rosin-Rammler" distribution, f_v), and

n = parameter indicating the size span of the distribution.

E 1620, E29

rosin reclaimed—See **reclaimed rosin**. **D 804, D01**

rosin spirits, n—the relatively light, volatile portion of the condensate obtained in the first stages when rosin is subjected to dry destructive distillation. **D 804, D01**

rosin standards, n—the combinations of assembled colored glasses having the colors designated as representative of the established U.S. grades used in classifying rosin. **D 804, D01**

rosin type (sample), n—a sample of rosin, or a mold of thermosetting plastic material, used as an unofficial standard in grading rosin. **D 804, D01**

rot—See **decay**.

D 9, D07

rotameter, n—a device, based on the principle of Stoke's law, for measuring rate of fluid flow, consisting of a tapered vertical tube having a circular cross section, and containing a float that is free to move in a vertical path to a height dependent upon the rate of fluid flow upward through the tube. **D 1356, D22**

rotary atomizer—see **centrifugal atomizer**. **E 1620, E29**

rotary conveyor type—See **pot, pan, and utensils washing machine**. **F 1827, F26**

rotary cup atomizer—a centrifugal atomizer in which liquid is fed to the interior surface of a spinning cup, from which it is flung out to form a spray. **E 1620, E29**

rotary-cut veneer—See under **veneer**.

D 1038, D07

rotary disk atomizer—a centrifugal atomizer in which liquid is introduced near the center of one or more spinning disks, spreads out toward the rim, and is flung out to form a spray. **E 1620, E29**

rotary drilling—a drilling process in which a hole is advanced by rotation of a drill bit under constant pressure without impact. See **percussion drilling**. **D 653, D18**

rotary extraction cleaning, n—a cleaning procedure which uses a rotating brush machine or a series of rotating jets through which shampoo is fed or sprayed into the carpet pile and simultaneously removed by suction. **D 123, D13**

rotary extraction cleaning, n—a cleaning procedure which uses a rotating brush machine or a series of rotating jets through which shampoo is fed or sprayed into the carpet pile and simultaneously removed by suction. **D 5253, D13**

rotary press, n—a machine fitted with a rotating table carrying multiple dies in which a material is pressed. **B 243, B09**

rotary shampoo, n—a cleaning procedure which uses a rotating brush machine through which shampoo is fed into the pile of a textile floor covering. See also **rotary extraction cleaning**. **D 123, D13**

rotary shampoo, v—clean using a brush or bonnet-type machine to impregnate the textile floor covering with a foam. After drying, vacuum loosened soil. See also **rotary extraction cleaning**. **D 5253, D13**

rotary smelter—any of the cylindrical smelters that depend on slow rotation about a horizontal axis for agitation of the molten mass. **C 286, B08**

rotary wheel atomizer—a centrifugal atomizer that consists of a rotating, hollow cylinder in which liquid is introduced to the interior and flows through passages to openings, where it is broken up into drops. **E 1620, E29**

rotation—movement about an axis; such as a body segment about a joint, also used to denote movement about the longitudinal axis of the bone (medial or lateral rotation). **F 869, F08**

rotational capacity test—test in which a zinc-coated bolt is inserted in a steel joint or tension measuring device, assembled with a lubricated zinc coated nut, and initially tightened to not less than 10% of the bolt proof load. After initial tightening, the nut is rotated through specified degrees of rotation. **F 1789, F16**

rotation angle, ϵ , n—angle indicating the orientation of the specimen when it is rotated about a selected axis fixed in it (for plane specimens, usually the specimen normal); *in retroreflection*, angle indicating orientation after rotation about the retroreflector axis. **E 284, E12**

rotation cast button, n—a button fabricated from a disc blanked from a partially polymerized sheet formed in a rotating cylinder. **D 123, D13**

rotation cast button, n—a button fabricated from a disk blanked from a partially polymerized sheet formed in a rotating cylinder (also known as centrifugal casting and wheel casting). **D 5497, D13**

rotation plan, n—*in tire testing*, the scheduled change of wheel positions for all tires on a vehicle, and between vehicles in a convoy, and scheduled change of vehicle position in a convoy during a road test as appropriate. **F 538, F09**

rotisserie—a device fitted with one more mechanically rotated spits that hold the meat or poultry in position near a fixed heat source while the food is slowly being cooked on all sides. **F 1827, F26**

rotisserie broiler—equipment designed for continuous loading and cooking with vertically stacked spits. See **rotisserie**. **F 1827, F26**

rotisserie oven—equipment designed for batch cooking, with the individual spits arranged on a rotating wheel within a closed cavity. See **rotisserie**. **F 1827, F26**

rotor, n—*in open-endspinning machines*, a device resembling a centrifuge, in which the fibers are assembled and in which, by virtue of its rotation, real twist is inserted in the forming yarn. **D 123, D13**

rotor, n—*in open-endspinning machines*, a device resembling a

- centrifuge, in which the fibers are assembled and in which, by virtue of its rotation, real twist is inserted in the forming yarn. **D 3888**, D13
- rotorless cure meter**, *n*—a test device for measuring vulcanization and rheological parameters, in which a rubber specimen is enclosed in a heated die cavity with one surface oscillating and the resistance of the rubber to these oscillations is measured versus time. **D 1566**, D11
- rotor-type open-end spinning machine**, *n*—an open-end spinning machine wherein the assembly of individual fibers and the insertion of real twist are effected by a rotor. (See also **open-end spinning machine**.) **D 123**, D13
- rotor-type open-end spinning machine**, *n*—an open-end spinning machine wherein the assembly of individual fibers and the insertion of real twist are effected by a rotor. (See also **open-end spinning machine**.) **D 3888**, D13
- rotovinyl**, *n*—a vinyl flooring with a pattern produced by rotogravure printing. **F 141**, F06
- RO train**—one of two or more complete RO installations, including membranes and high pressure pump operating in parallel. **D 6161**, D19
- rouge pits**—{archaic} an imperfection; traces of rouge remaining in an incompletely polished glass surface. **C 162**, C14
- rough**, *adj*—a descriptive term for a fabric surface which has the feel of sandpaper. **D 123**, D13
- rough**, *adj*—a descriptive term for a fabric surface which has the feel of sandpaper. **D 3990**, D13
- rough cut**—irregular-shaped areas of uneven corrugations on the veneer surface, occurring as the veneer is cut by the lathe or slicer. **D 1038**, D07
- roughened finish**, *n*—the surface texture resulting when die surfaces are broken by mechanical means, such as wire cutting or wire brushing. **C 43**, C15
- rough glass**—(1) glass pieces obtained by cutting the original sheet of flat glass into workable sizes. **C 162**, C14
(2) rolled or patterned glass.
- roughing**—in leak testing, the initial evacuation of a vacuum system. **E 1316**, E07
- roughing**—the exposure and erection of the fibers of the material on the lasted over margin of the upper and the corresponding edges of the outsole in order to provide a more grippable surface to be cemented for the purpose of sole attaching. **F 869**, F08
- roughing line**—in leak testing, a line running from a mechanical pump to a vacuum chamber through which preliminary pumping is conducted in the rough vacuum range. **E 1316**, E07
- roughing pump**—in leak testing, a vacuum pump used for the initial evacuation of a vacuum system. **E 1316**, E07
- rough lumber**—See **lumber**. **D 996**, D10
- roughness**—height of each continuous scallop rounded to the nearest 0.05 in. (1 mm), except those less than 0.03 in. (0.8 mm) vertically and 2 ft (0.6 m) longitudinally. **E 867**, E17
- roughness index, half-car (HRI)**—see **half-car roughness index**. **E 867**, E17
- roughness index, international (IRI)**—see **international roughness index**. **E 867**, E17
- roughness index, mean (MRI)**—see **mean roughness index**. **E 867**, E17
- roughness traveled surface**—see **traveled surface roughness**. **E 867**, E17
- roughometer**, *n*—a road meter that measures the unidirectional vertical movement of damped, leaf-sprung wheel relative to the road meter's trailer frame during travel to yield a measure of roughness. **E 867**, E17
- rough or burred edge**, *n*—in *mica*, a frayed or serrated edge usually 0.8 mm deep or greater, or an edge turned up or down as caused by trimming with scissors, and so forth, or by rubbing the edge against sandpaper, stone, and so forth. **D 1711**, D09
- rough part**, *n*—the part prior to final machining. **B 899**, B02
- rough, rough-tanned and in-the-rough**—terms applied to cattlehide leathers tanned but not finished. (See also **crust**.) **D 1517**, D31
- rough sawn**—in *plywood*, a decorative treatment produced by scoring across the grain of the panel surface to provide a saw-roughened texture. **D 1038**, D07
- rough selvage**—See **loopy selvage**. **D 3990**, D13
- rough shred**, *n*—a piece of a shredded tire that is larger than 50 mm by 50 mm by 50 mm, but smaller than 762 mm by 50 mm by 100 mm. **D 5681**, D34
- rough shred**, *n*—a piece of a shredded tire that is larger than 2 in. (5.1 cm) by 2 in. (5.1 cm) by 2 in. (5.1 cm), but smaller than 30 in. (76.2 cm) by 2 in. (5.1 cm) by 4 in. (10.2 cm). **D 5681**, D34
- round**—a set of holes drilled and charged in a tunnel or quarry that are fired instantaneously or with short-delay detonators. (ISRM) **D 653**, D18
- round**, *n*—a solid member, circular in cross section.
sag flow test—See **test, sag flow**. **E 631**, E06
- round conductor flat cable**, *n*—a flat cable made with parallel, round conductors in the same plane. **D 1711**, D09
- rounded blade**—a blade having a radius on its outer surface which forms a transition between the outer edge and the cutting edges. **F 1078**, F04
- round edge**, *n*—a rounded, paper-bound edge formation on gypsum board, commonly used for gypsum lath. **C 11**, C11
- rounded thread, round-bottom thread**—thread with rounded root extending to pitch line. Rounded thread also referring to rounded thread crest. **F 547**, F16
- round head**—circular head having convex top surface with height equal to its radius. **F 547**, F16
- roundness**—the ratio of the average radius of curvature of the individual edges of a particle to the radius of the maximum circle that can be inscribed within the particle. **D 4410**, D19
- round or rounded crown**—curved staple crown used in wiring, carding, and encircling operations; also, in spring-up applications in furniture manufacturing. **F 592**, F16
- round-robin test**, *n*—the practice of planning, conducting, analyzing, and interpreting the results of interlaboratory tests on the chemical and physical properties of engine coolants. **D 4725**, D15
- round shank**—term applied to nail with shank of circular cross section, made from round wire. **F 547**, F16
- round table**—{archaic} a type of laying table used for supporting plate glass for grinding and polishing. **C 162**, C14
- route**, *n*—the path chosen by a climber. **F 1773**, F08
- routine dosimeter**—dosimeter calibrated against a primary-, reference-, or transfer-standard dosimeter and used for routine absorbed-dose measurement. **E 170**, E10
- routine hardness locations**—hardness readings made on prescribed fastener surfaces, such as wrench flats, unthreaded shank, bearing face, etc., after removal of oxide, platings, or other coating materials. Used for testing the hardness of a finished fastener. **F 1789**, F16
- routine maintenance**, *n*—in *textile cleaning*, superficial daily or weekly cleaning to remove particulate soil and dust. **D 123**, D13
- routine maintenance**, *n*—in *textile cleaning*, superficial daily or weekly cleaning to remove particulate soil and dust. **D 5253**, D13
- rove**, *n*—in *juteprocessing*, a continuous strand of spun-jute fiber having a spynle number of 50 or greater. **D 123**, D13
- roving**, *n*—in glass textiles, a multiplicity of filaments or yarns gathered together into an approximately parallel arrangement without twist. **C 162**, C14
- roving**, *n*—a loose assemblage of fibers drawn or rubbed into a single strand, with very little twist. In spun yarn systems, the product of the stage, or stages, just prior to spinning. **D 123**, D13
- roving**, *n*—in *glasstextiles*, a multiplicity of filaments or yarns gathered together into an approximately parallel arrangement without twist. **D 123**, D13
- roving**, *n*—in *fibrouscomposites*, large filament count tow. (See also **tow and filament count**.) **D 3878**, D30

roving, *n*

roving, *n*—a loose assemblage of fibers drawn or rubbed into a single strand, with very little twist. In spun yarn systems, the product of the stage, or stages, just prior to spinning. **D 4849**, D13

roving, *n*—*in glasstextiles*, a multiplicity of filaments or yarns gathered together into an approximately parallel arrangement without twist. **D 7018**, D13

roving knot—a knotted or entangled section of roving found in a pultrusion.

NOTE—Such a knot may cause high fiber concentration locally and may or may not be visible as a white or light spot on the surface of the section. **D 3918**, D20

row, *n*—a rib or a continuous collection of elements that lie on a circumferential line parallel to the circumferential centerline of the tread band. **F 538**, F09

row/rib wear, *n*—a type of irregular wear characterized by a greater wear rate in one or more rows/ribs; the increased wear rate may occur at one or more circumferential locations in (on) a given row/rib and is independent of (ie. occurs across) individual projections resulting in a step-off in tread depth between adjacent rows/ribs. **F 538**, F09

R-phase, *n*—the intermediate phase which forms from austenite prior to martensite formation. **F 2005**, F04

R-phase finish temperature (R_f), *n*—the temperature at which the transformation from austenite to R-phase is completed on cooling in a two-stage transformation. **F 2005**, F04

R'-phase finish temperature (R'_f), *n*—the temperature at which the martensite to R-phase transformation is completed on heating in a two-stage transformation. **F 2005**, F04

R-phase peak temperature (R_p), *n*—the temperature of the exothermic peak position on the DSC curve upon cooling for the austenite to R-phase transformation. **F 2005**, F04

R'-phase peak temperature (R'_p), *n*—the temperature of the endothermic peak position on the DSC curve upon heating, for the martensite to R-phase transformation in a two-stage transformation. **F 2005**, F04

R-phase start temperature (R_s), *n*—the temperature at which the transformation from austenite to R-phase begins on cooling in a two-stage transformation. **F 2005**, F04

R'-phase start temperature (R'_s), *n*—temperature at which the martensite to R-phase transformation begins on heating in a two-stage transformation. **F 2005**, F04

RS—abbreviation for raw stock. (see **BP**) **F 549**, F05

RS232, *n*—a serial interface standard to connect elements of a communication system. **F 1457**, F05

R_{sb} —ratio of specimen crack strength to yield strength in bending **F 2078**, F07

RSM—Rapidly Solidified Materials. **B 243**, B09

RSP—Rapid Solidification Processing or Rapidly Solidified Powders. **B 243**, B09

RST—Rapid Solidification Technology. **B 243**, B09

R titration—a titration in which the sensing electrode responds to an ion introduced by a reagent prior to titration. A synonym for *indicator titration*. **D 4127**, D19

RTS—abbreviation for **request to send**. **F 1457**, F05

RTV, *n*—room temperature vulcanization (A) **D 907**, D14

R_u —maximum diaphragm reaction, lbf (or N) **E 631**, E06

rub—abrasion of a glass surface producing a frosted appearance. Also known as a scuff. **C 162**, C14

rubber, *n*—a material that is capable of recovering from large deformations quickly and forcibly, and can be, or already is, modified to a state in which it is essentially insoluble (but can swell) in boiling solvent, such as benzene, methylethyl ketone, and ethanol-toluene azeotrope. **D 123**, D13

rubber, *n*—term not defined by Committee D20. Definition approved by Committee D11 on Rubber and Rubber-Like Materials is as follows:

“**rubber**—a material that is capable of recovering from large

deformations quickly and forcibly, and can be, or already is, modified to a state in which it is essentially insoluble (but can swell) in boiling solvent, such as benzene, methylethylketone, and ethanol-toluene azeotrope.”

“A rubber in its modified state, free of diluents, retracts within 1 min to less than 1.5 times its original length after being stretched at room temperature (18 to 29°C) to twice its length and held for 1 min before release.” **D 883**, D20

rubber—a material that is capable of recovering from large deformations quickly and forcibly, and can be, or already is, modified to a state in which it is essentially insoluble (but can swell) in boiling solvent such as benzene, methyl ethyl ketone, and ethanol-toluene azeotrope. **D 1079**, D08

rubber, *n*—a material that is capable of recovering from large deformations quickly and forcibly, and can be, or already is, modified to a state in which it is essentially insoluble (but can swell) in boiling solvent, such as benzene, methyl ethyl ketone, or ethanol-toluene azeotrope. **D 1566**, D11

rubber, *n*—an elastomer, generally implying natural rubber, but used loosely to mean any elastomer, vulcanized and unvulcanized. By definition, rubber is a material that is capable of recovering from large deformations quickly and forcibly and can be, or already is, modified to a state in which it is essentially insoluble in a boiling solvent. **D 5681**, D34

rubber, *n*—a material that is capable of recovering from large deformations quickly and forcibly, and can be, or already is, modified to a state in which it is essentially insoluble (but can swell) in boiling solvent, such as benzene, methylethyl ketone, and ethanol-toluene azeotrope. **D 6477**, D13

rubber—a material that is capable of recovering from large deformations quickly and forcibly, and can be, or already is, modified to a state in which it is essentially insoluble (but can swell) in boiling solvent, such as benzene, methylethylketone, and ethanol-toluene azeotrope.

A rubber in its modified state, free of diluents, retracts within 1min to less than 1.5 times its original length after being stretched at room temperature (18 to 29°C) to twice its length and held for 1 min before release. (D11) **F 412**, F17

rubber—a generic term that includes elastomers and elastomer compounds, regardless of origin. **F 819**, F18

rubber—a material that is capable of recovering from large deformations quickly and forcibly, and can be, or already is, modified to a state in which it is essentially insoluble (but can swell) in boiling solvent, such as benzene, methyl ethyl ketone, and ethanol-toluene azeotrope. (D 1566, D11) **F 869**, F08

rubber, *n*—an elastic substance derived from various tropical plants, such as the general Hevea and Ficus, essentially a polymer of isoprene; the term is frequently applied to both natural and synthetic elastic substances. (*Webster Modified*) *saran plastic*—see **vinylidene chlorideplastic**. **F 1251**, F04

rubber, bound, *n*—the portion of the rubber in a mix that is so closely associated with the filler as to be unextractable by the usual rubber solvents. **D 1566**, D11

rubber, cellular, closed cell, *n*—a cellular material in which practically all the individual cells are nonconnecting. **D 1566**, D11

rubber compound, *n*—*as used in the manufacture of rubber articles*, an intimate mixture of elastomer(s) with all the materials necessary for the finished article. **D 123**, D13

rubber compound, *n*—*as used in the manufacture of rubber articles*, an intimate mixture of elastomer(s) with all the materials necessary for the finished article. **D 6477**, D13

rubber, crude, *n*—See **rubber, raw**, the preferred term. **D 1566**, D11

rubber, expanded, *n*—cellular rubber having closed cells made from a solid rubber compound. **D 1566**, D11

rubber fines, *n*—small particles of ground rubber that result as a by-product of producing shredded rubber. **D 5681**, D34

rubber flooring, *n*—a floor surfacing material in sheet or tile form

consisting of compounded natural or synthetic rubbers or both in combination with mineral fillers, pigments, and other additives.

F 141, F06

rubber gasket—rubber formed and used as a seal in concrete pipe joints.

C 822, C13

rubber, gel, *n*—the portion of rubber insoluble in a chosen solvent. (See also **rubber, sol.**)

D 1566, D11

rubber, glass transition temperature, *n*—the approximate mid-point of the temperature range over which a reversible change in an amorphous polymer or in amorphous regions of a partially crystalline polymer occur from (or to) a viscous or rubbery condition to (or from) a hard and relatively brittle one.

D 1566, D11

rubber, hard, *n*—See **ebonite**.

D 1566, D11

rubber hardness degree, international, *n*—a measure of hardness, the magnitude of which is derived from the depth of penetration of a specified indenter into a specimen as described in Test Method D 1415.

D 1566, D11

rubber heel marking—the mechanical transfer of coloring matter from rubber heels to surfaces.

D 2825, D21

rubberize, *v*—to impregnate or coat with rubber compound or both.

D 123, D13

rubberize, *n*—to impregnate or coat, or both, a substrate with rubber.

D 1566, D11

rubberize, *v*—to impregnate or coat with rubber compound, or both.

D 6477, D13

rubber latex, centrifuged, *n*—latex, the rubber concentration of which has been increased by the removal of serum by centrifugal force.

D 1566, D11

rubber latex, evaporated, *n*—latex, the rubber concentration of which has been increased by evaporation of some of the water.

D 1566, D11

rubber latex, preserved, *n*—rubber latex treated to inhibit putrefaction and accompanying coagulation.

D 1566, D11

rubber latex, prevulcanized, *n*—a rubber latex in which the particles have been sufficiently vulcanized to produce films and useful articles by drying only.

D 1566, D11

rubber latex, stabilized, *n*—rubber latex treated to inhibit premature coagulation.

D 1566, D11

rubber, natural, *n*—a *cis*-1,4-polyisoprene that is obtained from a botanical source, usually *Hevea brasiliensis*.

D 1566, D11

rubber, oil-extended, *n*—a grade of raw rubber containing a relatively high proportion of processing oil.

D 1566, D11

rubber products, *n*—items of commerce in which the major portion of the filler-bearing material is a rubber.

D 1566, D11

rubber, raw, *n*—natural or synthetic elastomer, usually in bales or packages, that is the starting material for the manufacture of rubber articles.

D 1566, D11

rubber reversion hydroplaning, *n*—hydroplaning of pneumatic tires with separation caused by devulcanized rubber.

E 867, E17

rubber, skim, *n*—rubber obtained by coagulating the rubber in the serum that separates out during the concentration of natural rubber latex.

D 1566, D11

rubber, sol, *n*—the portion of rubber soluble in a chosen solvent. (See also **rubber, gel.**)

D 1566, D11

rubber, sponge, *n*—cellular rubber consisting predominantly of open cells and made from a dry rubber compound.

D 1566, D11

rubber, synthetic, *n*—rubber produced by polymerizing one or more monomers with or without post-polymerization chemical modification.

D 1566, D11

rubber, the vulcanized compound, *n*—a crosslinked elastic material compounded from an elastomer, susceptible to large deformations by a small force and capable of rapid, forceful recovery to approximately its original dimensions and shape upon removal of the deforming force.

D 1566, D11

rubber, virgin(s), *n*—obsolete term. See **wet spots**.

D 1566, D11

rubbing stone—a shaped abrasive used in stoning porcelain enamel.

C 286, B08

rubbing strips—boards nailed to the underside of **skids**, or floor boards of **crates** or **boxes** to provide a surface upon which to slide the containers. (See also **skid.**)

D 996, D10

rubble, *n*—rough stones of irregular shapes and sizes, broken from larger masses either naturally or artificially, as by geological action, in quarrying, or in stone cutting or blasting.

D 8, D04

rug, *n*—a textile floor covering of limited area which is complete in itself and is intended for use as a partial covering of a floor or another floor covering.

D 123, D13

rug, *n*—a textile floor covering of limited area which is complete in itself and is intended for use as a partial covering of a floor or another floor covering.

D 5684, D13

ruggedness, *n*—insensitivity of a test method to departures from specified test or environmental conditions.

E 456, E11

ruggedness, *n*—the degree of reproducibility of the same sample under a variety of normal conditions; for example, different operators.

F 2312, F04

ruggedness test, *n*—an experiment in which environmental or test conditions are deliberately varied to evaluate the effect of such variations.

D 123, D13

ruggedness test, *n*—a factorial test designed to explore the sensitivity of the method to variations in the procedure (See Youden and Steiner, 1975).

D 1356, D22

ruggedness test, *n*—a planned experiment in which environmental factors or test conditions are deliberately varied in order to evaluate the effects of such variation.

E 456, E11

run, *n*—*in experimenting or testing*, a single performance or determination using one of a combination of experimental or test conditions.

D 123, D13

run, *n*—*in knitted fabrics*, a series of dropped stitches. (See **dropped-stitch.**)

D 123, D13

run, *n*—*in the American woolen system*, the number of 1600-yd lengths of yarn per pound; an indirect yarn numbering system generally used for yarns spun on the woolen system.

D 123, D13

run, *n*—*in knitted fabrics*, a series of dropped stitches. (See **dropped-stitch**) (*Syn.* ladder)

D 3990, D13

run, *n*—*in the American woolen system*, the number of 1600-yd lengths of yarn per pound; an indirect yarn numbering system generally used for yarns spun on the woolen system.

D 4849, D13

run, *n*—(1) an uninterrupted sequence of occurrences of the same attribute or event in a series of observations, and (2) a consecutive set of successively increasing run-up or successively decreasing run-down values in a series of variable measurements.

E 456, E11

rundown, *n*—*in building construction*, bloom or fluid migration from a sealant, coating, or membrane that due to natural forces is carried down and accumulates on vertical and sloping surfaces.

C 717, C24

run-in, *n*—*in tribology*, an initial transition process occurring in newly established wearing contacts, often accompanied by transients in coefficient of friction, or wear rate, or both, which are uncharacteristic of the given tribological system's long term behavior. (*Synonym:* **break-in, wear-in.**)

G 40, G02

run in, *v*—*in tribology*, to apply a specified set of initial operating conditions to a tribological system to improve its long term frictional or wear behavior, or both. (*Synonym:* **break in, v.** and **wear in, v.** See also **run-in, *n***.)

G 40, G02

runner, *n*—(1) the secondary feed channel in an injection or transfer mold that runs from the inner end of the sprue or pot to the cavity gate.

(2) the piece formed in a secondary feed channel or runner.

D 883, D20

runner, *n*—(1) the secondary feed channel in an injection or transfer mold that runs from the inner end of the sprue to the cavity gate.

(2) the piece formed in a secondary feed channel or runner. (D20)

F 412, F17

runner, *n*—a sewn or tied loop of webbing or rope designed to support a load.

F 1773, F08

runner bar

runner bar—[archaic] iron casting attached to a circular grinding runner or head for abrasive grinding of plate glass. **C 162, C14**

runner cut—[archaic] an imperfection in plate glass resulting from fracture of the surface by the runner bar. **C 162, C14**

runner (injection or transfer mold), *n*—the secondary feed channel for transferring material under pressure from the inner end of the sprue to the cavity gate. **D 1566, D11**

running batch—the regular batch formulated to produce the desired composition when used with its own cullet. **C 162, C14**

running bond, *n*—pattern used when installing the thermal insulation board, to offset the vertical insulation board joints from joints in previous rows of insulation board. **E 2110, E06**

running ground—*in tunneling*, a granular material that tends to flow or “run” into the excavation. See **flowing ground**. **D 653, D18**

running sample—See **sample**. **D 1356, D22**

running surface—the entire bottom surface of the ski bordered by the side geometry. **F 472, F27**

running surface—the entire bottom surface of the snowboard ordered by the side geometry. **F 1107, F27**

runoff—that part of precipitation appearing in surface streams. **D 4410, D19**

run-off, *n*—water, which, having fallen on a surface, flows across the surface, picking up materials and will, if not collected, continue into a watercourse. Also any rainwater, leachate or other liquid that drains over land from any part of a facility. **E 2201, E50**

run-off application—application of a liquid material using sufficient volume such that it begins to drip from the target. **E 1102, E35**

run-of-kiln quicklime—quicklime as drawn or discharged from a kiln. **C 51, C07**

run-of-mine, *adj*—usage in this test method refers to ore and waste rock produced by excavation (with attendant variable particle sizes) from open pit or underground mining operations. **D 5681, D34**

run-of-mine (ROM) coal—*for the purpose of Test Method D 4749*, (1) *in the case of an underground mine*, it is that coal delivered to the surface by a slope belt, hoist, and so forth.

(2) *in the case of a surface mine*, it is that coal as it exists after it has been removed from the pit and placed into the initial means of transportation whether it be an on-the-road or off-the-road haul truck, dump hopper which feeds a pit-to-plant conveyor, and so forth. For both underground and surface mines, ROM coal is as-mined and has not been exposed to any treatment such as breaking, crushing, or cleaning except for that done by the normal operations used to extract the coal from the ground, that is, blasting, ripping, loading, cutting, and so forth. **D 121, D05**

run-out—no fatigue failure at a specified number of force cycles. **E 1823, E08**

rupture, *n*—the breaking or tearing apart of a material. (Compare **failure**.) **D 123, D13**

rupture—that stage in the development of a fracture where instability occurs. It is not recommended that the term rupture be used in rock mechanics as a synonym for fracture. (ISRM) **D 653, D18**

rupture, *n*—the breaking or tearing apart of a material. (Compare **failure**.) **D 4848, D13**

rupture envelope (ruptureline)—see **Mohr envelope**. **D 653, D18**

russet—a term of varied meaning in the leather trade, since it connotes both color and tannage:

(1) *russet calf*—The natural color of unfinished calf leather resulting from tannage by vegetable extracts.

(2) *russet harness*—A completely finished leather of bright, clean, uniform color, and finish.

(3) *russet sheepskin*—Leather tanned in cold-leached hemlock bark, used for shoe linings, with color resulting from the hemlock.

(4) *russet upholstery*—leather tanned but not finished.

D 1517, D31

Russian leather—originally a Russian calfskin shoe leather, distinguished by its odor of birch oil. Now, in the United States a fancy calfskin stock. **D 1517, D31**

rust, *n* (coatings)—the reddish material, primarily hydrated iron oxide, formed on iron or its alloys resulting from exposure to humid atmosphere or chemical attack. See **white rust**. **D 16, D01**

rust, *n*—of ferrous alloys, a corrosion product consisting primarily of hydrated iron oxides. **D 4175, D02**

rust—a corrosion product consisting primarily of hydrated iron oxide. (A term properly applied only to ferrous alloys.) **G 15, G01**

rust (coatings), *n*—the reddish material, primarily hydrated iron oxide, formed on iron or its alloys resulting from exposure to humid atmosphere or chemical attack. **D 4175, D02**

rustication (or reveal)—a continuous groove cut within the face or along the edge of a dimension stone panel, usually for the purpose of visually imitating or accentuating a joint location. **C 119, C18**

rustproof—made of nonferrous material or protectively coated, plated, galvanized or aluminized. (See **corrosion-resistant, rust-resistant**.) **F 547, F16**

rust resistance, *n* (coatings)—the ability of a coating to protect the substrate of iron or its alloys from rusting. **D 16, D01**

rust-resistant—term used to describe a material or treatment designed to inhibit rusting; not synonymous with rustproof. **F 547, F16**

rut, *n*—a contiguous longitudinal depression deviating from a surface plane defined by transverse cross slope and longitudinal profile. **E 867, E17**

rut, *n*—a contiguous longitudinal depression deviating from a surface plane defined by transverse cross slope and longitudinal profile. **E 1778, E17**

rut-depth—the maximum measured perpendicular distance between the bottom surface of the straightedge and the contact area of the gage with the pavement surface at a specific location. **E 867, E17**

rutile—a mineral form of titanium oxide (TiO₂) (tetragonal crystallization), but usually produced chemically for use in ceramics and other products. **C 242, C21**

R-value—a measure of the resistance to heat flow through a material calculated as $R = t/k$, where t is the thickness of the material and k is the thermal conductivity. **C 162, C14**

Ry, *n*—in measuringsurface finish, the vertical distance between the top of the highest peak and the bottom of the deepest valley in one sampling length. **D 4175, D02**

Ry, *n*—in measuringsurface finish, the vertical distance between the top of the highest peak and the bottom of the deepest valley in one sampling length of the roughness profile. **D 4175, D02**

ryznar stability index (RSI)—an index indicating if a water has a tendency to corrode or precipitate CaCO₃; equals $2 * \text{pH} (\text{CaCO}_3 \text{ saturation}) - \text{pH} (\text{actual})$, $\text{RSI} < 6.0$ scale formation, > 7.0 corrosive. **D 6161, D19**

Rz, *n*—in measuringsurface finish, the average of all Ry values (peak to valley heights) in the assessment length. **D 4175, D02**

Rz (DIN), *n*—in measuringsurface finish, the average of all Ry values (peak to valley heights) in the assessment length. **D 4175, D02**

S

S₁₀—the portion of a cellulose pulp that is soluble in 10 % sodium hydroxide using Test Method D 1696, or its equivalent. **D 1695, D01**

S₁₈—the portion of a cellulose pulp that is soluble in 18 % sodium hydroxide using Test Method D 1696, or its equivalent. **D 1695, D01**

"S"—a letter code. See **upholstery cleaning instructions**. **D 5253, D13**

"S"—clean with dry solvent cleaner only. Do not saturate. Do not use water or solutions containing water. Pile fabrics may require brushing to restore appearance. Cushion covers should not be removed and dry cleaned. **D 5253, D13**

Δ_s—pure shear deformation of diaphragm, in. (or mm) **E 631, E06**

Δ_s'—apparent total shear deformation of the diaphragm based on test (see 8.1.2.2), in. (or mm). This factor includes both the pure shear deformation and that contributed by distortion of the connection system. **E 631, E06**

S—effective scattered neutron content. *S* is the percent background film darkening caused by scattered neutrons. **E 1316, E07**

sabin, [L²]**—**the unit of measure of sound absorption in the inch-pound system. **C 634, E33**

saccharification—the breaking of dextrans (starch) into simple sugars (hydrolysis). **E 1705, E48**

sack—See **bag**. **D 996, D10**

sacrificial layer—a layer that is intentionally deposited (or added) then removed, in whole or in part, during the micromachining process, to allow freestanding microstructures. **E 2444, E08**

sacrificial protection—the form of corrosion protection wherein one metal corrodes in preference to another, thereby protecting the latter from corrosion. **B 374, B08**

saddle—See **packing**. **D 996, D10**

saddle, n—a construction to channel or direct surface water to drains or off the roof. A saddle may be located between drains or in a valley, and is often like a small hip roof or a pyramid with a diamond-shaped base. (See **cricket**). **D 1079, D08**

saddle, n—the bottom support of the enclosed scale. **E 344, E20**

saddle curve—in a phase diagram, the locus of a series of maximum points which itself passes through a minimum value. **E 7, E04**

saddle-fused joint—see **joint, saddle-fused**. **F 412, F17**

saddle leather—vegetable-tanned cattlehide leather for harness and saddlery, usually of a natural tan shade and rather flexible. **D 1517, D31**

saddle point—the minimum point on a saddle curve, which is a univariant point, a composition of congruent melting. **E 7, E04**

saddle stapling—pamphlet or book stapling on a "V"-shaped table, which permits placement of staple in center fold. **F 592, F16**

saddle stitching—Similar to saddle stapling; however, accomplished with wire stitcher. **F 592, F16**

saddle-tie, for furring, n—a single or double strand of wire used to attach furring members to framing members of wall or ceiling assemblies. **C 11, C11**

saddle-tie, for furring, v—to attach furring members to framing members of wall or ceiling assemblies using a single or double strand of wire. **C 11, C11**

saddle-tie, for wire hangers, v—to attach wire hangers to main runners. **C 11, C11**

SAE—abbreviation for Society of Automotive Engineers, Inc. **D 4175, D02**

safety, n—freedom from unacceptable risk. **E 2363, E55**

safety diver, n—diver who is dressed completely in dive gear and who remains on the surface to go to the immediate aid of a distressed diver underwater. **F 1549, F32**

safety factor (rope systems), n—the ratio between the breaking strength and the load; commonly used interchangeably with the term *load ratio*, the term *safety factor* is properly applied only to systems and not to individual components. **F 1490, F32**

safety glass—flat (including bent) glass so constructed, treated, or combined with other materials that, if broken by human contact, the likelihood and/or severity of cutting and piercing injuries that might result from such contact is reduced. See related terms "laminated glass," "fully tempered glass," "tempered glass," and "wired glass." **C 162, C14**

safety mechanism—a device intended to prevent accidental actuation of tool. **F 592, F16**

safety stop, n—additional time spent at shallow depths even though the dive computer or dive table indicates that a direct ascent to the surface is possible. **F 1549, F32**

sag, n—*in building construction*, the gravity-induced downward flow of a sealant or glazing compound, resulting in an uneven thickness, when applied on a vertical surface. **C 717, C24**

sag flow test—See **test, sag flow**. **E 1749, E06**

sagging—process of forming glass by reheating until it conforms to the shape of the mold or form on which it rests. **C 162, C14**

sagging—(1) a defect characterized by a wavy line or lines appearing on those surfaces of porcelain enamel that have been fired in a vertical position.

(2) A defect characterized by irreversible downward bending in an article insufficiently supported during the firing cycle.

NOTE—See the Proposed Method of Test for Sag Resistance of Steel Sheets for Porcelain Enameling, *Proceedings*, ASTM, Vol 55, 1955, p. 431. **C 286, B08**

sagging—usually occurs in sedimentary rock formations as a separation and downward bending of sedimentary beds in the roof of an underground opening. (ISRM) **D 653, D18**

sagittal—pertaining to the anteroposterior median plane of the body (sagittal plane), the median vertical plane of the body dividing it into right and left halves that is the major plane for walking and running. **F 869, F08**

sag or sagging, n—nonuniform downward flow of a wet paint film that occurs between the times of application and setting, resulting in an uneven coating having a thick lower edge. **D 16, D01**

sags—downward movement of a paint film between the time of application and setting, resulting in an uneven coating having a thick lower edge. **D 4538, D33**

saladero hides—Argentinian hides corresponding to small-packer hides in the United States. **D 1517, D31**

salamander—a medium duty broiler, with approximately half the depth of an upright, and generally mounted above a commercial range. See **broiler, overfired**. **F 1827, F26**

sales code diameter—the overall diameter of a tin-plate fabricated aerosol can, taken from the double seam at the bottom of the container. **D 3064, D10**

sales code height—the height of a tin-plate fabricated aerosol can, taken from between the double seams at the top and bottom of the cylinder. **D 3064, D10**

sales square—the quantity of prepared roofing required to cover 9.3 m² (100 ft²) of deck. **D 1079, D08**

saline electrolyte, n—a solution customarily consisting of the chlorides of the alkali metals. **B 899, B02**

saline permafrost—permafrost in which part or all of the total water content is unfrozen because of freezing-point depression caused by the dissolved solids content of the pore water. **D 7099, D18**

salinity, n—the concentration of dissolved matter found in water after bromide and iodide have been replaced by an equivalent quantity of chloride, all carbonate converted to oxide, and all organic matter destroyed. **D 1129, D19**

salinity—the concentration of inorganic salts in water. **D 6161, D19**

salinity—(1) a general property of aqueous solutions caused by the alkali, alkaline, earth, and metal salts that are not hydrolyzed; (2) the ratio of the weight of salt in a soil sample to the total weight of the sample. **D 7099, D18**

salt bath, n—a heat transfer apparatus, utilizing molten salts as the

salt bath, *n*

heating medium, generally used for vulcanization. See **liquid curing medium (LCM)**. **D 1566, D11**

salt cake—an industrial term for sodium sulfate (Na_2SO_4). **C 162, C14**

salt flux—amount of dissolved salt passing through the membrane, moles per day per square unit of membrane area. **D 6161, D19**

salt glaze, *n*—the surface feature resulting when faces have a lustrous glazed finish from the thermochemical reaction of the silicates of the clay body with vapors of salt or chemicals. **C 43, C15**

salt glaze—a glaze produced by the reaction, at elevated temperature, between the ceramic body surface and salt fumes produced in the kiln atmosphere. **C 242, C21**

salt passage, SP—the ratio of product (CP) and feed (CF) salt concentrations expressed as percent

$$SP = \frac{CP \times 100}{CF}$$

the ratio of product (CP) and feed (CF) salt concentrations expressed as percent. **D 6161, D19**

salt rejection, SR—(100 - salt passage) expressed as percent:

$$SR = 100 \left(1 - \frac{CP}{CF} \right)$$

D 6161, D19

salt spray test—corrosion test in which the metallic fastener specimens are exposed to a fine mist of salt water solution, either continuously or intermittently. **F 1789, F16**

salt stain—discoloration on the surface of hides and skins, developed during the curing process. **D 1517, D31**

salt water—See **gall**. **C 162, C14**

salt water, *n*—the aerobic, aqueous compartment, characteristically with a salinity equal to or greater than five parts per thousand. **D 4175, D02**

salt water, *n*—the aerobic, aqueous compartment, characteristically with a salinity equal to or greater than five parts per thousand. **D 6384, D02**

salty, *adj*—taste produced by substances such as sodium chloride when in solution. **E 253, E18**

salvage—property that has no reasonable prospect of sale or use as serviceable property without major repairs, but has some value in excess of its scrap value. **E 2135, E53**

salvage value—the value of an asset, assigned for tax computation purposes, that is expected to remain at the end of the depreciation period. **E 631, E06**

salvage value, *n*—the value of an asset, assigned for tax computation purposes, that is expected to remain at the end of the depreciation period. **E 833, E06**

sample, *n*—one or more portions of a liquid or solid material taken in an unbiased manner from a batch, heat, lot, or process stream to be representative of the whole, for subsequent testing to determine the chemical, physical, mechanical, or other quality characteristics of the material, or combination thereof. **A 644, A04**

sample, *n*—a portion of the material in a lot, selected according to a specific sampling plan, intended to represent the lot. **A 902, A05**

sample—the final form of a material submitted for chemical analysis (drillings, millings, and so forth) or a prepared test specimen to be used for mechanical testing. **B 846, B05**

sample, *n*—a portion of a material or product randomly selected to be representative of the whole. **C 71, C08**

sample—the number of specimens drawn from a lot. **C 822, C13**

sample—each piece or group of pieces selected from a lot and used to determine whether the product complies with the specification criteria. **C 896, C04**

sample, *n*—a quantity of material taken from a larger quantity for the purpose of estimating properties or composition of the larger quantity.

analysis sample, *n*—final subsample prepared from the original

gross sample but reduced to 100 % through No. 60 (250- μm) sieve and divided to not less than 50 g.

divided sample, *n*—See **subsample**.

gross sample, *n*—a sample representing one lot of coal and composed of a number of increments on which neither reduction nor division has been performed.

laboratory sample, *n*—the sample, not less than the permissible weight delivered to the laboratory for further preparation and analysis.

representative sample, *n*—a sample collected in such a manner that every particle in the lot to be sampled is equally represented in the gross or divided sample.

subsample, *n*—a sample taken from another sample.

unbiased sample (representative sample)—a sample free of bias. **D 121, D05**

sample, *n*—(1) a portion of a lot of material which is taken for testing or for record purposes.

(2) a group of specimens used, or observations made, which provide information that can be used for making statistical inferences about the population(s) from which the specimens were drawn. (See also **lot sample, laboratory sample, and specimen**) **D 123, D13**

sample—piece or quantity of bulk material that has been selected by some sampling process. **D 653, D18**

sample, *n*—a small part or portion of a material or product intended to be representative of the whole. **D 883, D20**

sample, *n*—a discreet portion of matrix intended to represent its source. **D 1129, D19**

sample, *n*—a portion of a population intended to be representative of the whole.

cumulative sample, *n*—a sample obtained over a period of time with (1) the collected atmosphere being retained in a single vessel, or (2) with a separated component accumulating into a single whole.

operating humidity range of sample, *n*—the range of ambient relative humidity of air which passes through the analyzer's sensing system, over which the monitor will meet all performance specifications.

operating temperature range of sample, *n*—the range of ambient temperatures of air, which passes through the analyzer's sensing system, over which the analyzer will meet all performance specifications.

personal sample, *n*—a sample representative of air-borne dust that is likely to enter the test subject's respiratory system and which is therefore taken by a collection apparatus (membrane filter) positioned near the nose and mouth of the subject or in the breathing zone.

running sample, *n*—withdrawal of a portion of the atmosphere over a period of time with continuous analysis or with separation of the desired material continuously and in a "linear" form. **D 1356, D22**

sample—a sample consists of one or more units of product drawn from a lot, the units of the sample being selected at random without regard to their quality. **D 1517, D31**

sample, *n*—the portion or unit(s) selected to represent the lot. **D 1566, D11**

sample, *n*—one or more units of product taken from a lot without regard to the quality of the unit. (Also often termed lot sample). **D 1711, D09**

sample, *n*—of paper or paperboard, a specified number of test units selected in accordance with a prescribed procedure to represent the lot. See **lot**. **D 1968, D06**

sample, *n*—a portion of carbon black selected for use in obtaining a test result. **D 3053, D24**

sample, *n*—a part taken as representative of a whole material. **D 4175, D02**

sample, *n*—(1) a portion of material which is taken for testing or for record purposes. (2) a group of specimens used, or of observations

- made, which provide information that can be used for making statistical inferences about the population(s) from which the specimens are drawn. (See also **laboratory sample, lot sample, and specimen.**) **D 4439, D35**
- sample, n**—(1) a portion of a lot of material which is taken for testing or record purposes. (2) the group of specimens used, or observations made, which provide information that can be used for making statistical inferences about the population from which they were drawn. **D 4845, D13**
- sample, n**—a portion of material taken from a larger quantity for the purpose of estimating properties or composition of the larger quantity. **D 5681, D34**
- sample, n**—a portion of material that is taken for testing or for record purposes. **D 5681, D34**
- sample, n**—one or more items or portions collected from a lot or population. **D 5681, D34**
- sample, n**—a portion of material which is collected for testing or for record purposes. **D 5681, D34**
- sample, n**—*in methods of chemical analysis*, a portion of a material selected and processed to render its composition representative of the composition of the whole. (Contrast **specimen**).
- gross, n*—a sample representing one lot of material and composed of a number of increments on which neither reduction nor division has been performed.
- laboratory, n*—a subsample, taken from the prepared sample of a lot, for submission to one or more laboratories for chemical analysis.
- prepared, n*—a subsample, taken from the gross sample, on which comminution, division, blending, or other procedures have been performed.
- test, n*—a subsample selected from the properly prepared laboratory sample which has a suitable sample weight or volume for one or more determinations by chemical analysis.
- umpire, n*—a laboratory sample submitted to a laboratory of recognized capability chosen to resolve a difference. **E 135, E01**
- sample, n**—an amount of the material, product, or assembly, to be tested, which is representative of the item as a whole. **E 176, E05**
- sample, n**—a small part or portion of a material or product intended to be representative of the whole. **E 284, E12**
- sample, n**—a group of items, observations, test results, or portions of material, taken from a large collection of items, observations, test results, or quantities of material, which serves to provide information that may be used as a basis for making a decision concerning the larger collection. **E 456, E11**
- sample, n**—a portion of material taken from a larger quantity for the purpose of estimating properties or composition of the larger quantity. **E 631, E06**
- sample**—a portion of material taken from a larger quantity for the purpose of estimating properties or composition of the larger quantity. See **analysis sample, gross sample, laboratory sample, and representative sample.** **E 856, D34**
- sample, n**—a group of items, observations, test results, or portions of material taken from a large collection of items, observations test results or quantities of material, which serves to provide information that may be used as a basis for making a decision on the larger collection. or quantity. **E 1605, E06**
- sample, n**—a portion, or part, of a quantity of material. **E 1638, E29**
- sample**—a group of items, test results or portions of material, taken from a large collection of items, test results or portions of material, which serves to provide information that may be used as a basis for making a decision concerning the larger collection.
- sample**—One or more sampling units taken from a population and intended to provide information on the population. (ISO 3534-93) **E 1732, E30**
- sample**—the specimens from the population selected for test purposes. **E 1823, E08**
- sample**—a number of items, for example, documents, records, articles, or actions selected from a lot for a review in order to draw inferences regarding to the status of the lot. **E 2135, E53**
- sample, n**—a portion, piece, or segment that is representative of a whole. **E 2363, E55**
- sample**—one or more units of product randomly selected from a lot to represent that lot. **F 412, F17**
- sample, n**—a selected number of n test objects that accurately represent the lot or population of interest. **F 538, F09**
- sample, n**—a group of items, observations, test results, or portions of material, taken from a large collection (population) of items, observations, test results, or quantities of material that serves to provide information that may be used as a basis for making a decision concerning the larger collection. **F 1773, F08**
- sample**—a portion of material taken from a larger quantity and representative of the whole, to be used for test purposes. **G 15, G01**
- sample, n**—a group of units or portion of material, taken from a larger collection of units or quantity of material, which serves to provide information that can be used as a basis for action on the larger quantity. **G 113, G03**
- sample, all-levels (liquid sample)**—one obtained by submerging a closed sampler to a point as near as possible to the draw-off level, then opening the sampler and raising it at a rate such that it is about three-fourths full as it emerges from the liquid. An all-levels sample is not necessarily an average sample because the tank volume may not be proportional to the depth and because the operator may not be able to raise the sampler at the variable rate required for proportionate filling. The rate of filling is proportional to the square root of the depth of immersion. **E 1547, E15**
- sample average (arithmetic average)**—the sum of all the observed values in a sample divided by the sample size. It is a point estimate of the population mean. **E 1823, E08**
- sample, average (liquid sample)**—one that consists of proportionate parts from all sections of the container. **E 1547, E15**
- sample average (\bar{x}), n**—the sum of all the observed values in a sample divided by the sample size. It is a point estimate of the population mean. **F 1773, F08**
- sample, bottom (liquid sample)**—one obtained from the material on the bottom surface of the tank, container, or line at its lowest point. (Bottom samples are usually taken to check for water, sludge, scale, etc.) **E 1547, E15**
- sample, composite, compartment-tank (liquid sample) (ship, barge, etc.)**—a blend of individual all-levels samples from each compartment that contains the product being sampled in proportion to the volume of material in each compartment. **E 1547, E15**
- sample, composite, single-tank (liquid sample)**—a blend of the upper, middle, and lower samples. For a tank of uniform cross section, such as an upright cylindrical tank, the blend consists of equal parts of the three samples. For a horizontal cylindrical tank, the blend consists of the three samples in the proportions shown in **E 1547.** **E 1547, E15**
- sample contacting equipment**—equipment that comes in direct contact with the sample or portion of sample that will undergo chemical analyses or physical testing (for example, ground water well bailer, split-spoon sampler, soil gas sampling probe). **D 653, D18**
- sample, continuous (liquid sample)**—one obtained from a pipeline conveying the product in such a manner as to give a representative average of the stream throughout the period of transit. **E 1547, E15**
- sample division, n**—the process whereby a sample is reduced in weight without change in particle size. **D 121, D05**
- sample division**—the process of extracting a smaller sample from a gross sample wherein the representative properties of the large sample are retained. **D 5681, D34**
- sample division**—the process of extracting a smaller sample from a sample so that the representative properties of the larger sample are retained. During this process it is assumed that no change in particle size or other characteristics occurs. **D 5681, D34**
- sample division**—the process of obtaining a smaller sample from a

sample division

larger sample so that the representative properties of the larger sample are retained. During this process it is assumed that no change in particle size or other characteristics occurs. **E 856, D34**

sample, drain (liquid sample)—one obtained from the draw-off or discharge valve. Occasionally, a drain sample may be the same as a bottom sample, as in the case of a tank car. **E 1547, E15**

sampled zone—that part of a transect presumed to be wholly represented by sediment samples. **D 4410, D19**

sample for examination—a specified number of units taken from a lot for the purpose of visual, dimensional or tactile inspection. **D 1517, D31**

sample for test—a specified number of sample units taken from a lot for the purpose of testing the lot for all physical and chemical properties for which requirements are specified. **D 1517, D31**

sample for test—a specified number of sample units taken from a lot for the purpose of testing the lot for all physical and chemical properties for which requirements are specified. **F 869, F08**

sample, gross (solid sample)—a composite prepared by mixing the increments. **E 1547, E15**

sample integrity—the unimpaired chemical composition of a test sample upon the extraction of said test sample for analysis. **E 176, E05**

sample item—a single document, record, article, or action from the sample. **E 2135, E53**

sample item element—a single element from a sample item subject to evaluation, for example, name or nomenclature, description, national stock number, quantity received, quantity issued, balance on hand, and so forth. **E 2135, E53**

sample, jar (liquid sample)—one obtained by placing a jar into the path of a free-flowing stream so as to collect a definite volume from the full cross section of the stream. **E 1547, E15**

sample, laboratory—See **laboratory sample**. **D 4439, D35**

sample, laboratory (solid sample)—that portion of the subsample that is sent to the laboratory for testing. **E 1547, E15**

sample, lot—See **lot sample**. **D 4439, D35**

sample median—the (1) middle value when all observed values in a sample are arranged in order of magnitude if an odd number of items (units) are tested or (2) the average of the two middle-most values if an even number of items (units) are tested. It is a point estimate of the population median, or 50 % value. **E 1823, E08**

sample, middle (liquid sample)—one obtained from the middle of the tank contents. **E 1547, E15**

sample, mixed (liquid sample)—one obtained after mixing or vigorously stirring the contents of the original container, and then pouring out or drawing off the quantity desired. **E 1547, E15**

sample of the waste, n—for waste sampling of building materials, a collection of the **components of the waste** assembled in proportion to their contribution to the total volume of the waste. **E 1605, E06**

sample, outlet (liquid sample)—one normally obtained at the level of the tank outlet (either fixed or a swing line outlet). **E 1547, E15**

sample pathlength, b—in a *spectrophotometer*, the distance, measured in the direction of propagation of the beam of radiant energy, between the surface of the specimen on which the radiant energy is incident and the surface of the specimen from which it is emergent. **E 131, E13**

sample percentage—the percentage of observed values between two stated values of the variable under consideration. It is a point estimate of the percentage of the population between the same two stated values. (One stated value may be “minus infinity” or “plus infinity.”) **E 1823, E08**

sample preparation, n—the process that may include air drying, crushing, division, and mixing of a gross sample for the purpose of obtaining an unbiased analysis sample. **D 121, D05**

sample preparation—the process that includes drying, size reduction, division, and mixing of a laboratory sample for the purpose of obtaining an unbiased analysis sample. **D 5681, D34**

sample preparation—the process that includes drying, size reduc-

tion, division, and mixing of a laboratory sample for the purpose of obtaining an unbiased analysis sample. **E 856, D34**

sampler, n—a device in which or through which atmospheric or emission samples are collected for analysis.

constant flow high-volume sampler, n—a sampler that is equipped with a constant flow device.

Hi-Vol (high-volume air sampler), n—a device for sampling large volumes of an atmosphere; collecting the contained particulate matter by filtration; and consisting of a high-capacity vacuum pump, a filter to collect suspended particles, and means for measuring or controlling the flow rate, or both. **D 1356, D22**

sampler, n—the device used to obtain a sample. **D 5681, D34**

sample reduction, n—the process whereby a sample is reduced in particle size by crushing or grinding without significant change.

D 121, D05

sample reduction—the process whereby sample particle size is reduced without change in sample weight. **D 5681, D34**

sample reduction—the process whereby sample particle size is reduced without change in sample weight (see milling).

E 856, D34

sample set—a group of samples (one or more). **E 631, E06**

sample size—the number of units of product in the sample.

D 1517, D31

sample size, n—the number of units of product taken to make up the sample. **D 1711, D09**

sample size, n—the base size from which grade rule values are established. **D 6963, D13**

sample size, n—the number of units in a sample or the number of observations in a sample. **E 456, E11**

sample size—the number of units of product in the sample.

F 869, F08

sample skein, n—skein reeled from the package or beam of the laboratory sample, and used in the laboratory as a source of specimens. **D 123, D13**

sample skein, n—skein reeled from the package or beam of the laboratory sample, and used in the laboratory as a Source of specimens. **D 4849, D13**

sample spectrum, n—a spectrum, either single-beam or ratioed, that contains spectral features due to an analyte of interest. **E 131, E13**

sample standard deviation, n—the square root of the sum of the squares of the individual deviations from the sample average divided by one less than the number of results involved.

$$s = \sqrt{\frac{\sum_{j=1}^n (X_j - \bar{X})^2}{n - 1}}$$

where:

S = sample standard deviation,

n = number of results obtained,

X_j = j th individual result, and

\bar{X} = sample average.

D 5681, D34

sample standard deviation, s—the square root of the sample variance. It is a point estimate of the population standard deviation, a measure of the “spread” of the frequency distribution of a population. **E 1823, E08**

sample standard deviation (s), n—the square root of the sample variance. It is a point estimate of the population standard deviation, a measure of the *spread* of the frequency distribution of a population. Sample standard deviation is defined as follows:

$$s = \sqrt{\frac{n\sum x^2 - (\sum x)^2}{n(n - 1)}}$$

where:

s = sample standard deviation,

n = number of units in a sample, and
x = sample property being measured.

F 1773, F08

sample, sub (solid sample)—a smaller sample produced in a specified manner by the reduction in volume or quantity of the gross sample. E 1547, E15

sample system—See analyzer. D 1356, D22

sample, top (liquid sample)—one normally obtained 6 in. (152 mm) below the top surface of the tank contents. E 1547, E15

sample, tube or thief (liquid sample)—one obtained with a sampling tube or special thief, either as a core sample or spot sample from the specified point in the container. E 1547, E15

sample unit (for test purposes)—the total quantity of material necessary to obtain one test result for each of the properties and characteristics specified in the material specification or procurement document. In testing of small package units, the Sample Unit may be a package unit randomly selected from the material representing the lot. In testing commodities in which the units are individually too small to provide sufficient material for evaluating all the properties specified in the material specification, the Sample Unit may be a sufficient amount of the material, taken as an aggregate to provide the quantity of material required. D 1517, D31

sample unit (for test purposes)—the total quantity of material necessary to obtain one test result for each of the properties and characteristics specified in the material specification or procurement document. F 869, F08

sample, upper (liquid sample)—one obtained from the middle of the upper third of the tank contents. E 1547, E15

sample variance, s^2 —the sum of the squares of the differences between each observed value and the sample average divided by the sample size minus one. It is a point estimate of the population variance. E 1823, E08

sample weight, *n*—the amount of test material determined by weighing with a balance. E 135, E01

sampling—process of selecting samples from a lot for use in testing. C 896, C04

sampling, *v*—obtaining a representative portion of the material concerned. D 1129, D19

sampling, *n*—a process consisting of the withdrawal or isolation of a fractional part of the whole.

active sampling, n—a means of collecting an airborne or emission substance that employs a mechanical device such as a pump or vacuum-assisted critical orifice to draw air or emissions into or through the sampling device.

collocated sampling, n—the simultaneous collection of two or more air or emission samples by samplers placed side-by-side (often mistakenly termed *co-located* sampling), placed close enough to each other to ensure that comparable samples are collected, but separated sufficiently to prevent cross-interference.

condensation sampling, n—a process consisting of the collection of one or several components of a gaseous mixture by simple cooling of the gas stream in a device which retains the condensate.

continuous sampling, n—sampling without interruptions throughout an operation or for a predetermined time.

cryogenic sampling, n—the collection of an air or emission substance by condensation in a trap cooled to a temperature sufficient to condense or freeze the substance being collected, usually used in near real-time or sequential monitoring. Also called *freeze-trapping*.

event sampling, n—a special form of intermittent sampling where the duration of a sampling period is defined as a single, discrete occurrence of precipitation, dew, fog, or frost.

grab sampling, n—the collection of an atmospheric or emission substance without regard to variations, whether temporal or spatial.

instantaneous sampling, n—obtaining a sample of an atmosphere in a very short period of time such that this sampling time is insignificant in comparison with the duration of the operation or the period being studied.

intermittent sampling, n—sampling successively for limited periods of time throughout an operation or for a predetermined period of time.

isokinetic sampling, n—sampling in which the linear velocity and direction of the fluid entering the sampling nozzle is equal to the undisturbed fluid stream at the sample point.

reactive sampling, n—the collection of an air or emission substance by reacting it with a chemical reagent (for example, derivatization).

sampling period(s), n—the record length or interval over which data collection occurs.

sampling rate (Hz), n—the rate at which data collection occurs, usually presented in samples per second (Hertz).

sampling train, n—the assemblage of equipment necessary to sample atmospheres.

sequential sampling—See **sample, running**.

source sampling, n—withdrawal, with or without simultaneous isolation of specific components, of a portion of the offgases from a source of pollutants. D 1356, D22

sampling—see **digitization**. E 131, E13

sampling—a process whereby a test sample is extracted from a fire test environment. E 176, E05

sampling—process of drawing or constituting a sample. E 1402, E11

sampling, *n*—(The) process of drawing or constituting a sample. E 1732, E30

sampling, *v*—the act of selecting samples. F 538, F09

sampling density—the number of borings (that is, sampling points) per unit area. D 5681, D34

sampling design, *n*—(1) the sampling schemes specifying the point(s) for sample collection; (2) the sampling schemes and associated components for implementation of a sampling event. D 5681, D34

sampling device—a filter holder and air sampling pump assembly used to collect airborne particulate lead on a filter. The filter holder houses a cellulose ester membrane filter, through which air is drawn by using an air sampling pump; the filter holder is connected to the pump by tubing. E 631, E06

sampling error—the systematic and random deviations of the sample value from that of the population. The systematic error is the *sampling bias*. The random error is the *sampling variance*. D 5681, D34

sampling fraction, *f, n*—the ratio *f* of the number of sampling units selected for the sample to the number of sampling units available.

NOTE—For the simple random sample case, $f = n/N$ where *n* is the sample size and *N* is the number of sampling units available. When $f > 0.10$ estimation of the precision of an estimator should take account of this magnitude of *f*. See finite population correction. E 456, E11

sampling fraction, *f, n*—the ratio *f* of the number of sampling units selected for the sample to the number of sampling units available. E 1402, E11

sampling frequency—number of interferogram data points digitized per second in a single scan. E 131, E13

sampling interval—difference in retardation between successive sample points in an interferogram. E 131, E13

sampling location—a specific area within a sampling site that is subjected to sample collection. Multiple sampling locations are commonly designated for a single sampling site. E 631, E06

sampling location, *n*—a specific area within a **sampling site** that is subjected to sample collection. E 1605, E06

sampling period—See **sampling**. D 1356, D22

sampling plan, *n*—a procedure for obtaining a sample. D 123, D13

sampling plan result, *n*—the number obtained for use in judging the acceptability of a lot when applying a sampling plan. D 123, D13

sampling probe

sampling probe—in leak testing, a device used to collect tracer gas from an area of the test object and feed it to the leak detector at the reduced pressure required. Also called a sniffing probe.

E 1316, E07

sampling process, n—the method and procedure of collecting physical samples from a defined population.

D 5681, D34

sampling rate—See **sampling**.

D 1356, D22

sampling site—a local geographical area that contains the sampling locations. A sampling site is generally limited to an area that is easily covered by walking.

E 631, E06

sampling site, n—a local place that contains the sampling locations.

E 1605, E06

sampling site, n—A sampling site is generally limited to an area that is easily covered by walking, for example, an apartment building or single-family residence.

E 1605, E06

sampling (solid sample)—the process of extracting a small fraction of material from a larger bulk, so that it will be sufficiently representative of the bulk for the intended purpose.

E 1547, E15

sampling template (dust), n—a tool used to isolate a known area of a surface for dust wipe sampling.

E 1605, E06

sampling train—See **sampling**.

D 1356, D22

sampling unit, n—an identifiable, discrete unit or subunit of material that could be taken as part of a sample.

D 123, D13

sampling unit, n—*in wool*, a portion of material that is taken at one time from one physical location and that is combined with similar portions to make up the laboratory sample.

D 123, D13

sampling unit, n—an identifiable, discrete unit or subunit of material that could be taken as part of a sample. (See also **primary sampling unit, laboratory sample, and specimen**.)

D 4439, D35

sampling unit, n—*in wool*, a portion of material that is taken at one time from one physical location and that is combined with similar portions to make up the laboratory sample.

D 4845, D13

sampling unit, primary—See **primary sampling unit**.

D 4439, D35

sampling vertical—an approximately vertical path from the water surface to the bottom along which one or more samples are collected to define various properties of the flow, such as sediment concentration.

D 4410, D19

sampling without replacement, n—a procedure in which a selected sampling unit is set aside for the sample, and a previously unselected unit is selected at each step (or draw) of the sample selection procedure.

E 1402, E11

sampling with replacement, n—a procedure used with some probability sampling plans in which a selected unit is replaced after any step in selection so that this sampling unit is available for selection again at the *next* step of selection, or at any other succeeding step of the sample selection procedure.

E 456, E11

sampling with replacement, n—a procedure used with some probability sampling plans in which a selected unit is replaced after any step in selection so that this sampling unit is available for selection again at the *next* step of selection, or at any other succeeding step of the sample selection procedure.

E 1402, E11

sand, n—fine aggregate resulting from natural disintegration and abrasion of rock or processing of completely friable sandstone.

C 125, C09

sand—particles of rock that will pass the No. 4 (4.75-mm) sieve and be retained on the No. 200 (75- μ m) U.S. standard sieve.

D 653, D18

sandblasted—an irregular, pitted surface produced by impacting sand particles at high velocity against a stone surface.

C 119, C18

sand blasting—abrasive blasting with sand.

B 374, B08

sand boil—the ejection of sand and water resulting from piping.

D 653, D18

sand casting, n—a casting process wherein molten metal is poured by gravity into the cavity of a sand mold and solidified; also, a product of such a process.

B 899, B02

sanded grout—grout in which sand is incorporated into the mixture.

D 653, D18

sand equivalent—a measure of the amount of silt or clay contami-

nation in fine aggregate as determined by test (Test Method D 2419).

D 653, D18

sand finish, n—the surface feature resulting when faces have sand applied either to the clay column in the extrusion process for appearance purposes or as the lubricant to the molds in the molding process.

C 43, C15

sand holes—{archaic} small fractures in the surface of glass, produced by the rough grinding operation, that have not been removed by subsequent fine grinding.

C 162, C14

sand-lightweight concrete, n—concrete made with a combination of expanded clay, shale, slag, or slate or sintered fly ash and natural sand and generally weighing between 1680 and 1920 kg/m³ (105 to 120 pcf).

E 176, E05

sand-lime brick, n—See **calcium-silicate brick**.

C 1209, C15

sand size (fluvial sediment)—0.062 to 2 mm in diameter.

D 4410, D19

sandstone (commercial definition) (I)—sedimentary rock composed mostly of mineral and rock fragments within the sand size range, from 0.06 to 2.0 mm, and having a minimum of 60 % free silica, cemented or bonded to a greater or lesser degree by materials including silica and various carbonates, with iron oxides or clay sometimes present, and which has a compressive strength over 28 MPa (4,000 psi).

C 119, C18

sand wedge—a wedge-shaped body of sand produced by the filling of a thermal contraction crack with sand that has either been blown in or washed in.

D 7099, D18

sand-wedge polygon—a polygon outlined by sand wedges underlying its boundaries.

D 7099, D18

sandwich panel—a structure consisting of relatively dense high-strength facing(s) bonded to a less dense low-strength intermediate material or core.

sash—See **windows and doors**.

E 631, E06

sandwich panel—a structure consisting of relatively dense high-strength facing(s) bonded to a less dense low-strength intermediate material or core.

E 1749, E06

sanforizing mark, n—a crimped, rippled, wavy, pebbled, or cockled place in the cloth showing distortion of the texture.

D 123, D13

sanforizing mark, n—a crimped, rippled, wavy, pebbled, or cockled place showing distortion of the texture. (*Syn.* blanket mark)

D 3990, D13

sanitary ware—See **china sanitary ware**.

C 242, C21

sanitary ware—porcelain enameled ware such as sinks, lavatories, and bathtubs.

C 286, B08

sanitization—reduction in the number of bacterial contaminants to safe levels. See **disinfection**.

D 6161, D19

sanitizing agent feeder—a device that automatically feeds sanitizer into recirculated or non-recirculated rinse water of spray-type commercial dishwashing and glasswashing machines.

F 1827, F26

sap—the moisture in unseasoned wood, containing nutrients and other chemicals in solution.

D 9, D07

saponification—the alkaline hydrolysis of fats whereby a soap is formed; more generally, the hydrolysis of an ester by an alkali with the formation of an alcohol and a salt of the acid portion.

B 374, B08

saponification—alkaline hydrolysis of esters to produce the component soaps and alcohols.

D 459, D12

saponification, n—the interaction of fats, fatty acids, or esters generally with an alkali to form the metallic salt, which is commonly called soap.

D 4175, D02

saponification number, n—*in petroleum technology*, the number of milligrams of potassium hydroxide that is consumed by 1 g of oil under the conditions of the test.

D 4175, D02

saponification number, n—the number of milligrams of potassium hydroxide consumed by 1 g of a sample under the conditions of the test.

D 4175, D02

saponify, v—to hydrolyze a fat with alkali to form an alcohol and the salt of a fatty acid.

D 4175, D02

sapric peat—peat in which the original plant fibers are highly decomposed (less than 33 % fibers). **D 653, D18**

sapwood—the wood containing some living cells and forming the initial wood layer beneath the bark of the log. The thickness of the sapwood layer varies by species and may be lighter in color than heartwood. Under most conditions the sapwood is more susceptible to decay than heartwood. **D 9, D07**

saran—a manufactured fiber in which the fiber-forming substance is any long-chain synthetic polymer composed of at least 80 % by weight of vinylidene chloride units (CzCH₂CzCCl₂Cz). **D 123, D13**

saran plastics—See **vinylidene chloride plastics**. **D 883, D20**

sash, n—single frame in a door or window that holds one or more lites (panes) of glass. See **window sash**. **E 631, E06**

sash, n—single frame in a door or window that holds one or more lites (panes) of glass. See **window sash**. **E 1605, E06**

satellite, n—extraneous or undesirable ink droplets. See also **spatter, spray**. **F 1857, F05**

satellite drops, n—drops formed during atomization that are associated with a much larger drop. **E 1620, E29**

satellite peaks—See **photoelectronX-ray satellite peaks and shake-up lines or shake-up-satellites**. **E 673, E42**

satin, adj—description of a weave pattern in which warp yarns pass unbound (“float”) over several fill yarns before crossing under a single fill yarn. **D 3878, D30**

satin etch—decorative glass surface that scatters light upon reflection, yielding a dull sheen finish. **C 162, C14**

satin finish—a surface finish that behaves as a diffuse reflector and which is lustrous but not mirrorlike. **B 374, B08**

satin glaze—a glaze which exhibits a non-zero specular reflection reduced by at least 50 percent. **C 242, C21**

satin, matte, or black finish—a reduced reflective surface varying from a dull appearance to a blackened surface. **F 1840, F04**

saturated felt—a felt that has been immersed in hot bitumen; the felt adsorbs and absorbs as much bitumen as it can retain under the processing conditions, but remains porous and contains voids. **D 1079, D08**

saturated gun—a self-biased electron gun in which electron emission is limited by space charge rather than filament temperature. **E 7, E04**

saturated-lime water, n—see **lime-saturated water**. **C 219, C01**

saturated unit weight—see **unit weight**. **D 653, D18**

saturates, n—a mixture of paraffinic and naphthenic hydrocarbons that on percolation in a paraffinic solvent are not adsorbed on the adsorbing medium; other compounds such as naphthenic and polar aromatics are adsorbed thus permitting the separation of the saturate fraction. **D 8, D04**

saturation—(1) the attribute by which the a perceived color is judged to depart from a neutral gray of equal lightness toward a pure hue. (2) Attribute of a visual sensation that permits a judgment to be made of the proportion of pure chromatic color in the total sensation. **C 242, C21**

saturation—under **color of an object**, see *saturation*. **D 16, D01**

saturation, n—the condition existing when a vapor is in equilibrium with the plane surface of a condensed phase of the same substance (liquid or solid).

saturation mixing ratio, n—the ratio of the mass of water vapor, m_v, to the mass of dry air, m_a, present in saturated air.

saturation vapor pressure, n—the vapor pressure of a system at a given temperature, wherein the vapor of the substance is in equilibrium with a plane surface of that substance’s pure liquid or solid phase.

saturation vapor pressure of water, n—the pressure of water vapor in equilibrium with plane surface of a condensed phase.

saturation mixing ratio—See **saturation**.

saturation vapor pressure of water—See **saturation**. **D 1356, D22**

saturation—the point at which a solution contains enough of a dissolved solid, liquid, or gas so that no more will dissolve into the solution at a given temperature and pressure. **D 6161, D19**

saturation—the condition of coexistence in stable equilibrium of a vapor and a liquid or a vapor and solid phase of the same substance at the same temperature. **E 41, G03**

saturation—a condition in which an increase in input signal produces no increase in amplitude on the display. **E 1316, E07**

saturation—relative or comparative color characteristic resulting from a hue’s dilution with white light. **E 1316, E07**

saturation activity—the number of disintegrations per unit time for the steady-state condition in which the rate of production of a nuclide is equal to the rate of loss by radioactive decay or nuclear transmutation. **E 170, E10**

saturation charge—the maximum electrostatic charge that can be held on a photoconductive layer without the occurrence of dielectric breakdown. **F 335, F05**

saturation curve—see **zero air voids curve**. **D 653, D18**

saturation, degree of—the ratio of the weight of water vapor associated with a pound of dry air to the weight of water vapor associated with a pound of dry air saturated at the same temperature. **E 41, G03**

saturation density, n—the optical density value at which no additional density increase is seen on the thermal image as the energy delivered to thermal paper is increased. **F 1623, F05**

saturation (in color), n—another term for **chroma**. See **color**. **E 253, E18**

saturation level—see **vertical limit**. **E 1316, E07**

saturation, magnetic—the total magnetization produced in a ferromagnetic material, at which point the incremental permeability has progressively decreased to approach unity. **E 1316, E07**

saturation, s, n—(1) in the CIE 1976 L*, u*, v* system, the quotient of the CIE 1976 u, v, chroma C*_{uv} by the CIE 1976 lightness L*, s = C*_{uv}/L*.

(2) attribute of a visual sensation that permits a judgment to be made of the proportion of pure chromatic color in the total sensation. (See also **chroma (3)**.) **E 284, E12**

saturation temperature, n—the temperature at which a thermal image reaches its maximum optical density. **F 1623, F05**

saucer head—circular, cupped head with concave top surface and convex bearing surface. **F 547, F16**

Saunderson correction, n—mathematical expression relating, in turbid medium theory, the fluxes on opposite sides of a boundary at which there is a change in refractive index. **E 284, E12**

sauter mean diameter, SMD [L], n—the diameter of a drop that has the same ratio of volume to surface area as the ratio of total volume to total surface area in a distribution of drops, as computed from the equation:

$$SMD = \frac{\sum n_i d_i^3}{\sum n_i d_i^2}$$

where:

i = a sampling size interval,

d_i = drop diameter, and

n_i = number of drops in that interval.

G 40, G02

savings-to-investment ratio (SIR)—either the ratio of present value savings to present value investment costs, or the ratio of annual value savings to annual value investment costs.

scaling—see **flaking**.

E 631, E06

savings-to-investment ratio (SIR), n—either the ratio of present value savings to present value investment costs, or the ratio of annual value savings to annual value investment costs. **E 833, E06**

saw burn—blackening or carbonization of a cut surface of a pultruded section.

saw burn

NOTE—This condition is usually caused by cutting with a dull saw blade, cutting too slowly, or cutting a highly reinforced material with a diamond blade without water. **D 3918, D20**

saw chain, n—a closed loop of cutters linked together for use in a portable power-operated tool. **F 1494, F23**

sawdust—wood particles resulting from the cutting and breaking action of saw teeth. **D 1554, D07**

saw kerf—(1) grooves or notches made in cutting with a saw; (2) that portion of a log, timber, or other piece of wood removed by the saw in parting the material into two pieces. **D 9, D07**

saw-log size—a log large enough to produce lumber or other products that can be sawed. Its size and quality vary with the utilization practices of the region. **D 9, D07**

saw milling residue, n—sawdust, chips, slabs, bark, and other debris generated during the processing of logs into finished lumber or lumber products. **D 1968, D06**

sawn veneer—See under **veneer**. **D 1038, D07**

Saybolt color, n—an empirical definition of the color of a clear petroleum liquid. **D 4175, D02**

Saybolt color, n—the name of an empirical scale for expressing of the color of a clear petroleum liquid based on a scale of -16 (darkest) to +30 (lightest) and determined by Test Method D 156. **D 4175, D02**

Saybolt color, n—an empirical definition of the color of a clear petroleum liquid based on a scale of -16 (darkest) to +30 (lightest). **E 284, E12**

SBS—sodium bisulfite, NaHSO₃. **D 6161, D19**

SBS, n—see **sick building syndrome**. **E 2114, E06**

SC—an abbreviation for self-contained. **F 549, F05**

scab—in porcelain enameling metal sheets or castings, a defect having the appearance of a loose piece of metal, tongue, or flap on the surface. **C 286, B08**

scaffold, n—a support, delivery vehicle, or matrix for facilitating the migration, binding, or transport of cells or bioactive molecules used to replace, repair, or regenerate tissues. **F 2312, F04**

scaffold nail—See **double-headed nail**. **F 547, F16**

scale—an adherent oxide coating that is thicker than the superficial film referred to as tarnish. **B 374, B08**

scale—a small particle of foreign material embedded in the surface of molded glass articles. **C 162, C14**

scale—the oxide formed on the surface of the metal during heating. **C 286, B08**

scale, n—a deposit formed from solution directly upon a surface. **D 1129, D19**

scale—a condition wherein resin plates or particles are on the surface of a pultrusion.

NOTE—Scales can often be readily removed, sometimes leaving surface voids or depressions. **D 3918, D20**

scale, n—a defined arrangement of the elements of a set of stimuli or responses. **E 284, E12**

scale, v—to assess the content of one or more appearance attributes in the members of a set of stimuli. **E 284, E12**

scale, n—graduation of temperature display in degrees Celsius or Fahrenheit. **E 344, E20**

scale inhibitor—a chemical which inhibits the growth of microcrystals (inhibits precipitation of sparingly soluble salts). See **antiscalant**. **D 6161, D19**

scale of particle sizes—based on AGU (American Geophysical Union) scale. **D 4410, D19**

scale range—the range of degrees of temperature through which a thermometer is usable. **E 344, E20**

scale suppressant, n—a substance added to engine coolant concentrates, corrosion inhibitor packages, or supplemental coolant additives that helps prevent the formation of hard water mineral scale. **D 4725, D15**

scaling—the process of forming scale with or without acid fumes; sometimes refers to spontaneous detachment of scale. **C 286, B08**

scaling—same as spalling. **C 717, C24**

scaling—the build-up of precipitated salts on a surface, such as membranes, pipes, tanks, or boiler condensate tubes. **D 6161, D19**

scaling, n—the deterioration of the upper concrete slab surface, normally 3 mm (0.125 in.) to 13 mm (0.5 in.) in depth, resulting in the loss of surface mortar. **E 867, E17**

scaling—see **flaking**. **E 1605, E06**

scaling, n—the deterioration of the upper concrete slab surface, normally 3 mm (0.125 in.) to 13 mm (0.5 in.) in depth, resulting in the loss of surface mortar. **E 1778, E17**

scaling resistance, n—See **flaking resistance**. **D 16, D01**

scalloped selvage, n—an abrupt, narrow indentation in the selvage. **D 123, D13**

scalloped selvage, n—an abrupt, narrow indentation in the selvage. (*Syn. misclip*) **D 3990, D13**

scalops—excursions of the surface record above and below the blanking band. **E 867, E17**

scan—a search for information to be recognized by the recognition unit of the optical scanner, and the conversion of the optical signal to an electrical signal. **F 149, F05**

scan, n—the search for a symbol which is to be optically recognized; also, a search for marks to be recognized by the interpretation unit of an optical scanner. **F 1294, F05**

scan area—the area of a form that contains information to be scanned. **F 149, F05**

scan band—a strip across a document that passes directly beneath a scanning head of a reader. **F 149, F05**

scan ink—ink that is sensed by the optical scanner. Synonym for *nonreflective ink, read ink*. **F 149, F05**

scanner—(1) a device that examines a spatial pattern one part after another, and generates analog or digital signals corresponding to the pattern. Scanners are often used to mark reading, pattern recognition, or character recognition.

(2) See **flying spot scanner, optical scanner, mark scanning, optical scanner**. **F 149, F05**

scanner, n—a device that examines a spatial pattern, part by part, and generates analog or digital signals corresponding to the pattern. **F 1294, F05**

scanning—the movement of a search unit relative to the test piece in order to examine a volume of the material. **E 1316, E07**

scanning index—the distance the search unit is moved between scan paths after each traverse of the part. **E 1316, E07**

scanning microscope—an electron microscope in which the image is formed by a beam operating in synchronism with an electron probe scanning the object. The intensity of the image forming beam is proportional to the scattering or secondary emission of the specimen where the probe strikes it. **E 7, E04**

scanning/reading range (also called **Operating Range (OR)**), *n*—the combined distance of optical ability of a lens, a photographic material, or a photographic system to distinguish detail under specific conditions. Also, the narrowest element dimension that can be distinguished by a particular reading device. **F 1294, F05**

scan reflectance profile, n—according to *ANSI X3.182*, a record of the reflectance measured using the reference reflectivity method across the entire bar code symbol. **F 1294, F05**

scar, n—fibrous tissue replacing normal tissues destroyed by injury or disease. **F 2312, F04**

scarfing—the removing of flash or bead by a cutting operation. **B 846, B05**

scarf joint, n—see *scarf joint* under **joint**. **D 907, D14**

SCAS—see **semicontinuous activated sludge, SCAS**. **D 459, D12**

scattered energy—energy that is reflected in a random fashion by small reflectors in the path of a beam of ultrasonic waves. **E 1316, E07**

scattered ion:

energy—ISS, for a binary elastic collision, the kinetic energy of the probe ion following a binary elastic collision, E_s , is given by:

$$E_s = E_0[M_0/(M_0 + M_1)]^2(\cos \theta + [(M_1/M_0)^2 - \sin^2 \theta]^{1/2})^2$$

where:

E_s = kinetic energy for the scattered probe ion,
 E_0 = energy of the incident probe ion prior to collision, determined from the product of ionic charge and accelerating potential,

M_0 = mass of the probe ion,

M_1 = mass of the target atom, and

θ = angle between the initial and final velocity vectors for the probe ion, as determined from a common origin in the laboratory coordinate system, expressed as a value between 0 and 180°.

energy ratio—ISS, the value E_s/E_0 which may be used as the abscissa of an ion-scattering spectrum. For definition of E_s and E_0 , see **scattered ion energy**.

intensity, experimental—ISS, the measured response of the energy filtering and detection system as a consequence of bombarding the specimen material with a beam of probe ions, usually presented as the ordinate of an ion-scattering spectrum.

intensity, theoretical—ISS, defined by an equation of the form:

$$I_i(\theta) = I_0 N P_i \alpha_i (d\sigma/d\Omega) \theta \Delta \Omega T$$

where:

$I_i(\theta)$ = scattered ion intensity from atoms of species, i , at a given scattering angle, θ , ions s^{-1} ,

I_0 = intensity of incident probe ions, ions s^{-1} ,

N_i = number of scattering centers of species i per unit area of surface, or per unit volume accessible to the incident beam, atoms $metre^{-2}$,

P_i = probability that the probe ion remains ionized after interacting with an atom of species i ,

α_i = geometric or shadowing factor for species i in the given environment and geometry,

$(d\sigma/d\Omega)\theta$ = differential scattering cross section per unit solid angle, for species i , taken at the angle for which scattering is measured; that is, the angular distribution of scattered ion intensity per unit flux of incident ions, per atom of species i , $metre^2 atom^{-1} steradian^{-1}$,

$\Delta \Omega$ = solid angle of acceptance determined by the entrance aperture of the filtering and detection system, steradians, and

T = fractional transmission of the analyzing and detection system.

E 673, E42

scattered neutrons—neutrons that have undergone a scattering collision but still contribute to film exposure. **E 1316, E07**

scattering, *n*—the process by which light or other electromagnetic radiant flux passing through matter is redirected over a range of angles. **E 284, E12**

scattering—in leak testing, dispersion or diffusion in various directions due to intermolecular or ionic collisions as applied to the effect of the residual gas in a mass spectrometer tube or an ion beam traversing the tube. **E 1316, E07**

scattering—the dispersion, deflection, or redirection of the energy in an ultrasonic beam caused by small reflectors in the material being examined. **E 1316, E07**

scattering loss—that part of transmitted energy lost due to roughness of reflecting surface. **D 653, D18**

scattering (of radiant energy), *n*—in atomic emission spectrometry, reflection of radiant energy in random directions by matter located between the source and the detector. **E 135, E01**

scattering, 90° (or 180°)—scattering which is observed at an angle of 90° (or 180°) to the direction of the incident beam. **E 131, E13**

scattering tinting strength, *n*—relative change in the scattering properties of a standard black material (with no scattering colorant present) when a specified amount of a white or chromatic scattering colorant is added to it. **E 284, E12**

scattering (X-ray)—a general term which includes both Compton and coherent scattering. **E 7, E04**

scatter rug, *n*—a small rug which is designed to be flexible and is usually cleaned by laundering. **D 123, D13**

scavenger—a chemically active substance which consumes or deactivates an undesirable substance in a system or mixture. **D 2864, D27**

scenario, *n*—a detailed physical description of the process whereby a potential inadvertent combination of materials may occur. **E 1445, E27**

schedule—a pipe size system (outside diameters and wall thicknesses) originated by the iron pipe industry. **F 412, F17**

schematic design—the phase of a project during which the initial solutions to the program are prepared by the design professional through the use of plans and sections and system's descriptions.

*score, *n**—See **serviceability score**.

screen—See **railing systems**.

E 631, E06

schematic design, *n*—the phase of a project during which the initial solutions to the program are prepared by the design professional through the use of plans and sections and system's descriptions.

E 833, E06

schist—a foliated metamorphic quartz-feldspar-containing rock characterized by thin foliae of platy or prismatic minerals such as mica or chlorite. Schists split readily along these planes of foliation. This rock exists in many gradations, some of them progressing into a gneiss. **C 119, C18**

schistosity—the variety of foliation that occurs in the coarser-grained metamorphic rocks and is generally the result of the parallel arrangement of platy and ellipsoidal mineral grains within the rock substance. (ISRM) **D 653, D18**

Schlieren system—an optical system used for visual display of an ultrasonic beam passing through a transparent medium.

E 1316, E07

scintillation, *n*—the multiple discharges or small arcs that originate in the more conductive areas of the insulation surface, and span less conductive areas. **D 1711, D09**

scintillator, *n*—a transparent substance that emits visible or near ultraviolet light when traversed by an ionizing particle.

C 1145, C28

scintillators and scintillating crystals—a detector that converts ionizing radiation to light. **E 1316, E07**

scissoring—lateral misalignment. **F 1638, F04**

Scleroscope hardness number, HSc or HSd, *n*—a number related to the height of rebound of a diamond-tipped hammer dropped on the material being tested. **E 6, E28**

Scleroscope hardness test, *n*—a dynamic indentation hardness test using a calibrated instrument that drops a diamond-tipped hammer from a fixed height onto the surface of the material under test.

E 6, E28

sclerotinite—See *sclerotinite* under **maceral**.

D 121, D05

SCOF—static coefficient of friction.

F 141, F06

SCOF—static coefficient of friction

F 1646, F13

scoop—Deprecated term, see **element**.

D 2050, D13

scorch, *n*—premature vulcanization of a rubber compound.

D 1566, D11

scorch, Mooney, *n*—the time to incipient cure of a compound when

tested in the Mooney shearing disk viscometer under specific conditions (see Test Methods D 1646). **D 1566, D11**

score, *n*—a channel formed for appearance purposes on the face or faces of a manufactured masonry unit. **C 1232, C15**

score, *n*—an impression or crease in **paperboard, corrugated** or **solid fiberboard** to locate and facilitate folding. **D 996, D10**

score, *v*—to form a score. **D 996, D10**

score—a cut made by a flaying knife on the flesh side. **D 1517, D31**

scoring, *n*—*in tribology*, a severe form of wear characterized by the formation of extensive grooves and scratches in the direction of sliding. **D 4175, D02**

scoring, *n*—the formation of severe scratches in the direction of sliding. **D 4175, D02**

scoring, *n*—*in tribology*, a severe form of wear characterized by the formation of extensive grooves and scratches in the direction of sliding. **G 40, G02**

scorotron, *n*—a corotron with a screen. **F 1457, F05**

scotch grain—a pebbled pattern embossed on cattlehide or calf leather. **D 1517, D31**

scotopic, *adj*—pertaining to vision at sufficiently low levels of illumination that only the retinal rods are stimulated. **E 284, E12**

scour—the enlargement of a flow section by the removal of the boundary material by the motion of a fluid. **D 4410, D19**

scoured wool, *n*—wool from which the bulk of impurities has been removed by an aqueous or solvent washing process. **D 123, D13**

scoured wool, *n*—wool from which the bulk of impurities has been removed by an aqueous or solvent washing process. **D 4845, D13**

scouring—a wet process of cleaning by chemical or mechanical means, or both. **D 459, D12**

scrap—excess property that has no value except for its basic material content. **E 2135, E53**

scrape, *n*—the crystallized pine oleoresin collected from the scarified faces of trees being worked for turpentine. **D 804, D01**

scrapings—the overspray that has been recovered from a spray booth. **C 286, B08**

scrap tire, *n*—a tire, which can no longer be used for its original purpose due to wear or damage. **D 5681, D34**

scrap tire processing, *n*—any method of size reducing whole scrap tires to facilitate recycling, energy recovery or disposal. **D 5681, D34**

scratch—damage on a glass surface in the form of a line caused by the relative movement of an object across and in contact with the glass surface. **C 162, C14**

scratch—damage resulting from the movement of a hard pointed object. **D 2825, D21**

scratch—in micro-indentation hardness testing, a mark or groove cut in the specimen by moving a loaded indenter across the surface. **E 7, E04**

scratch, *n*—a shallow cut or narrow groove in the flooring surface. A line or furrow made in the flooring surface by rasping or rubbing with a pointed or jagged object. **F 141, F06**

scratch—any marking or tearing of the surface in glass or plastic caused by an abrasive material. **F 2429, F07**

scratch coat, *n*—the first layer of plaster applied over lath or other substrate. **C 11, C11**

scratches, *n*—the result of mechanical removal or displacement, or both, of material from a surface by the action of abrasive particles or protuberances sliding across the surfaces. **D 4175, D02**

scratching, *n*—the formation of fine lines in the direction of sliding that may be due to asperities on the harder slider or to hard particles between the surfaces or embedded in one of them. **D 4175, D02**

scratching, *v*—a form of wear, in which a minute groove-like break in a flooring surface is made by a rubbing contact with a tool or particle, the total deformation being confined to the most immediate surface level. **F 141, F06**

scratching, *n*—*in tribology*, the mechanical removal or displacement, or both, of material from a surface by the action of abrasive

particles or protuberances sliding across the surfaces. (See also **plowing**.) **G 40, G02**

scratch-resistant coatings—coatings applied to glass surfaces to reduce the effects of frictive contact. **C 162, C14**

screen, *n*—in laboratory work an apparatus, in which the apertures are circular, for separating sizes of material. **D 8, D04**

screen—an apparatus with circular apertures for separating sizes of material. **D 1079, D08**

screen, *n*—an apparatus for separating sizes of granules. **D 5681, D34**

screen, *n*—a perforated sheet consisting of wire mesh, woven or welded wire fabric, or standard or flattened expanded metal; serving as an infill panel and being an integral part of a panel railing or guardrail system. **E 631, E06**

screen—alternative term for intensifying screen. **E 1316, E07**

screen, *n*—a perforated sheet consisting of wire mesh, woven or welded wire fabric, or standard or flattened expanded metal; serving as an infill panel and being an integral part of a panel railing or guardrail system. **E 1481, E06**

screen, *v*—to review or compare property on hand against a known or anticipated requirement. **E 2135, E53**

screen analysis, *n*—see **sieve analysis**. **B 243, B09**

screen-back hardboard (S1S)—hardboard with a reverse impression of a screen on the back produced when a damp or wet mat is hot-pressed into a board and dried in the press. **D 1554, D07**

screen dump, *n*—a command that causes information showing on a terminal display to be printed just as it appears on the display. **F 1457, F05**

screening, *n*—the appearance of a cross-hatch pattern on the print that can be caused by ink drying too rapidly. **D 6488, D01**

screening, *n*—a pattern of vertical and diagonal lines on the printed substrate where the ink flowout between cells in the cylinder is such that an uneven ink film is formed. **D 6488, D01**

screening, *n*—a preliminary procedure to select assessors, samples, products, or variables. **E 253, E18**

screening design, *n*—a balanced design, requiring relatively minimal amount of experimentation, to evaluate the lower order effects of a relatively large number of factors in terms of contributions to variability or in terms of estimates of parameters for a model. **E 456, E11**

screening design, *n*—a balanced design, requiring relatively minimal amount of experimentation, to evaluate the lower order effects of a relatively large number of factors in terms of contributions to variability or in terms of estimates of parameters for a model.

NOTE—In screening designs, the term lower order effects is sometimes limited to first order terms such as linear components of main effects, but often includes both first order terms and second order terms such as two factor interactions and quadratic curvature components of main effects. **E 1325, E11**

screening energy—the diminished energy of an ion due to coulombic attraction of electrons in the immediate environment. **E 673, E42**

screenings, *n*—a residual product resulting from the artificial crushing of rock, boulders, cobble, gravel, blast-furnace slag or hydraulic cement concrete, all of which pass the smallest screen used with the crushing operation and most of which pass the 2.36-mm (No. 8) sieve. **D 8, D04**

screening test, *n*—*as related to fire*, a fire-response test performed to determine whether a material, product, or assembly (a) exhibits any unusual fire-related characteristics, (b) has certain expected fire-related characteristics, or (c) is capable of being preliminarily categorized according to the fire characteristic in question. **E 176, E05**

screen lens—an electrostatic electron lens consisting of a combination of screens or foils at different potentials. **E 7, E04**

screen marks—a mesh pattern left by a silk screen process in the applied ceramic glass enamel before or after firing. **C 162, C14**

screen mesh, *n*—the average number of openings per linear inch of material. **C 1145, C28**

screen plate or film—See **color film**. E 7, E04

screen test—a standard test for fineness of porcelain enamel slip or powder. C 286, B08

screw—the fastener which joins the scissor halves F 1078, F04

screw, n—an anchor component that connects to the bony elements of the spine, pelvis, or ribs by means of threads. F 1582, F04

screw—mechanical fastener having basic design characteristics which facilitate its assembly into a tapped hole or to form its own threads during installation. F 1789, F16

screw contact—see **contact,screw**. B 542, B02

screw head—See **slotted head**. F 547, F16

screw, ice, n—a device designed to be screwed into ice to provide a belay or protection anchor. F 1773, F08

screw interconnection, n—an interconnection having an implant component sandwiched between the screw head (or screw thread) and bony element or other implant components. F 1582, F04

screw nail, screw nail, screw-grip nail, screw-shank nail, scrushank nail, screw-thread nail—terms applied to helically threaded nail and screw-threaded nail. (See **thread**.) F 547, F16

screw, screw-grip thread, screw-shank thread, scrushank thread, screw thread—See **helical thread, screw thread**. F 547, F16

screw stock—metal in the form of wire or rod, usually a free-machining alloy used for automatic screw machine work. E 7, E04

screw thread—helical thread with small lead angle rolled onto nail shank. F 547, F16

screw thread—helical ridge generally of uniform cross section formed on a cylindrical surface used to facilitate assembly of mechanical components. F 1789, F16

scrim, n—lightweight woven or non-woven fabrics that are manufactured from yarns. D 1079, D08

scrim—a reinforcing fabric woven into an open mesh construction, used in the processing of tape or other B-stage material to facilitate handling and control bondline thicknesses. Also referred to as a *carrier*. E 631, E06

scroll—See **railing systems**. E 631, E06

scrim—a reinforcing fabric woven into an open mesh construction, used in the processing of tape or other B-stage material to facilitate handling and control bondline thicknesses. Also referred to as a *carrier*. E 1749, E06

scroll, n—a cast or forged ornamental spiral of convoluted shape, serving, for example, as a decorative panel or insert. E 631, E06

scroll, n—a cast or forged ornamental spiral of convoluted shape, serving, for example, as a decorative panel or insert. E 1481, E06

scroll—a decorative ornament on top of a gate. F 552, F14

scrubber, n—a type of apparatus used in sampling and in gas cleaning in which the gas is passed through a space containing wetted packing or spray. D 1356, D22

scrubber, n—a pollution control device designed to remove gaseous elements from boiler exhaust gasses. See **flue gas desulfurization**. E 2201, E50

scrubber material, n—see **FGD material**. E 2201, E50

SCS—abbreviation for **system network architecture character string**. F 1457, F05

scud—remnants of epithelial tissue, hair, dirt, etc., left in the hair follicles after unhairing. D 1517, D31

scudding—removal of scud from unhairing hides by scraping with a blade, either by hand or machine. D 1517, D31

scuff—See **rub**. C 162, C14

scuff—disfigurement of polish film resulting from the abrading or scraping action repairable without recoating. D 2825, D21

scuff, v—a form of wear, in which a mark, gall, roughness or other damage is caused by the rubbing of traffic bodies against a flooring surface and may involve deposition of a foreign material onto the flooring surface. F 141, F06

scuff—the color of the CF or CFB sheet caused by capsule damage on the CB sheet when it is pulled under pressure across the mate sheet. F 549, F05

scuffing—long white scrape marks on the surface of the pultrusion. NOTE—This condition usually results from mechanical scraping or scratching of the pultrusion in the machine or in handling it afterwards. D 3918, D20

scuffing, n—in *lubrication*, surface damage resulting from localized welding at the interface of rubbing surfaces with subsequent fracture in the proximity of the weld area. D 4175, D02

scuffing, n—localized damage caused by the occurrence of solid phase welding between sliding surfaces, without local surface melting. D 4175, D02

scuffing—marks on coated surface due to movement between sheets under pressure. F 335, F05

scuffing—*n*, a form of wear occurring in inadequately lubricated tribosystems that is characterized by macroscopically-observable changes in surface texture, with features related to the direction of relative motion. G 40, G02

scuff marks—scratches or other damage to the shoe finish or polish coating. D 2825, D21

scuff, scuffing, n—in *lubrication*, damage caused by instantaneous localized welding between surfaces in relative motion which does not result in immobilization of the parts. D 4175, D02

scum—a floating layer of unmelted material on the molten glass surface. C 162, C14

scum, n—a condition that occurs when a lithographic plate has become sensitized in the nonimage areas and these areas begin to take ink. D 6488, D01

scumming—a defect characterized by areas of poor gloss on the surface of porcelain enamel. C 286, B08

scumming, n—the deposit of ink in the non-imaging area. D 6488, D01

scutching, n—the mechanical beating and scraping of flax straw subsequent to breaking to separate the shives and tow from the long line flax fiber. D 123, D13

scutching, v—the mechanical beating and scraping of flax straw subsequent to breaking to separate the shives and tow from the long line flax fiber. D 6798, D13

scuttle—a hatch that provides access to the roof from the interior of the building. D 1079, D08

scye depth, n—in *body measurements*, the distance from the cervicale to a point level with the armpit. D 123, D13

scye depth, n—the vertical distance from the cervicale to the back break-point level, taken with the arms down. D 5219, D13

SDI—**silt density index**—an index calculated from the rate of plugging of 0.45 μm membrane filter. It is an indication of the amount of particulate matter in water, sometimes called fouling index. D 6161, D19

SDLC—abbreviation for **synchronous data link control**. F 1457, F05

S&DSI—Stiff and Davis saturation index, measure of CaCO₃ solubility in seawater or highly saline water. See Practice D 4582 and **LSI**. D 6161, D19

SDWA—Safe Drinking Water Act of the United States, specifying required purity levels of municipal potable water. D 6161, D19

seal, n—in *building construction*, a barrier against the passage of liquids, solids, or gases. C 717, C24

seal:

heat seal—in *packaging*, a method of bonding mating surfaces under controlled application of heat, pressure, and dwell time.

hermetic seal—in *packaging*, a seal that prevents passage of air and other gases. D 996, D10

seal—the closure of a structure to make it leakproof by the application of sealant to fasteners, seams, and any other possible leak path.

sealing, absolute—See **absolute sealing**. E 631, E06

seal—the closure of a structure to make it leakproof by the application of sealant to fasteners, seams, and any other possible leak path. E 1749, E06

seal

seal—a continuous joint of two or more surfaces of sheet material such as made by fusion or adhesion. **F 17, F02**

seal—See Terminology F 17. **F 1327, F02**

sealant—*in building construction*, a material that has the adhesive and cohesive properties to form a seal. **C 717, C24**

sealant—a mixture of polymers, fillers, and pigments used to fill and seal joints where moderate movement is expected; unlike caulking, it cures to a resilient solid. **D 1079, D08**

sealant, n—a material that has adhesive and cohesive properties to seal joints, cracks, or other narrow openings (generally less than 76-mm (3-in.) wide) in pavements against the entrance or passage of water or other debris. **D 5535, D04**

sealant, aerosol foam, n—*in building construction*, a sealant that expands in volume as it is dispensed from a container, using propellant under pressure, to form a rigid or semi-rigid cellular mass. **C 717, C24**

sealant, aerosol foam, straw-type, n—*in building construction*, an aerosol foam sealant that is extruded through a narrow tube. **C 717, C24**

sealant backing—*in building construction*, a compressible material placed in a joint before applying a sealant. **C 717, C24**

sealant, chemically curing, n—*in building construction*, a compound that cures primarily through chemical reaction. **C 717, C24**

sealant, emulsion—See **sealant, latex**. **C 717, C24**

sealant, hot-applied, n—*in building construction*, a compound that is applied in a molten state and cures primarily by cooling to ambient temperatures. **C 717, C24**

sealant, latex, n—*in building construction*, a compound that cures primarily through water evaporation. **C 717, C24**

sealant, non-sag, n—*in building construction*, a compound that exhibits little or no flow when applied in vertical or inverted joints. **C 717, C24**

sealant, precured, n—*in building construction*, a preformed, factory cured elastomeric material that when adhered to a joint forms a seal. **C 717, C24**

sealant, preshimmied, n—*in building construction*, a sealant having encapsulated therein solids or discrete particles that limit its deformation within a joint under compression. **C 717, C24**

sealant, preshimmied tape, n—*in building construction*, a preshimmied sealant in tape sealant form. **C 717, C24**

sealant-sealed seam finish, n—*in home sewing*, a seam finish in which a clear liquid seam-sealant is used as the treatment to prevent fraying. **D 123, D13**

sealant-sealed seam finish, n—*in home sewing*, a seam finish in which a clear liquid seam-sealant is used as the treatment to prevent fraying. **D 4965, D13**

sealant, self-leveling, n—*in building construction*, a compound that exhibits flow sufficient to seek gravitational leveling. **C 717, C24**

sealant, silicone, n—*in building construction*, a liquid-applied curing compound based on polymer(s) of polysiloxane structures. **C 717, C24**

sealant, solvent-release, n—*in building construction*, a compound that cures primarily through solvent evaporation. **C 717, C24**

sealant, structural, n—*in building construction*, a sealant capable of transferring dynamic or static ("live" or "dead," or both) loads, or both, across joint members exposed to service environments typical for the structure involved. **C 717, C24**

sealant, tape, n—*in building construction*, a sealant having a preformed shape, and intended to be used in a joint initially under compression. **C 717, C24**

seal contamination—foreign matter in the seal area such as, but not limited to, water, grease, or food. **F 17, F02**

seal contamination—See Terminology F 17. **F 1327, F02**

seal creep—the reduction in width of a seal due to a force being exerted on it, such as a bulky product, pouch distortion, or internal air pressure. **F 1327, F02**

seal creep resistance—a measure of the ability of a sealed package or seal to remain intact when subjected to a constant force. **F 1327, F02**

sealed (anodic) coating—*in anodizing aluminum*, an anodic oxide coating on aluminum that has been treated in an aqueous or steam medium resulting in reduced porosity of the coating. **B 374, B08**

sealer, n—a liquid composition to prevent excessive absorption of finish coats into porous surfaces; also a composition to prevent bleeding (see **size**). **D 16, D01**

sealing—permanent joining by heating an interface to reduce the viscosity of glass(es) for geometrical accommodation and bonding. **C 162, C14**

sealing, absolute—See **absolute sealing**. **E 1749, E06**

sealing blade—See **blade clincher**. **F 592, F16**

sealing element—a separate or bonded material between the sleeve and the pipe that forms a seal. **C 896, C04**

sealing glass—a glass with special thermal expansion characteristics intended for sealing to another glass or solid. **C 162, C14**

sealing material, n—See **seal**. **C 717, C24**

sealing of anodic coating—a process which, by absorption, chemical reaction, or other mechanism, increases the resistance of an anodic coating to staining and corrosion, improves the durability of colors produced in the coating, or imparts other desirable properties. **B 374, B08**

sealing surface—that portion of the finish of a glass container which makes contact with the sealing gasket or liner. See **finish**. **C 162, C14**

sealing tape—See **sealant, tape**. **C 717, C24**

seal (mechanical), n—any material or device that prevents or controls the passage of matter across the separable members of a mechanical assembly. **D 1566, D11**

seal, O-ring, n—a product of precise dimensions molded in one piece to the configuration of a torus with circular cross section, suitable for use in a machined groove for static or dynamic service. **D 1566, D11**

seal plane—all surfaces of a shelter that establish seal continuity and are in immediate contact with the environment.

sealed insulating glass—See **windows and doors**.

sealed insulating glass unit—a preassembled unit, comprising sealed panes of glass separated by dehydrated space(s), intended for vision areas of buildings. The unit is normally used for windows, window walls, picture windows, sliding doors, patio doors, or other types of windows or doors. **E 631, E06**

seal plane—all surfaces of a shelter that establish seal continuity and are in immediate contact with the environment. **E 1749, E06**

seal strength—a measure of the mechanical strength of the bond between sealed materials of a package. **F 1327, F02**

seam, n—*in wire*, a longitudinal discontinuity that extends radially into the wire from its surface. **A 902, A05**

seam—a naturally filled or bonded crack which does not adversely affect the strength of a stone (see **crack, fracture, microcrack**). **C 119, C18**

seam, n—a mark on a glass surface resulting from the joint between matching mold parts. **C 162, C14**

seam, v—to slightly grind the sharp edges of a piece of glass. **C 162, C14**

seam, n—a line where two or more fabrics are joined, usually near the edge. (Syn. **joining line**. See also **sewn seam, glued seam, stapled seam, thermallybonded seam**.) **D 123, D13**

seam—See **container**. **D 996, D10**

seam, n—a permanent joining of two or more materials. **D 4439, D35**

seam, n—the connection of two or more pieces of material by mechanical, chemical, or fusion methods to provide the integrity of a single piece of the material. **D 4439, D35**

seam, n—*in homesewing*, a line along which two or more sections of

a product have been joined. (Syn. *joining line*. See also **glued seam, sewn seam, stapled seam, thermally bonded seam.**)
D 4965, D13

seam—an unwelded fold or lap on the surface of a metal which appears as a crack, usually the result of defects in casting or working which have not welded shut.
E 7, E04

seam—a noncontinuous joint of two or more surfaces of sheet material such as made by stitching, spot adhesions, or intermittent fusion.
F 17, F02

seam—See Terminology F 17.
F 1327, F02

seam—straight or smooth curved line surface discontinuity running longitudinally on the fastener thread, shank, and head. **F 1789, F16**

seam allowance, n—*in sewn fabrics*, the distance from the edge of a fabric to the parallel stitch line furthest from that edge.
D 123, D13

seam allowance, n—the width of fabric used in making a seam assembly, bounded by the edge of the fabric and the furthest stitch line.
D 4439, D35

seam allowance, n—*in sewn materials*, the width of material between the cut edge of a fabric section and the line parallel to the cut edge along which that section will be joined to another section during assembly of the finished product.
D 4965, D13

seam assembly, n—the composite structure obtained when fabric(s) are joined by means of a seam.
D 123, D13

seam assembly, n—the unit obtained by joining fabrics with a seam, including details such as fabric direction(s), seam allowance, sewing threads used, and number of stitches per unit length; and sometimes additional details of fabrication such as sewing-machine type and speed, needle type and size, etc. **D 4439, D35**

seam damage, n—*in sewn fabrics*, an adverse change in the physical condition of one or more of the components in a seam which would reduce the seam acceptability such as yarn slippage, needle damage, or fabric rupture.
D 123, D13

seam damage, n—*in sewn fabrics*, any change in the physical condition of one or more of the components in a seam which reduces seam efficiency.
D 123, D13

seam design engineering, n—the procedures used to select a specific thread, a specific stitch type, and a specific seam type to achieve the required seam strength.
D 4439, D35

seam efficiency, n—*in sewn fabrics*, the ratio of seam strength to fabric strength.
D 123, D13

seam efficiency, sewn, n—*in sewn fabrics*, the ratio expressed as a percentage of seam strength to fabric strength.
D 4439, D35

seam engineering, n—*in sewn fabrics*, the procedures used to select a specific combination of sewing thread, stitch type, seam type, and stitch density to achieve the maximum sewn seam strength for a particular fabric type.
D 123, D13

seam failure, n—*in sewn fabrics*, that point at which an external force (1) ruptures the sewing thread, (2) ruptures the fabric, (3) causes excessive yarn slippage adjacent to the stitches, or (4) causes any combination of these unacceptable conditions.
D 123, D13

seam-finish, n—a treatment of the raw fabric edges of the seam allowance in a plain seam.
D 123, D13

seam finish, n—*in home sewing*, a treatment of the fabric cut edges of the seam allowance in a plain seam.
D 4965, D13

seam interaction, n—*in sewn fabrics*, the net effect of the relationship between the combination of fabric, seam type, stitch type, and stitch density on seam efficiency.
D 123, D13

seam interaction, n—the result of combining a specific textile, a specific stitch type, and a specific seam type.
D 4439, D35

seamless pipe, n—a round, hollow product made with a continuous periphery in all stages of manufacture and produced to the particular dimensions commercially known as standard pipe sizes.
B 899, B02

seam mark, n—*in unfinished cloth*, a pressure mark caused by the thickness of the seam being pressed against the cloth. **D 123, D13**

seam mark, n—*in unfinished cloth*, a pressure mark caused by the thickness of the seam being pressed against the cloth. **D 3990, D13**

seam moisture, n—synonym for *inherent moisture*. **D 121, D05**

seam slippage, n—*in sewn fabrics*, the displacement of the fabric yarn parallel and adjacent to the stitch line.
D 123, D13

seam type, n—*in sewn fabrics*, an alphanumeric designation relating to the essential characteristics of fabric positioning and rows of stitching in a specified sewn fabric seam.
D 123, D13

seam type, n—*in sewn fabrics*, an alphanumeric designation relating to the essential characteristics of fabric positioning and rows of stitching in a specific sewn fabric seam (see Federal Standard 751).
D 4439, D35

search-gas—Same as **tracer gas**.
E 1316, E07

search unit—an electro-acoustic device used to transmit or receive ultrasonic energy, or both. The device generally consists of a nameplate, connector, case, backing, piezoelectric element, wearface, or lens, or wedge.
E 1316, E07

seasonal freezing index—the cumulative number of degree-days below 0°C, calculated as the arithmetic sum of all the negative and positive mean daily air temperatures (degrees C) for a specific station during the period between the highest point in the fall and the lowest point the following spring, on the cumulative degree-day time curve.
D 7099, D18

seasonal frost—(1) seasonal temperatures causing frost that affect earth materials and keep these frozen only during the winter; (2) the occurrence of ground temperatures below 0°C for only part of the year.
D 7099, D18

seasonally-active permafrost—the uppermost layer of the permafrost which undergoes seasonal phase changes due to the lowered thawing temperature and freezing-point depression of its pore water.
D 7099, D18

seasonally frozen ground—ground that freezes annually.
D 7099, D18

seasonally frozen layer—the “active layer” in areas without permafrost.
D 7099, D18

seasonally thawed ground—ground that thaws annually.
D 7099, D18

seasonally thawed layer—the “active layer” in areas of permafrost.
D 7099, D18

seasonal thawing index—the cumulative number of degree-days above 0°C, calculated as the arithmetic sum of all the positive and negative mean daily air temperatures (degrees C) for a specific station during the period between the lowest point in the spring and the highest point the following fall, on the cumulative degree-day time curve.
D 7099, D18

season cracking—See **stress-corrosion cracking**.
G 15, G01

seasoning—drying; the term often applied to the process of removing moisture from wood to achieve a moisture content appropriate for the performance expected of the final product.

air-dried—dried by exposure to air, usually in a yard, without artificial heat.

dry—seasoned; in softwood lumber, the abbreviation S-Dry means not in excess of 19 % moisture content at time of surfacing, in accordance with recognized standards.

kiln-dried—dried in a closed chamber in which temperature and relative humidity of the circulated air can be controlled. The drying temperature is usually greater than outside air temperature. In softwood lumber grading rules under the jurisdiction of the Southern Pine Inspection Bureau, the abbreviation KD indicates seasoned in a kiln to a moisture content not in excess of 15 % moisture content.

ovendry—dried in an oven to remove all moisture. The temperature employed usually is 101 to 105°C or 214 to 221°F in accordance with ASTM Methods D 2016 Test for Moisture Content of Wood.

shipping-dry—dried to a moisture content judged low enough to prevent stain, mold, and decay in transit.
D 9, D07

seat—prepared position on the siege where the pot rests. **C 162, C14**

sea water—water with an approximate concentration of total dissolved solids ranging from 30 000 to 60 000 mg/L. See **brackish water**, **high brackish water**. **D 6161**, D19

secant modules, *n*—depreciated term in textile terminology. Use the preferred term *chord modulus*. **D 4848**, D13

secant modulus—See **modulus**, **secant**. **C 717**, C24

secant modulus—the slope of a line drawn from the origin to any specified point on the stress-strain curve. **C 904**, C03

secant modulus—slope of the line connecting the origin and a given point on the stress-strain curve. (ISRM) **D 653**, D18

secant modulus, *n*—the slope of the secant drawn from the origin to any specified point on the stress-strain curve. **D 907**, D14

secant modulus, *n*—the ratio of stress (nominal) to corresponding strain at any specified point on the stress-strain curve. **D 4439**, D35

secant modulus, J_{sec} , (FL^{-1}) , Nm^{-1} , *n*—for *geosynthetics*, the ratio of change in force per unit width to the change in elongation between two points on a force-elongation curve. **D 4439**, D35

secondary accelerator, *n*—accelerator used in smaller concentrations compared to the primary accelerator, to achieve a faster rate of vulcanization. **D 1566**, D11

secondary atomization, *n*—the disintegration of unstable drops or liquid fragments resulting from primary atomization to produce stable drops. **E 1620**, E29

secondary backing, *n*—for *pile yarn floor covering*, a suitable material adhered to or adhered to the underside of the primary backing fabric. **D 123**, D13

secondary backing, *n*—for *pile yarn floor covering*, a suitable material attached to or adhered to the underside of the primary backing fabric. **D 5684**, D13

secondary bonding—the joining together, by the process of adhesive bonding, of two or more cured composite parts, during which the only chemical (or thermal) reaction taking place is the curing of the adhesive itself.

secondary circulation area—See **building space**. **E 631**, E06

secondary bonding—the joining together, by the process of adhesive bonding, of two or more cured composite parts, during which the only chemical (or thermal) reaction taking place is the curing of the adhesive itself. **E 1749**, E06

secondary circulation area—portion of building area not defined as **primary circulation area**, but required for access to some subdivision of space, whether or not bounded by **walls**. **E 631**, E06

secondary circulation area—See **space categories**. **E 631**, E06

secondary circulation area—See **space categories**. **E 1480**, E06

secondary clay (sedimentary clay)—a clay that has been geologically transported from its place of formation. **C 242**, C21

secondary (concerning X-rays)—the X-rays emitted by a specimen irradiated by a primary beam. **E 7**, E04

secondary consolidation (secondary compression) (secondary time effect)—see **consolidation**. **D 653**, D18

secondary container—a container which encloses one or more primary containers. **D 996**, D10

secondary electrons—*AES*, electrons leaving a surface, produced through various mechanisms of energy transfer from the incident beam. By convention, electrons with energies ≤ 50 eV are considered as secondary electrons. **E 673**, E42

secondary extinction—a decrease in the intensity of a diffracted X-ray beam caused by parallelism or near-parallelism of mosaic blocks in a mosaic crystal; the lower blocks are partially screened from the incident radiation by the upper blocks, which have reflected some of it. **E 7**, E04

secondary filter pack—a clean, uniformly graded sand that is placed in the annulus between the primary filter pack and the overlying seal, or between the seal and overlying grout backfill, or both, to prevent movement of seal or grout, of both, into the primary filter pack. **D 653**, D18

secondary flow-rate standard—See **standard**. **D 1356**, D22

secondary hardening, *n*—the hardening phenomenon that occurs during high-temperature **tempering** of certain **steels** containing one or more carbide-forming alloying elements. **A 941**, A01

secondary healing, *n*—healing by second intention. **F 2312**, F04

secondary hole—in *grouting*, the second series of holes to be drilled and grouted usually spaced midway between primary holes. **D 653**, D18

secondary image—the image resulting from internal reflections of light rays at the surfaces of the transparency. **F 2429**, F07

secondary ion—ions ejected from a specimen surface as a result of energy transfer from a primary beam.

angular distribution—*SIMS*, the secondary ion yield as a function of emission angle.

energy distribution—the number of secondary ions as a function of the energy at a specified collection angle.

signal gating—the process of accepting secondary ion signal from only a portion of the sputtered area of the specimen to minimize crater edge effects.

yield—the total number of ions sputtered from the specimen per incident ion of given mass, energy, charge, and angle of incidence. **E 673**, E42

secondary light source, *n*—surface or object that is not self-emitting but receives light and re-directs it, at least in part, by reflection or transmission. **E 284**, E12

secondary lining—the second-placed, or permanent, structural lining of a tunnel, which may be of concrete, steel, or masonry. (ISRM) **D 653**, D18

secondary manufacturer—any entity, including the original manufacturer, that alters the fastener. **F 1789**, F16

secondary material, *n*—fragments or finished products or leftovers from a manufacturing process which converts a primary material into a commodity of economic value. **D 5681**, D34

secondary photovoltaic reference cell, *n*—a photovoltaic reference cell calibrated against a primary reference cell. **E 1328**, E44

secondary processing—process that is performed to a fastener in order to add further value, such as drilling, assembly with other fastener components, lubricating, coating, and machining. This product may already be tested (or certified when applicable, or both) in compliance with a given standard. **F 1789**, F16

secondary protective clothing—protective clothing designed for continuous wear for work activities in designated locations in which intermittent exposure to molten substance splash, radiant heat, and flame sources is possible. **F 1494**, F23

secondary radiation—radiation emitted by any substance as the result of irradiation by the primary source. **E 1316**, E07

secondary road, *n*—two lane, occasionally maintained, hard or loose surface (for example, large rock, paved crush rock, gravel, soil aggregate) intended for medium-weight, low-density traffic, in accordance with the U.S. Federal Highway Administration. **F 538**, F09

secondary seal—a seal that alone cannot provide a dependable absolute seal. **E 631**, E06

secondary seal—a seal that alone cannot provide a dependable absolute seal. **E 1749**, E06

secondary sources (of lead)—sources of lead exposure other than lead-based paint.

SEL—see **substrate equivalent lead concentration**.

semi-detached dwelling—See **dwelling**. **E 631**, E06

secondary standard, *n*—a standard calibrated by reference to another standard, such as a primary standard. Often, a secondary standard is prepared from typical production-type material. **C 1145**, C28

secondary standard—See **standard**. **D 1356**, D22

secondary standard, *n*—standard calibrated by reference to another standard such as a primary, reference, laboratory, or working standard. **D 2946**, C17

secondary standard thermocouple, *n*—a thermocouple that has had

- its temperature-emf relationship determined by reference to a primary standard of temperature. **E 344, E20**
- secondary state of stress**—the resulting state of stress in the rock around man-made excavations or structures. (ISRM) **D 653, D18**
- secondary wound closure, *n***—wound closure for healing by second intention. **F 2312, F04**
- secondary X rays, *n***—the X rays emitted by a specimen irradiated by primary X rays. **E 135, E01**
- second growth**—timber that has grown after the removal, whether by cutting, fire, wind, or other agency, of all or a large part of the previous stand. Often limited to that growth following removal of old-growth timber. **D 9, D07**
- second-hand filling material, *n***—an industry product which contains any filling material which has previously been used should not be offered for sale unless a clear and conspicuous disclosure of that fact is made on the label thereof and in all advertising and invoices relating to such product. **D 123, D13**
- second-hand filling material, *n***—an industry product which contains any filling material which has previously been used should not be offered for sale unless a clear and conspicuous disclosure of that fact is made on the label thereof and in all advertising and invoices relating to such product. **D 7022, D13**
- second side**—{archaic} the final side of plate glass to be ground and polished. **C 162, C14**
- section**—in a phase diagram, a planar cut through a space diagram; sections are commonly isotherms, isobars or isopleths. **E 7, E04**
- sectioned tire, *n***—a tire that has been cut into at least two parts. **D 5681, D34**
- section height [*L*], *n***—the radial height of a tire section, expressed as one half the difference between the outside diameter of the unloaded tire and the nominal rim diameter; the outside diameter is measured on a tire-wheel assembly with the tire inflated to rated inflation pressure. **F 538, F09**
- section mark, *n***—*in woven fabrics*, warp bands of different color, texture, or luster. **D 123, D13**
- section mark, *n***—*in woven fabrics*, warp bands of different color, texture, or luster. **D 3990, D13**
- section width, *n***—the width of a new tire, including 24-h inflation growth and including normal sidewalls, but not including protective side ribs, bars, or decorations. **F 538, F09**
- sedigraph, *n***—an instrument for determining the particle size distribution of a particulate solid, making use of a physical relation between rate of settling (sedimentation) in a liquid and the particle size. **C 1145, C28**
- sediment**—See **fluvial sediment**. **D 4410, D19**
- sediment**—(1) particulate material that usually lies below water, and (2) formulated particulate material that is intended to lie below water in a test. **E 943, E47**
- sedimentation**—(a) consists of five fundamental processes: (1) weathering, (2) erosion, (3) transportation, (4) deposition, and (5) diagenesis, or consolidation into rock; (b) deposition of particles, especially in engineering. **D 4410, D19**
- sedimentation**—the precipitation or settling of insoluble materials from a suspension, either by gravity or artificially. For example, centrifuge, pressure. **D 6161, D19**
- sedimentation, *n***—gravitational settling of solid particles in a liquid system. **E 2201, E50**
- sediment basin**—a structure created by construction of a barrier or small dam-like structure across a waterway or by excavating a basin or a combination of both to trap or restrain sediment. **D 653, D18**
- sediment delivery**—See **sediment yield**. **D 4410, D19**
- sediment delivery ratio**—the ratio of sediment yield to gross erosion expressed in percent. **D 4410, D19**
- sediment discharge**—the mass or volume of sediment passing a stream cross section in a unit of time. (The term may be qualified as suspended-sediment discharge, bedload discharge or total-sediment discharge.) **D 4410, D19**
- sediment load**—a general term that refers to material in suspension or in transport, or both; it is not synonymous with either discharge or concentration. (See **bed-load** and **suspended-sediment load**.) **D 4410, D19**
- sedimentology**—the scientific study of sediment, sedimentary rocks, and the processes by which they were formed. **D 4410, D19**
- sediment particle**—fragment of mineral or organic material in either a singular or aggregate state. **D 4410, D19**
- sediment sample**—a quantity of water-sediment mixture or deposited sediment that is collected to represent some property or properties of the sampled medium. **D 4410, D19**
- sediment sump**—a blank extension beneath the well screen used to collect fine-grained material from the filter pack and adjacent strata. The term is synonymous with rat trap or tail pipe. **D 653, D18**
- sediment transport rate**—See **sediment discharge**. **D 4410, D19**
- Seebeck coefficient, *n***—the rate of change of thermal emf with temperature at a given temperature, normally expressed as emf per unit of temperature. (Same as **thermoelectricpower**). **E 344, E20**
- Seebeck emf, *n***—the net emf set up in a thermocouple under condition of zero current. It represents the algebraic sum of the Peltier and Thomson emf. (Same as **thermal electromotive force**). **E 344, E20**
- seed**—a relatively small gaseous inclusion in glass. **C 162, C14**
- seed coat fragment, *n***—*in cotton*, a portion of a cotton seed, usually black or dark brown in color, broken from a mature or immature seed, and to which fibers and linters may or may not be attached. **D 123, D13**
- seed coat fragment, *n***—*in cotton*, a portion of a cotton seed, usually black or dark brown in color, broken from a mature or immature seed, and to which fibers and linters may or may not be attached. **D 7139, D13**
- seed cotton, *n***—cotton, as harvested and before ginning, consisting of seeds with the fibers attached and usually including measurable amounts of foreign matter. **D 123, D13**
- seed cotton, *n***—cotton, as harvested and before ginning, consisting of seeds with the fibers attached and usually including measurable amounts of foreign matter. **D 7139, D13**
- seep**—a small area where water oozes from the soil or rock. **D 653, D18**
- seepage**—the infiltration or percolation of water through rock or soil to or from the surface. The term seepage is usually restricted to the very slow movement of ground water. (ISRM) **D 653, D18**
- seepage face, *n***—a boundary between the saturated flow field and the atmosphere along which a subsurface liquid discharges, either by evaporation or movement “downhill” along the land surface or in a well as a thin film in response to the force of gravity. **D 653, D18**
- seepage force**—the frictional drag of water flowing through voids or interstices in rock, causing an increase in the intergranular pressure, that is, the hydraulic force per unit volume of rock or soil which results from the flow of water and which acts in the direction of flow. (ISRM) **D 653, D18**
- seepage force, *J* (F)**—the force transmitted to the soil or rock grains by seepage. **D 653, D18**
- seepage line**—see **line of seepage**. **D 653, D18**
- seepage line, *n***—the uppermost level at which a flowing liquid emerges along a seepage face. **D 653, D18**
- seepage (percolation)**—the slow movement of gravitational water through the soil or rock. **D 653, D18**
- seepage velocity, V_e , $V_1(LT^{-1})$** —the rate of discharge of seepage water through a porous medium per unit area of void space perpendicular to the direction of flow. **D 653, D18**
- segmental testing**—a method of isolating and testing portions of an installed pipeline to determine the location of an air loss in excess of the standard. **C 896, C04**
- segment die, *n***—a die fabricated by the assembly of several die sections within a retaining bolster or shrinkage ring. **B 243, B09**

segmented testing

segmented testing—a method of testing vitrified clay pipe using segmented bearings as detailed in Test Method C 301. **C 896, C04**

segregated ice—ice formed by the migration of pore water to the freezing plane where it forms into discreet lenses, layers, or seams, ranging in thickness from hairline to greater than 10 m (32 ft). The ice is formed by **ice segregation**. **D 7099, D18**

segregation, n—the separation of one or more constituents of a powder, for example, by particle size or chemical composition. **B 243, B09**

segregation, n—the unintentional separation of the constituents of concrete or particles of an aggregate, causing a lack of uniformity in their distribution. **C 125, C09**

segregation—*in grouting*, the differential concentration of the components of mixed grout, resulting in nonuniform proportions in the mass. **D 653, D18**

segregation—concentration of alloying elements in specific regions in a metallic object. **E 7, E04**

segregation potential—the ratio of the rate of moisture migration to the temperature gradient in a frozen soil, near the 0°C isotherm. **D 7099, D18**

seismic support—mass (heavy) supported on springs (weak) so that mass remains almost at rest when free end of springs is subjected to sinusoidal motion at operating frequency. **D 653, D18**

seismic test—test that applies load cycles of varying magnitude and frequency to an anchorage system for the purpose of simulating a seismic event (earthquake). **E 2265, E06**

seismic velocity—the velocity of seismic waves in geological formations. (ISRM) **D 653, D18**

seismometer—instrument to pick up linear (vertical, horizontal) or rotational displacement, velocity, or acceleration. **D 653, D18**

seizure, n—*in lubrication*, welding between surfaces in relative motion that results in immobilization of the parts. **D 4175, D02**

seizure or welding, n—localized fusion of rubbing metal, usually indicated by streaks of transferred metal, increased friction and wear, or unusual noise and vibration. **D 4175, D02**

SEL—see **substrate equivalent lead concentration**. **E 1605, E06**

selected area aperture—*SIMS*, the mechanical equivalent of electronic signal gating, commonly used in stigmatic mass spectrometers. **E 673, E42**

selected material—finely divided material free of debris, organic material, and large stones. **C 896, C04**

selective heating, n—intentionally heating only certain portions of a steel object. **A 941, A01**

selective ion meter—an instrument that measures the potential of pH and ion-selective electrodes and displays it directly in concentration or activity units, such as pH, moles per litre, or milligrams per litre, on a logarithmic scale. Millivolt scales are provided for titrations and to verify proper electrode operation. **D 4127, D19**

selective membrane skin—region, often located at the upstream face of an asymmetric membrane that forms a thin distinguishable layer primarily responsible for determining the permeability of the asymmetric membrane. **D 6161, D19**

selective quenching, n—**quenching** only certain portions of a steel object. **A 941, A01**

selective radiator, n—radiator whose spectral emissivity depends on the wavelength over the range considered. **E 349, E21**

selective surface—a surface for which the spectral optical properties reflectance, absorptance, emittance, or transmittance vary significantly with wavelength, which enhances the collection (or rejection) of radiant energy in a restricted portion of the spectrum.

NOTE—An example of a selective surface would be a collector cover glazing that has a high transmittance over the solar spectrum (300 to 2500 nm) and high reflectance over the spectral region of principal thermal infrared emission from the absorber. **E 772, E44**

selectivity—the ability to accurately measure the analyte in the presence of other sample matrix components or analytical process contaminants. **D 5681, D34**

selectivity—the characteristic of a test system that is a measure of the

extent to which an instrument is capable of differentiating between the desired signal and disturbances of other frequencies or phases. **E 1316, E07**

selectivity, n—Qualitative – the extent to which other substances interfere with the determination of a substance according to a given procedure. **E 1732, E30**

selectivity—the ability to accurately and specifically measure the analyte in the presence of components that may be expected to be present in the test specimen. **E 2161, E37**

selectivity constant—a measure of a liquid ion exchange or glass electrode's response to an interfering ion compared to its response to the ion being measured. The smaller the selectivity constant, the greater the electrode's preference for the ion being measured. The principal use of selectivity constants is in determining whether an electrode can be used in a particular application. Since selectivity constants vary somewhat with the ratio of the two ions, they should not be used to correct for errors caused by interferences. The term *selectivity constant* is sometimes mistakenly applied to solid-state electrodes (that are based on solubility product) to indicate the maximum allowable ratio of interference to ion being measured. Unlike liquid and glass electrodes, solid-state electrodes exhibit an *all-or-nothing* response to an interference, with no interference as long as the critical ratio is not exceeded. **D 4127, D19**

selenide-type inclusions—See **sulfide-type inclusions**. **E 7, E04**

self-absorption, n—*in atomic emission spectrometry*, the reduction in relative intensity in the central portion of spectral lines resulting from selective absorption by the cooler outer vapor of the source envelope of radiation emitted by the hot central core. **E 135, E01**

self-balancing potentiometer—See **potentiometer**. **E 7, E04**

self belay, n—a technique of self protection employed by a climber using climbing and mountaineering equipment. **F 1773, F08**

self-biased gun—an electron gun in which the cathode cap is biased with respect to the filament by means of a bias resistor through which the emission current flows between the filament and cap. This type of gun provides high intensity at low angular apertures. (See **biased gun, unbiased gun, saturated gun**.) **E 7, E04**

self-bound seam-finish, n—a finish for the raw edges of the seam allowances of a plain seam, in which one seam allowance encloses both raw edges. **D 123, D13**

self-bound seam finish, n—*in home sewing*, a seam finish in which one seam allowance encloses both cut edges. **D 4965, D13**

self-cementing coal fly ash, n—see **ceementitious ash**. **E 2201, E50**

self-checking bar code, n—a bar code that will not permit a single printing defect to be interpreted as a valid character within the symbology algorithm. **F 1294, F05**

self-clinching—term applied to nail with point or shank designed in such a way that nail clinches automatically while fully driven. **F 547, F16**

self-clocking, n—a bar code symbol designed to be read with a single aperture reader over a range of velocities, with allowances included for change in velocity after reading has commenced. **F 1294, F05**

self-contained chemical paper—a sheet that has two materials added during the paper manufacturing process or coated on the formed sheet, that react under pressure to form a visible image. **F 549, F05**

self-contained mechanical paper—a sheet that has a pigmented substrate that becomes apparent when a surface coating is rendered transparent by application of pressure. **F 549, F05**

self-curing, adj—see **self-vulcanizing**. **D 907, D14**

self-damping conductor—a conductor with internal vibration damping properties which will protect itself from damaging strains caused by aeolian vibration. **B 354, B01**

self-extinguishing, adj—not defined; the Board of Directors of ASTM has ruled that the term "self-extinguishing" shall not be used in ASTM standards. It has no meaning except in association with a specific test method or specific conditions of burning. **D 123, D13**

self-extinguishing, n—not defined. The Board of Directors of ASTM has ruled that the term "self-extinguishing" shall not be used in

- ASTM standards. It has no meaning except in association with a specific test method or specific conditions of burning. **D 4391**, D13
- self-flow**, *n*—the characteristic of a refractory castable to flow readily under its own weight without showing signs of segregation or separation. **C 71**, C08
- self-furring nail**—galvanized, regular-stock-steel, 1¼ to 2 ½ by 0.106-in. nails with ⅜-in. flat head, medium diamond point, and washer or spacer on shank; for fastening reinforcing wire mesh and spacing it from nailing member. **F 547**, F16
- self heating**, *n*—a rise in the temperature of a material, assemblage, or product caused by internal, exothermic chemical reaction. **E 176**, E05
- self-heating**, *n*—the change in temperature of the element caused by the heating effect of the excitation. **E 344**, E20
- self-heating**, *n*—the increase in the temperature of the thermometer element caused by the electric power dissipated in the element, the magnitude depending upon the thermometer current and heat conduction from the thermometer element to the surrounding medium. **E 344**, E20
- self-heating error**, *n*—the error caused by variations from the calibration conditions in the self-heating of the thermometer element at a given current, arising from the variations in the heat conduction from the thermometer to the surrounding medium. **E 344**, E20
- self ignition*, *n*—See **spontaneous ignition**, the preferred term. **E 176**, E05
- self-inflating**—boom that automatically inflates as it is deployed. **F 818**, F20
- self-limiting powder porcelain**—the maximum thickness of electrostatically-charged powder that can be deposited as a surface film. **C 286**, B08
- self-noise**, *n*—extraneous non-acoustical signals, generated or induced in a measurement system. **C 634**, E33
- self-polishing-type floor polish**—a floor polish that dries to a shine. **D 2825**, D21
- self-propagation of flame**, *n*—propagation of a flame front after the removal of any applied energy source. **E 176**, E05
- self-quenching**, *n*—in luminescence, the reduction of luminescence through the depletion of an excited atomic or molecular entity by interaction with another entity of the same species in the ground state. **E 131**, E13
- self-reversal**, *n*—in *atomic emission spectrometry*, the extreme case of self-absorption in which intensity decreases with increasing concentration. **E 135**, E01
- self-sealing fastener**—a fastener that provides a tight seal without the need for sealant material nor the use of a mechanical seal (for example, an interference fit fastener). **E 631**, E06
- self-spreading**—term applied to nail with split shank designed in such a way that two or more legs penetrate material in divergent directions. **F 547**, F16
- self-stressing grout**—expansive-cement grout in which the expansion induces compressive stress in grout if the expansion movement is restrained. **D 653**, D18
- self-supporting specimen**, *n*—a specimen that remains in place by its own structural characteristics both before and during the fire test. **E 176**, E05
- self-sustained combustion**, *n*—combustion that consumes a sample to the point at which the sample holder affects further combustion, assuming sufficient oxidizer. **G 126**, G04
- self-sustaining discharge**—a discharge in which all carriers necessary for the transport of current in the discharge are produced by this discharge itself. **B 542**, B02
- self-vulcanizing**, *adj*—pertaining to an adhesive that undergoes vulcanization without the application of heat. (See also **vulcanization**, *n*.) **D 907**, D14
- self-weighted bottom camber**, H_b —the height of the running surface from a plane surface, measured at the highest point, with only the influence of the snowboard weight. **F 1107**, F27
- selvage**, *n*—the woven edge portion of a fabric parallel to the warp. **D 123**, D13
- selvage**—an edge or edging which differs from the main part of: (1) a fabric; or (2) granule-surfaced roll roofing. **D 1079**, D08
- selvage**, *n*—the woven edge portion of a fabric parallel to the warp. **D 3878**, D30
- selvage**, *n*—the woven edge portion of a fabric parallel to the warp. **D 4439**, D35
- selvage**, *n*—the woven edge portion of a fabric parallel to the warp. **D 4850**, D13
- selvage**—the edge finish on woven chain link fabric joining pairs of pickets. The selvage may be knuckled or twisted. **F 552**, F14
- selvage mark**, *n*—in *finished cloth*, a lengthwise crease mark along the selvage caused by an edge being folded or doubled. **D 123**, D13
- selvage mark**, *n*—in *finished cloth*, a lengthwise crease mark along the selvage caused by an edge being folded or doubled. **D 3990**, D13
- semianthracite*—See *semianthracite* under **rank**. **D 121**, D05
- semiachromatic objective**—a compromise, in the correction for chromatic and spherical aberration, between achromatic and apochromatic objectives; frequently called fluorite objectives. **E 7**, E04
- semiachromatic objective lens**—an objective lens with both longitudinal and spherical chromatic correction for green and blue. Should be used with green or blue filters. **E 7**, E04
- semiautomatic image analyzer**—a device which can detect and measure features of interest in an image but requires the operator to perform feature discrimination. **E 7**, E04
- semi-autonomous**, *adj*—mode of control of a UAV where the pilot executes changes and conducts the mission through a flight management system interface. Without this input, the UAV will perform pre-programmed automatic operations. This can, but might not, include some fully autonomous functions (like takeoff, landing, and collision avoidance). **F 2395**, F38
- semichemical pulp**, *n*—fibrous material obtained by treating wood or other plant material with a combination of chemical and mechanical processes, such as chemimechanical pulp (CMP), chemithermomechanical pulp (CTMP), bleached chemithermomechanical pulp (BCTMP), and neutral sulfite semichemical pulp (NSSC). (See **chemical pulp** and **mechanical pulp**.) **D 1968**, D06
- semicontinuous activated sludge**, SCAS—a term used to designate a test procedure described in Test Method D 2667 that is used to confirm determinations of the degree of biodegradability of alkylbenzene sulfonates. **D 459**, D12
- semicontinuous-conveyance furnace**, *n*—a heating device through which steel objects are intentionally moved in accordance with a predetermined start-stop-start pattern during the thermal processing cycle. **A 941**, A01
- semi-detached dwelling**—one of a group of **dwelling units** joined by a common sidewall and occasionally by a garage, carport, or similar structure. **E 631**, E06
- semidrying oil**, *n*—an oil that possesses the characteristics of a drying oil but to a lesser degree. There is no definite line of demarcation between drying and semidrying oils. **D 16**, D01
- semi-efficient vulcanizing (semi-EV) system**, *n*—as applied to natural rubber and isoprene- and butadiene-based synthetic rubbers, a vulcanizing system having sulfur and accelerator concentrations between those of a conventional sulfur vulcanizing system and an EV system. **D 1566**, D11
- semifusinite*—See *semifusinite* under **maceral**. **D 121**, D05
- semi-guided bend**, *n*—the bend obtained by applying a force directly to the specimen in the portion that is to be bent. **E 6**, E28
- semikilled steel**, *n*—an incompletely deoxidized steel that contained sufficient oxygen to form enough entrapped carbon monoxide during solidification to offset solidification shrinkage. **A 941**, A01
- semi-major axis**, **a**—one-half the length of the long axis of an ellipse. For a circle, this distance is simply the radius. **D 5681**, D34

semi-mat glaze—See *semi-mat glaze* under **glaze**. C 242, C21

semi-minor axis, b—one-half the length of the short axis of an ellipse. D 5681, D34

semi-muffle furnace—a furnace with a partial muffle, in which the products of a combustion come in contact with the ware. C 286, B08

semi-permanent mold casting, n—mold casting that is made with an expendable core such as sand. B 899, B02

semipermeable membrane—a membrane which preferentially allows the passage of specific compounds while rejecting others. D 6161, D19

semi-porcelain—a trade term designating semivitreous dinnerware. C 242, C21

semiquantitative screen—an analysis run that is performed on highly diluted sample digestates for the purpose of determining the approximate analyte level in the digest. This analysis run is generally performed without inserting instrumental QC standards except for calibration standards. Data from this run are used for determining serial dilution requirements for sample digestates to keep them within the linear range of the instrument. E 631, E06

semi-restraint, adj—of or relating to a method of mounting that allows an object a limited degree of movement (for example, contraction or expansion of a fabric). D 123, D13

semirigid plastic, n—for purposes of general classification, a plastic that has a modulus of elasticity either in flexure or in tension of between 70 and 700 MPa (10 000 and 100 000 psi) at 23°C and 50 % relative humidity when tested in accordance with Test Method D 747, Test Methods D 790, Test Method D 638, or Test Methods D 882. D 883, D20

semirigid plastic, n—for the purposes of general classification, a plastic that has a modulus of elasticity either in flexure or in tension of between 70 and 700 MPa (10 000 and 100 000 psi) at 23°C and 50% relative humidity when tested in accordance with Test Methods D 638, D 747, D 790, or D 882. (D20) F 412, F17

semirigid plastic—for purposes of general classification, a plastic that has a modulus of elasticity either in tension of between 70 and 700 MPa (10 000 and 100 000 psi) at 23°C and 50 % relative humidity when tested in accordance with Test Methods D 747, D 790, or D 882. F 1251, F04

semivitreous (semivitrified)—that degree of vitrification evidenced by a moderate or intermediate water absorption. C 242, C21

semivolatile organic chemical—See **organic chemical**. D 1356, D22

Senarmont (Friedel) polarimeter—an optical device for measuring relative optical retardation consisting of a light source, a polarizing filter, a retardation plate exhibiting one-quarter wave retardation with its optical axis perpendicular to the polarizing axis, and a rotatable polarizing element (the analyzer) whose angular position can be read on a scale. C 162, C14

sense-and-avoid system, S&A system, n—appliance which fulfills the requirements of 14 CFR Part 91.113. F 2395, F38

sensing circuit, n—the combination of the thermoelements and extension wires, but excluding active signal conditioning components such as reference junction compensators, amplifiers and transmitters. E 344, E20

sensitive items—items for which, regardless of value, there is a reasonable need for extraordinary security, accountability, and control. E 2135, E53

sensitive tint plate—a gypsum plate (better known as a red I or full wave plate), used with cross polarized light producing circularly polarized light. For anisotropic materials, colors are enhanced, for isotropic materials, a magenta hue is produced. E 7, E04

sensitivity, n—in *electronic systems*, the minimum change in the input signal that produces a change in the output signal that can be reliably measured. D 123, D13

sensitivity, n—in *mechanical systems*, the smallest change that can be induced on a material by the system and be reliably measured. (See also **least count**.) D 123, D13

sensitivity—the effect of remolding on the consistency of a cohesive soil. D 653, D18

sensitivity, n—in *electronic systems*, the minimum change in the input signal that produces a change in the output signal that can be reliably measured. D 4849, D13

sensitivity, n—in *mechanical systems*, the smallest change that can be induced on a material by the system and be reliably measured. (See also **least count**.) D 4849, D13

sensitivity, n—the change of instrument response with change in analyte concentration. E 135, E01

sensitivity, n—ability to perceive, identify, or differentiate one or more stimuli by means of the senses. E 253, E18

sensitivity—see **contrast sensitivity, equivalent IQI sensitivity, equivalent penetrometer sensitivity, IQI sensitivity, radiographic sensitivity**. E 1316, E07

sensitivity—in the case of a leak detector, the response of the detector to tracer gas leakage (that is, scale divisions per unit of leakage rate). E 1316, E07

sensitivity—the degree of capability of a magnetic particle examination technique for indicating surface or near surface discontinuities in ferromagnetic materials. E 1316, E07

sensitivity—a measure of the smallest ultrasonic signal which will produce a discernible indication on the display of an ultrasonic system. E 1316, E07

sensitivity—the capability of methodology or instrumentation to discriminate between samples having differing concentrations or containing differing amounts of an analyte. E 2161, E37

sensitivity analysis—a test of the outcome of an analysis by altering one or more parameters from an initially assumed value(s). E 631, E06

sensitivity analysis, n—a test of the outcome of an analysis by altering one or more parameters from an initially assumed value(s). E 833, E06

sensitivity control—the control in the instrument that adjusts the amplifier gain, and is one of the factors that determines the capacity to detect discontinuities. (E 215) E 1316, E07

sensitivity criterion, n—a quantitative measure of the relative merit of two test methods, that combines the estimated variance of each method with the ability of the method to measure differences in the property of interest. D 123, D13

sensitivity factor:

elemental—XPS, intensities of peaks relative to those of a standard, for example, F1s, for atoms in typical homogeneous environments. Division of peak height or peak area intensities by the appropriate sensitivity factors gives the relative number of atoms detected, on the assumption of sample homogeneity.

relative Auger elemental—AES, the ratio of the Auger signal strength of a specified Auger transition from a single element to that from a selected standard element (for example, silver), as measured under identical conditions.

SIMS—the factor used to convert the net counts per unit time, for a particular species, matrix and experimental conditions, to concentration. E 673, E42

sensitivity level—the descriptive term for identifying the capability of a penetrant system to indicate the presence of a surface-connected discontinuity. Ranging from ½ (ultra low) to 4 (ultra high). E 1316, E07

sensitivity (of an instrument)—the differential quotient dQ_0/dQ_1 , where Q_0 is the scale reading and Q_1 is the quantity to be measured. D 653, D18

sensitivity (of a transducer)—the differential quotient dQ_0/dQ_1 , where Q_0 is the output and Q_1 is the input. D 653, D18

sensitivity of leak test—the smallest leakage rate that an instrument, method, or system is capable of detecting under specified conditions. (See **minimum detectable leakage rate**.) E 1316, E07

sensitivity, photographic—the degree to which a photographic material responds by a change in its chemical or physical state to the action of both light and chemical development. The sensitivity of a given photographic material varies with wavelength of the

- incident radiation. The average degree of response is commonly referred to as speed. **E 7, E04**
- sensitivity range**—the impact pressure range over which a ribbon or carbon will produce an image of specified quality. **F 221, F05**
- sensitivity ratio, SR, *n***—in comparing two test methods, the ratio of the sensitivities of the test methods with the large sensitivity in the numerator. **D 123, D13**
- sensitivity value**—the value determined by the smallest standard discontinuity in any given sensitivity indicator observable in the radiographic image. Values are defined by identification of type of indicator, size of defect, and the absorber thickness on which the discontinuity is observed. **E 1316, E07**
- sensitization**—the absorption of a reducing agent, often a stannous compound, on the surface. **B 374, B08**
- sensitization**—a process resulting in a metallurgical condition which causes susceptibility of an alloy to intergranular corrosion or intergranular environmentally assisted cracking in a specific environment. **G 15, G01**
- sensitizer, *n***—a material which forms an eutectic with the developer to lower the melt point; acting as a solvent with the developer, the leuco dye is solubilized and reacts to form color. **F 1623, F05**
- sensitizing**—see **dye sensitizing**. **F 335, F05**
- sensitometric curve**—See **characteristic curve**. **E 7, E04**
- sensor, *n***—a device designed to respond to a physical stimulus (as temperature, illumination, and motion) and transmit a resulting signal for interpretation or measurement, or for operating a control. **D 1356, D22**
- sensor, *n***—of a thermometer or thermometric system, element of the thermometer or thermometric system that is directly affected by the temperature to be measured. **E 344, E20**
- sensor, *n***—device designed to respond to net IR radiation and convert that response into electrical signals. **E 344, E20**
- sensor, acoustic emission**—a detection device, generally piezoelectric, that transforms the particle motion produced by an elastic wave into an electrical signal. **E 1316, E07**
- sensory, *adj***—pertaining to the senses. **E 253, E18**
- sensory evaluation, *n***—a scientific discipline used to evoke, measure, analyze, and interpret reactions to stimuli perceived through the senses. **E 253, E18**
- sensory panel, *n***—a group of assessors used to obtain information concerning the sensory properties of stimuli. **E 253, E18**
- sensory profile, *n***—a description of the sensory properties of a sample, consisting of the sensory attributes in the order of perception, and with assignment of an intensity value for each attribute. **E 253, E18**
- separable pin, *n***—in zippers, a tube-like element attached over the bead at the bottom end of one stringer. **D 123, D13**
- separable pin, *n***—a tube-like element attached over the bead at the bottom end of one stringer. **D 2050, D13**
- separable zipper, *n***—a zipper fitted with special components at the bottom of the chain, so as to permit complete disengagement and then reengagement of the two stringers. (Compare **nonseparable zipper**.) **D 123, D13**
- separable zipper, *n***—a zipper fitted with special components at the bottom of the chain, so as to permit complete disengagement and then reengagement of the two stringers. (Compare **nonseparable zipper**.) **D 2050, D13**
- separate-application adhesive, *n***—a term used to describe an adhesive consisting of two parts, one part being applied to one adherend and the other part to the other adherend and the two brought together to form a joint. **D 907, D14**
- separate-element zipper, *n***—a zipper consisting of two series of separately formed elements, each attached to one of the opposing edges of two tapes which are engaged and disengaged by the movement of a slider. (Compare **continuous element zipper**.) **D 123, D13**
- separate element zipper, *n***—a zipper consisting of two series of separately formed elements, each attached to one of the opposing edges of two tapes, which are engaged and disengaged by the movement of a slider. (Compare **continuous element zipper**.) **D 2050, D13**
- separator, *n***—a component of some open-end spinning machines located inside the rotor to direct the incoming fibers to the slide surface. **D 123, D13**
- separator, *n***—any material interposed between articles or packing components. (Compare **buffer, divider, insert, liner**.) **D 996, D10**
- separator, *n***—a component of some open-end spinning machines located inside the rotor to direct the incoming fibers to the slide surface. **D 3888, D13**
- separator cloth**—a fabric, coated with TFE-fluorocarbon or similar release agent, placed between the lay-up assembly and the bleeder system to facilitate subsequent bleeder-system removal from the laminate after it has been cured. **E 631, E06**
- separator cloth**—a fabric, coated with TFE-fluorocarbon or similar release agent, placed between the lay-up assembly and the bleeder system to facilitate subsequent bleeder-system removal from the laminate after it has been cured. **E 1749, E06**
- separator paper, *n***—thin paper applied to a stranded conductor to prevent migration of extruded insulation into the strands and, subsequently, to facilitate stripping of the insulating material from the conductor. **D 1711, D09**
- SE probe**—see **dual search unit (twin probe)**. **E 1316, E07**
- sequencing, *n***—a characteristic whereby the thermal profiles of the liquid crystal formulations of a given thermometer follow each other in an orderly predetermined manner. **E 344, E20**
- sequential excitation NMR; continuous wave (CW) NMR**—a form of high-resolution NMR in which nuclei of different field-frequency ratio at resonance are successively excited by sweeping the magnetic field or the radio frequency. **E 131, E13**
- sequential response**—the assignment, according to local protocols, of emergency medical resources with varying levels of care capability to the scene of an illness or injury based on information received from previously arrived, medically trained, on-scene responders. A sequential response differs from a simultaneous response. **F 1177, F30**
- sequential sampling**—See **running sample** under **sample**. **D 1356, D22**
- sequestering agent**—an agent that forms soluble complex compounds with, or sequesters, a simple ion, thereby suppressing the activity of that ion. Thus, in water treatment the effects of hardness can be suppressed by adding agents to sequester calcium and magnesium. See **chelating agent**. **B 374, B08**
- sequestering agent**—any compound that, in aqueous solution, combines with a metallic ion to form a water-soluble combination in which the ion is substantially inactive. **D 459, D12**
- serial communication, *n***—in data communications, refers to sending the code for a character over a single line one bit at a time. (See **parallel communication**.) **F 1457, F05**
- serial dilution**—a method of producing a less-concentrated solution through one or more consecutive dilution steps. A dilution step for a standard or sample is performed by volumetrically placing a small aliquot of higher concentrated solution into a volumetric flask and diluting to volume with water containing the same acid levels as those found in original sample digestates. **E 631, E06**
- serial printer**—a printer where characters are printed one at a time. **F 149, F05**
- series, *n***—a collection of tests in which a common list of questions was used. **E 2035, E52**
- series collection, *n***—an operation involving the use of two or more collectors joined in series. **D 1356, D22**
- series grouting**—similar to stage grouting, except each successively deeper zone is grouted by means of a newly drilled hole, eliminating the need for washing grout out before drilling the hole deeper. **D 653, D18**
- series (in x-ray spectra)**—the group of characteristic X-ray lines which results when a vacancy in one particular electron level is

series (in x-ray spectra)

- filled from outside levels. Thus, the K series lines are emitted when a K level vacancy is filled. **E 7, E04**
- serpentine (commercial definition)**—a rock consisting mostly or entirely of serpentine (hydrated magnesium silicate), commonly greenish but can be black, red, or other colors; commonly veined with calcite, dolomite, or magnesite (magnesium carbonate) or a combination. **C 119, C18**
- serrated**—See **barbed**. **F 547, F16**
- serrations**—corrugations in the cutting edge of the blades. **F 1078, F04**
- serrations or teeth**—the gripping or clamping surfaces of the jaws. **F 921, F04**
- serum, (latex), n**—the dispersion medium of a rubber latex, or the solution remaining, after either coagulation or centrifugation. **D 1566, D11**
- serviceability, n**—the capability of a **building**, assembly, **component**, product, or construction to perform the function(s) for which it is designed and used. **E 631, E06**
- serviceability**—see *facility serviceability*. **E 631, E06**
- serviceability, n**—See **facility serviceability**. (See also **building performance**.)
- serviceability requirement**—See **requirement statement**. **E 631, E06**
- serviceability, n**—See **facility serviceability**. (See also **building performance**.) **E 1480, E06**
- serviceability requirement**—See **requirement statement**. **E 1480, E06**
- serviceability requirements profile (SRP)** (profilte besoins génériques de fonctionnalite (PBGF))—listing of the levels of serviceability (capability to perform, including quality) required in a facility. **E 631, E06**
- serviceability requirements profile (SRP)** (profilte besoins génériques de fonctionnalite (PBGF))—listing of the levels of serviceability (capability to perform, including quality) required in a facility. **E 1480, E06**
- service damage, n**—as used in *fractography*, scratches, chips, cracks, etc., created during use of the component. **C 1145, C28**
- service factor**—a factor which is used to reduce a strength value to obtain an engineering design stress. The factor may vary depending on the service conditions, the hazard, the length of service desired, and the properties of the pipe. **F 412, F17**
- service hardboard**—a hardboard of about 55 lb/ft³ (specific gravity 0.88) density intended for use where standard strength board is not required and better dimensional stability is desired. **D 1554, D07**
- service life, n**—in *building construction*, the period of time an installed sealant, coating, or membrane is reasonably expected to function successfully without replacement or significant repair, assuming reasonable or expected periodic maintenance is performed. **C 717, C24**
- service life**—the period of time required under use conditions to change the appearance of a surface treated with a floor polish sufficiently to require retreatment. **D 2825, D21**
- service life, n**—the interval of time that a connector assembly will be put to use and retain all physical and thermoelectric properties. **E 344, E20**
- service life (service time)**—the elapsed time until the end point is reached in an adsorption process. **D 2652, D28**
- service run, n**—that part of the operating cycle of an ion-exchange process in which a water is passed through a bed of the ion-exchange material in order to remove specific ions from the water or to exchange them for an equivalent amount of a specific ion from the bed material. **D 1129, D19**
- service strength setting time**—the time interval, after the initial mixing of the composition, at a specific temperature, at which time the product has acquired 90 % of its specified strength. **C 904, C03**
- service test**—a test in which the product is used under actual service conditions. **F 869, F08**
- service time**—see **service life**. **D 2652, D28**
- servicing, n**—on *magnet wire or conductor*, a uniform wrapping of insulation around a conductor. **D 1711, D09**
- servo accelerometer, n**—an accelerometer containing servo mechanisms, electronics, and a seismic element to sense inertial reaction. **F 538, F09**
- set, n**—the chemical and physical change in plaster as it goes from a plastic, workable state to a rigid state. See **setting time**. **C 11, C11**
- set**—a flow property of porcelain enamel slip affecting the rate of draining, residual thickness, and uniformity of coating. **C 286, B08**
- set**—in *grouting*, the condition reached by a cement paste, or grout, when it has lost plasticity to an arbitrary degree, usually measured in terms of resistance to penetration or deformation; initial set refers to first stiffening and final set refers to an attainment of significant rigidity. **D 653, D18**
- set, n**—strain remaining after complete release of the force producing the deformation. **D 883, D20**
- set, v**—to convert an adhesive into a fixed or hardened state by physical or chemical action, such as condensation, polymerization, oxidation, vulcanization, gelation, cooling, hydration, or evaporation of volatile constituents. (See also **cure and dry**.) **D 907, D14**
- set, n**—strain remaining after complete release of the force producing the deformation. **D 1566, D11**
- set**—strain remaining after complete release of the force producing the deformation. **E 6, E28**
- set, n**—of *results*, a group of results collected under specified conditions for statistical analysis. **E 135, E01**
- set, n**—strain remaining after complete release of the force producing the deformation. (D11) **F 412, F17**
- set, v**—to convert an adhesive into a fixed or hardened state by chemical or physical action, such as condensation, polymerization, oxidation, vulcanization, gelation, hydration, or evaporation of volatile constituents. (D14) **F 412, F17**
- set, n**—in *tire testing*, a selected number of test or control tires having nominally identical properties. **F 538, F09**
- set**—the positioning of the blade for proper cutting action. **F 1078, F04**
- set**—the at rest position of the instrument halves that will provide the intended closing relationship of fit and force. **F 1638, F04**
- set accelerator, n**—admixture incorporated into a masonry mortar to shorten the time of setting of a mortar. **C 1180, C12**
- set after break, n**—the set of a test piece after stretching it to rupture. **D 1566, D11**
- set mark, n**—a stop mark resulting from a prolonged loom shutdown. **D 123, D13**
- set mark, n**—a stop mark resulting from a prolonged loom shutdown. **D 3990, D13**
- set-off, n**—the unintentional transfer of part of an image or ink from its intended location to another surface. **D 6488, D01**
- set-off**—the unintentional transfer of part of an image or ink from its intended location to another surface. **F 221, F05**
- set-off**—the unintentional transfer of part of an image or ink from its intended location to another surface. **F 335, F05**
- set retarder, n**—admixture incorporated into a masonry mortar to lengthen the time of setting of a mortar. **C 1180, C12**
- set time**—(1) the hardening time of portland cement; or (2) the gel time for a chemical grout. **D 653, D18**
- setting, n**—the process, due to chemical reactions, occurring after the addition of mixing water, that results in a gradual development of rigidity of a cementitious mixture. **C 125, C09**
- setting, n**—process by which, after application, a liquid (wet-state) material changes to a serviceable condition by **curing** or **drying**. **E 631, E06**
- setting agent**—the component of a mixture that catalyzes or reacts with the resin component to cause hardening by polymerization. **C 904, C03**
- setting block, n**—in *building construction in glazing*, a piece of resilient material placed to support, to distribute the load, to

prevent edge contact, and to align a pane of glass or a panel within its supporting frame. **C 717, C24**

setting rate—a comparative term referring to the time required for the glass surface to cool between the limits of the working range. **C 162, C14**

setting shrinkage—*ingrouting*, a reduction in volume of grout prior to the final set of cement caused by bleeding, by the decrease in volume due to the chemical combination of water with cement, and by syneresis. **D 653, D18**

setting temperature, *n*—the temperature to which an adhesive or an assembly is subjected to set the adhesive. (See also **curing temperature** and **drying temperature**.) **D 907, D14**

setting temperature, *n*—the temperature that yields a reading of zero on the main scale for a given adjustment of the amount of mercury in the bulb and main capillary. **E 344, E20**

setting time, *n*—the elapsed time required for a gypsum plaster to attain a specified hardness and strength after mixing with water. **C 11, C11**

setting time, *n*—the elapsed time from the first addition of liquid during the mixing of the refractory castable until the time that the refractory castable has developed enough strength so that forms can be removed without any slumping or deformation. **C 71, C08**

setting time, *n*—the period of time necessary for an adhesive in an assembly to set under specified conditions of temperature or pressure, or both. **D 907, D14**

setting-up agent or **set-up agent**—an electrolyte used to increase the measured pick-up of a slip. **C 286, B08**

settled dust, *n*—particulate matter that has precipitated onto a surface. **E 1605, E06**

settle mark—See **chill mark**. **C 162, C14**

settling—the process of depositing, by gravity, matter suspended in water. **D 4410, D19**

settling velocity, *n*—the terminal rate of fall of a particle through a fluid as induced by gravity or other external force; the rate at which frictional drag balances the accelerating force (or the external force). **D 1356, D22**

sew, *v*—to unite or fasten with stitches. **D 123, D13**

sew, *v*—to unite or fasten with stitches, sewing usually involves a needle and sewing thread. **D 4849, D13**

sewage—waste matter carried off by sewers. **C 896, C04**

sewage (wastewater)—the spent water of a community which is a combination of liquid and water-carried wastes. **C 822, C13**

sewer—a pipeline intended to convey sewage. **C 822, C13**

sewer—generally, an underground conduit usually carrying waste matter in a liquid medium. **C 896, C04**

sewerage—system for collection, treatment, and disposal of sewage. **C 896, C04**

sewer brick, *n*—low absorption, abrasive-resistant brick intended for use in drainage structures. See Specification C 32. **C 43, C15**

sewer line—See **sewer**. **C 896, C04**

sewer pipe—vitrified clay pipe as described in Specification C 700. **C 896, C04**

sewing force, *n*—the force applied to a sewing thread at the needle eye during penetration of a material by the needle. **D 123, D13**

sewing force, *n*—the force applied to a sewing thread at the needle eye during penetration of a material by the needle. **D 4849, D13**

sewing hole, *n*—*in buttons*, a hole in either the flange or shank used to attach the button to the substrate by means of a needle and thread. **D 123, D13**

sewing hole, *n*—a hole in either the flange or shank of a button used to attach the button to the substrate by means of a needle and thread. **D 5497, D13**

sewing machine, *n*—*in home sewing*, a machine that uses needles and bobbin threads in the stitch formation and is primarily for home sewing use rather than industrial use. **D 123, D13**

sewing machine, *n*—*in home sewing*, a machine that uses needles and bobbin threads in the stitch formation and is primarily for home sewing use rather than industrial use. **D 5646, D13**

sewing thread, *n*—a flexible, small-diameter yarn or strand, usually treated with a surface coating, lubricant, or both, intended to be used to stitch one or more pieces of material or an object to a material. **D 123, D13**

sewing thread, *n*—a flexible, small diameter yarn or strand, usually treated with a surface coating, lubricant, or both, intended to be used to stitch one or more pieces of material or an object to a material. **D 4439, D35**

sewing thread, *n*—a flexible, small-diameter yarn or strand, usually treated with a surface coating, lubricant, or both, intended to be used to stitch one or more pieces of material or an object to a material. **D 4849, D13**

sew lines, *n*—lines that indicate where stitching of pattern pieces is to be done. **D 6963, D13**

sewn seam, *n*—*insewn fabrics*, a juncture at which two or more planar structures such as textile fabrics, are joined by sewing, usually near the edge. **D 123, D13**

sewn seam, *n*—*insewn fabrics*, a series of stitches joining two or more separate plies of a material or materials of planar structure such as textile fabric. **D 4439, D35**

sewn seam, *n*—*insewn materials*, a juncture along which two or more planar structures, such as textile material, are joined by sewing. (Compare **glued seam**, **stapled seam**, **thermally bonded seam**. Syn. **stitched seam**.) **D 4965, D13**

sewn seam strength, *n*—*in sewn fabrics*, the maximum resistance to rupture of the junction formed by stitching together two or more planar structures. **D 123, D13**

sewn seam strength, *n*—*for geotextiles*, the maximum resistance, measured in kilonewtons per metre, of the junction formed by stitching together two or more planar structures. **D 4439, D35**

sew-through flange button, *n*—a button that has two or more holes in its flange for passage of a needle and thread so that the button can be attached to a flexible substrate. **D 123, D13**

sew through flange button, *n*—a button attached to one part of a flexible substrate by means of a needle and thread passed through two or more holes in its flange and through the substrate. (Compare **sew-through shank button**.) **D 123, D13**

sew-through flange button, *n*—a button attached to one part of a flexible substrate by means of needle and thread passed through two or more holes in its flange and through the substrate. (Compare **sew-through shank button**.) **D 5497, D13**

sew through shank button, *n*—a button attached to one part of a flexible substrate by means of a needle and thread passed through a hole or loop in the integral shank and through the substrate. (Compare **sew-through flange button**.) **D 123, D13**

sew-through shank button, *n*—a button attached to one part of a flexible substrate by means of needle and thread passed through a hole or loop in the integral shank and through the substrate. (Compare **sew-through flange button**.) **D 5497, D13**

S-glass, *n*—a family of magnesia-alumina-silicate glasses with a higher tensile strength and higher softening temperature than E-glass. **E 344, E20**

shade, *n*—a term descriptive of a lightness difference between surface colors, the other attributes of color being essentially constant. **D 16, D01**

shade, *n*—(1) a color produced by a dye or pigment mixture including black dye or pigment. See also **shade**, *v*; **tint**, *n*; **tint**, *v*.
(2) an expression of color difference from a reference dyeing such that another dye must be added to produce a match.
(3) a color slightly different from a reference color. **E 284, E12**

shade, *v*—to adjust the color of a test specimen to be a closer color match to the standard. See also **shade**, *n*; **tint**, *v*; **tint**, *n*. **E 284, E12**

shade bracket nail—bright, regular-stock-steel, $\frac{3}{4}$ to 1 by 0.080 or 0.092-in. nails with slightly countersunk $\frac{1}{2}$ or $\frac{3}{32}$ -in. head and needle point. **F 547, F16**

shade sorting, *n*—process of grouping together, often by instrumental measurement, similarly colored materials so that the materials

shade sorting, *n*

within each group may be used together in a finished product without perceived color variation. **E 284, E12**

shading coefficient, *n*—the ratio of the solar heat gain through a glazing system under a specific set of conditions to the solar gain through a single light of double-strength sheet glass under the same conditions. **D 123, D13**

shading coefficient, *n*—the ratio of the solar heat gain through a glazing system under a specific set of conditions to the solar gain through a single light of double-strength sheet glass under the same conditions. **D 7018, D13**

shading or shadowing—the act of casting a shadow across any surface. **E 772, E44**

shadow—a region in a body that cannot be reached by ultrasonic energy traveling in a given direction because of the geometry of the body or a discontinuity in it. **E 1316, E07**

shadow angle—the angle between the line of motion of the evaporated atoms and the surface being shadowed. The angle is analogous to the angle of incidence in optics. May be specified as an arc tangent "a" so that "a" is in the ratio between the height of the object casting the shadow over the length of the shadow (see **shadowing**). **E 7, E04**

shadow cast replica—a replica which has been shadowed. (See also **shadowing**.) **E 7, E04**

shadowing—a process by which a metal or salt is deposited on a specimen at an angle (see **shadow angle**) from a heated filament in a vacuum to enhance image contrast by inhibiting the deposition of the shadowing material behind projections.

(1) *metal shadowing*—the enhancement of contrast in a microscopical specimen by the vacuum deposition of a dense metal at an angle generally not perpendicular to the surface of the object.

(2) *oblique evaporation*—the condensation of evaporated material onto a substrate which is inclined to the direct line of the vapor stream in order to produce shadows. **E 7, E04**

shadow microscope—an electron microscope which forms a shadow image of an object using electrons emanating from a point source located close to the object. **E 7, E04**

shadow wall—a structure built on top of the bridgewall or suspended from the crown to limit the flow of heat from the melter to the refiner. **C 162, C14**

shaft—generally a vertical or near vertical excavation driven downward from the surface as access to tunnels, chambers, or other underground workings. (ISRM) **D 653, D18**

shake—(1) a longitudinal separation of the wood. Generally two forms of shake are recognized, although variations and combinations may be used in industrial definitions.

heart shake—a shake that starts out at or near the pith and extends radially. Synonyms are *heart crack*, *rift crack*. A heart shake in which several radial cracks are present is termed a star shake.

ring shake—a shake occurring in the plane of the growth rings in the outer portion of the latewood for partial or entire encirclement of the pith, occasionally moving radially to an adjacent latewood ring. A synonym is "cup shake."

(2) A rectangular, board-like element for roof cover construction, similar to shingles, generally one of three types.

handsplit and resawn shakes—a shake having a split face and a sawn back.

tapersplit shake—a shake having two split faces and a natural, shingle-like taper.

straightsplit shake—a shake having two split faces and with no pronounced taper. **D 9, D07**

shake nail, cedar-shake or shingle nail, wood-shake face nail—enameled (baked-lacquer finished), galvanized, regular-stock-steel, plain-shank or annularly threaded, aluminum-alloy, plain-shank or helically threaded, or stainless-steel, annularly threaded, 1½ by 0.080 to 2½ by 0.092-in. nails with flat ⅛ to ⅝-in. head and medium diamond point. Also, aluminum-alloy 1¼ by 0.086 to 1¾ by 0.092-in. nails with flat ⅜-in. head and blunt diamond point. Also, aluminum-alloy, annularly threaded, 1⅜ and 2 by

0.099-in. nails with special type of thread and with flat slightly countersunk ⅜-in. head and long needle point; for fastening cedar shakes to fiberboard nail-base sheathing. **F 547, F16**

shakeoff process—XPS, a multi-electron photoelectric process in which two or more electrons are emitted, partitioning between them the excess kinetic energy. **E 673, E42**

shakeup lines or shakeup satellites—XPS, photoelectrons originating from photoelectric processes in which the final ion is left in an excited state, so that the photoelectron has a characteristic energy slightly less than that of the normal photoelectron. **E 673, E42**

shaking test—a test used to indicate the presence of significant amounts of rock flour, silt, or very fine sand in a fine-grained soil. It consists of shaking a pat of wet soil, having a consistency of thick paste, in the palm of the hand; observing the surface for a glossy or livery appearance; then squeezing the pat; and observing if a rapid apparent drying and subsequent cracking of the soil occurs. **D 653, D18**

shale, *n*—a thinly stratified, consolidated, sedimentary clay with well-marked cleavage parallel to the bedding. **C 43, C15**

shale—a laminated, indurated rock which is over two-thirds clay-sized minerals. Shales progressively grade into slate. When put to slate-like uses these rocks must meet slate specifications in Specification C 629. **C 119, C18**

shale—a thinly stratified, consolidated, sedimentary clay with well-marked cleavage parallel to the bedding. **C 896, C04**

shall—used to denote a mandatory requirement. **F 1789, F16**

shallow wood failure, *n*—failure that is invariably within the first one or two layers of cells beyond the adhesive layer in which the fracture path is not influenced by the wood-grain angle or growth-ring structure. **D 907, D14**

sham, *n*—a fabric covering for a bed pillow, usually of decorative fabric that matches the bedcovering. **D 123, D13**

sham, *n*—a fabric covering for a bed pillow, usually of decorative fabric that matches the bedcovering. **D 7023, D13**

shampoo, *n*—a solution of detergent in water formulated for specialized cleaning tasks. **D 123, D13**

shampoo, *n*—*in the cleaning of textile floor coverings and upholstered furniture*, a solution of detergent in water formulated for specialized cleaning tasks. **D 5253, D13**

shampoo, *v*—*in the cleaning of textile floor coverings*, use a cleaning machine which applies detergent solution, brushes it in, rinses, and extracts as much water as possible. **D 5253, D13**

shank—refers to leg positions of hide pattern. **D 1517, D31**

shank, *n*—*in buttons*, that part positioned perpendicular to and at the center back of the flange, and having a hole or loop for use in attaching the button to one part of a flexible substrate by means of a needle or thread, a ring, or a toggle. **D 5497, D13**

shank—main body of nail extending from head to point.

shank, formed or deformed—See **barbed, fluted, grooved, knurled, threaded, ortwisted**.

shank diameter—See **diameter**.

shear-resistant—See **threaded shear-resistant nail**.

smooth shank—See **plain shank**.

F 547, F16

shank—that part of the sole of the shoe between the heel and the ball or tread; also, the steel, plastic, or wood piece inserted in the arch of a shoe for reinforcement; also, the leg segment between the thigh and the foot. **F 869, F08**

shank—the part of either the female or the male member that yields configuration, length, and leverage. **F 921, F04**

shank—(1) the part of either scissor half that yields configuration, length, and leverage; (2) the part of the scissor between the finger ring and joint. **F 1078, F04**

shank eye, *n*—*in buttons*, the hole or loop in the shank of a sew-through shank button or the hole in the loop of the staple of a staple button. **D 5497, D13**

shape, *n*—this term is no longer recommended; the term **profile** is preferred. **B 881, B07**

shape calibration—a process of establishing a relationship between

the expected peak shape and energy. The shape calibration may be as simple as the user supplying a few peak full-width at half maximum (FWHM)/energy (or channel) pairs or as complex as using a least squares algorithm to establish several parameters characterizing the peak width and its deviation from a pure Gaussian. Shape calibration may be an explicitly defined function of an analysis program or implicitly done in connection with some other operation (typically the energy calibration). **E 170, E10**

shaped stone—dimension stone processed by carving, grinding, sawing, or other means into specific nonplanar configurations.

C 119, C18

shape factor—a dimensionless ratio of lengths, surface areas, or volumes of the particles, useful for characterizing or comparing particles that otherwise have similar physical properties.

C 242, C21

shape memory alloy, n —a metal which, after an apparent plastic deformation in the martensitic phase, undergoes a thermoelastic change in crystal structure when heated through its transformation temperature range resulting in a recovery of the deformation.

F 2005, F04

shape resolution—an electron image exhibits shape resolution when a polygon can be recognized as such in the image. Roughly, the particle diameter (defined as the diameter of a circle of the same area as the particle) must exceed the resolution by a factor equal to the number of sides on the polygon.

E 7, E04

shapes, n —materials of solid section in such forms as angles, channels, tees, I-beams, and four-fluted bars.

B 899, B02

shark fin—an upward-curved felt sidelap or endlap.

D 1079, D08

sharkskin—leather made from the top grain of the skins of sharks. It has various natural markings. The term should not be applied to leather made from other skins and embossed.

D 1517, D31

sharks teeth—a term relative to the appearance of the cut edge of a glass sheet having dagger-like striations starting at the scored edge and extending toward the opposite surface.

C 162, C14

sharp crease, n —for inflatable restraint fabrics, a sharp ridge that can be felt easily, caused by a hard folding of the fabric over itself not by design.

D 6799, D13

sharpeners—the device for holding the sharpening and truing stones.

The sharpener can be either attached to the slicer or removable from the slicer's sharpener attachment point. If it is removable, a storage location within the machine structure shall be provided.

F 1827, F26

sharp fire—combustion with excess air and short flame.

C 162, C14

sharpness, n —a perceived quality of an image that is associated with the abruptness of change of tone at the edge of an object area or tonal area.

E 284, E12

sharpness—in carbon paper and inked ribbon images, similarity of the geometry of the image to the type face and the rate of change of image density at the edge.

F 221, F05

sharp-notch strength—the maximum nominal (net section) stress that a sharply notched specimen is capable of sustaining.

F 2078, F07

sharp-notch strength, σ_s [FL^{-2}]—the maximum nominal (net-section) stress that a sharply notched specimen is capable of sustaining.

E 1823, E08

sharp point—end of point being keen, instead of being slightly rounded or dull.

F 547, F16

shattering—a phenomenon observed in hardness testing in which fissures or subsurface cracks originate in a hardness indentation and spread to adjacent parts of the specimen.

E 7, E04

shaving—a small wood particle of indefinite dimensions developed incidental to certain woodworking operations involving rotary cutterheads usually turning in the direction of the grain; and because of this cutting action, producing a thin chip of varying thickness, usually feathered along at least one edge and thick at another and usually curled.

D 1554, D07

shavings—the thin slices of wood removed in dressing.

D 9, D07

shear—relative displacement of adjacent planes in a member.

D 9, D07

shear, n —in an adhesively-bonded joint, stress, strain or failure resulting from applied forces that tends to cause adjacent planes of a body to slide parallel in opposite directions.

D 907, D14

shear, adj —descriptive of properties measured using a specimen deformed in shear, for example, shear modulus.

D 1566, D11

shear—an action or stress, resulting from applied forces, which causes (or tends to cause) two contiguous parts of a body to slide, relative to each other, in a direction parallel to their plane of contact.

D 4092, D20

shear, adj —a relative movement of molecules or molecular aggregates that occurs in flowing liquids. A shear flow is one in which the spatial velocity gradient is perpendicular to the direction of flow.

D 4175, D02

shear, v —to subject a liquid to shear flow.

D 4175, D02

shear burst—open break in the fastener metal at approximately 45° to the product axis, usually at the periphery of fasteners having flanged or circular heads or on the side of hex heads.

F 1789, F16

shear-cake—a counterweighted refractory slab used as a gate or door to a small furnace or oven.

C 162, C14

shear coaxial injector—a pneumatic atomizer consisting of a central liquid stream surrounded by a high-velocity co-annular gas stream.

E 1620, E29

shear crimping, n —buckling of the compressive facing due to low core shear modulus. Usually causes the core to fail in shear at the crimp.

C 274, D30

shear degradation, n —the decrease in molecular weight of a polymeric thickener (VI improver) as a result of exposure to high shear stress.

D 4175, D02

sheared-bevel point—one directional point having one flat surface; formed by shearing nail wire off at angle to shank axis, inducing nail to diverge from straight penetration unless countermeasures are introduced.

F 547, F16

sheared point—See sheared-bevel point, sheared-square point.

F 547, F16

sheared-square point—extremity of nail shank opposite head end of nail sheared at right angle to shank axis.

F 547, F16

shear failure (failure by rupture)—failure in which movement caused by shearing stresses in a soil or rock mass is of sufficient magnitude to destroy or seriously endanger a structure.

general shear failure—failure in which the ultimate strength of the soil or rock is mobilized along the entire potential surface of sliding before the structure supported by the soil or rock is impaired by excessive movement.

local shear failure—failure in which the ultimate shearing strength of the soil or rock is mobilized only locally along the potential surface of sliding at the time the structure supported by the soil or rock is impaired by excessive movement.

D 653, D18

shear force—a force directed parallel to the surface element across which it acts. (ISRM)

D 653, D18

shear fracture, n —a mode of fracture in crystalline materials resulting from translation along slip planes which are preferentially oriented in the direction of the shearing stress.

E 6, E28

shearling—leather made from sheepskin that has been sheared shortly before slaughter, the short wool being left on the skin when tanned.

D 1517, D31

shear mark—a mark appearing in glass, caused by the action of the cutting shear.

C 162, C14

shear modulus, n —the ratio of shear stress to corresponding shear strain below the proportional limit. (Compare secant modulus.) (See proportional limit.)

D 907, D14

shear modulus, G [FL^{-2}], n —the ratio of shear stress to corresponding shear strain below the proportional limit of the material.

E 6, E28

shear modulus, G (Pa)—the quotient of shear stress and shear strain. (See ISO 537.)

shear modulus, G (Pa)

$$G = \frac{\sigma}{\gamma}$$

shearogram/hologram, n —the common term for an interferometric image provided by S/H systems. **F 538, F09**

shearographic or holographic (S/H) systems, n —a shearographic or holographic system using interferometric laser imaging to non-destructively inspect tires. **F 538, F09**

shear plane—a plane along which failure of material occurs by shearing. (ISRM) **D 653, D18**

shear rate, $\dot{\gamma}$ —the time rate of change of shear strain. For a one-dimensional shear flow, it is the velocity gradient. **D 4092, D20**

shear rate, n —in fluid flow, the velocity gradient across the fluid. **D 4175, D02**

shear rate, n —the velocity gradient in fluid flow. **D 4175, D02**

shear rate, n —the rate at which a series of adjacent layers of grease move with respect to each other; proportional to the linear velocity of flow divided by the capillary radius, and is thus expressed as reciprocal seconds. **D 4175, D02**

shear resistance—see **internal friction.** **D 653, D18**

shear rigidity, n —the sandwich property which resists shear distortions: synonymous with shear stiffness. $U=hG$; the core thickness (approximate) times the core shear modulus. **C 274, D30**

shear stability, n —the resistance of a polymer-thickened fluid to shear degradation. **D 4175, D02**

shear strain—the change in shape, expressed by the relative change of the right angles at the corner of what was in the undeformed state an infinitesimally small rectangle or cube. (ISRM) **D 653, D18**

shear strain, n —the angular change, expressed in radians, between two lines originally perpendicular to each other, due to shear stress. **D 907, D14**

shear strain, γ —the tangent of the angular change, due to force, between two lines originally perpendicular to each other through a point in a body. (E28) **D 4092, D20**

shear strain, n —the tangent of the angular change, due to force, between two lines originally perpendicular to each other through a point in a body. **E 6, E28**

shear strength, n —the resistance to forces that cause, or tend to cause, two contiguous parts of a body to slide relatively to each other in a direction parallel to their contact. **D 123, D13**

shear strength—(monitoring wells) a measure of the shear or gel properties of a drilling fluid or grout. **D 653, D18**

shear strength, n —in an adhesive joint, the maximum average stress when a force is applied parallel to the joint. (See **bond strength.**) **D 907, D14**

shear strength—the maximum resistance of a soil or rock to shearing stresses. **D 7099, D18**

shear strength—maximum load applied normally to a fastener's axis that can be supported prior to fracture. Single shear is load occurring in one transverse plane, thus cutting the fastener into two pieces; double shear is load applied in two planes so that, at fracture, the fastener would be cut into three pieces. **F 1789, F16**

shear strength [FL⁻²], n —the maximum shear stress which a material is capable of sustaining. Shear strength is calculated from the maximum force during a shear or torsion test and is based on the original dimensions of the cross section of the specimen. **E 6, E28**

shear strength of metal connector plate—resistance to shear force by net plate cross section, expressed as force per unit of length of full cross section of connector plate, when used in connections composed of pairs of plates. **E 631, E06**

shear strength, s, T_f (FL⁻²)—the maximum resistance of a soil or rock to shearing stresses. See **peak shear strength.** **D 653, D18**

shear stress—a state of stress where adjacent planes in a member tend to slip on one another. **D 9, D07**

shear stress, τ —a stress acting parallel to the surface of the plane being considered. **D 653, D18**

shear stress—stress directed parallel to the surface element across which it acts. (ISRM) **D 653, D18**

shear stress, τ —the stress component tangential to the plane on which forces act. (E28) **D 4092, D20**

shear stress, n —the motivating force per unit area for fluid flow. **D 4175, D02**

shear stress area: bolt or screw—area perpendicular to the fastener axis which is based on the root diameter (minor diameter) of an externally threaded bolt or screw. **F 1789, F16**

shear stress [FL⁻²], n —the stress component tangential to the plane on which the forces act. **E 6, E28**

shear stress (shearingstress) (tangential stress)—see **stress.** **D 653, D18**

shear test—an experiment to determine the flow properties of a bulk solid by applying different states of stress and strain to it. **D 653, D18**

shear test—application of load perpendicular to anchor or anchor axis and parallel to and at the surface of the base material. **E 2265, E06**

shear tester—an apparatus for performing shear tests. **D 653, D18**

shear transfer plate—metal connector plate with integral teeth projecting from plate in both directions perpendicular to plate surfaces; designed to be placed between adjacent wood members and to connect and transmit forces from one wood member to another. **E 631, E06**

shear wall—structural subassembly that acts as a cantilever/diaphragm to transfer horizontal building loads to the foundation in the form of horizontal shear and an overturning moment. **E 631, E06**

shear wave—wave motion in which the particle motion is perpendicular to the direction of propagation. **E 1316, E07**

shear wave (rotational, equivolumental)—wave in which medium changes shape without change of volume (shear-plane wave in isotropic medium is transverse wave). **D 653, D18**

shear wave search unit (Y cut quartz search unit)—a straight beam search unit used for generating and detecting shear waves. **E 1316, E07**

sheath, n —in feathers, a covering at the quill point end of nestling feathers or nestling down which holds the barbs together. **D 123, D13**

sheath, n —in feathers, a covering at the quill point end of nestling feathers or nestling down which holds the barbs together. **D 7022, D13**

sheath, n —a cylindrical metal tube with an integral welded closure at the end in which the element is located. **E 344, E20**

sheath-core, adj —a descriptive term for a multicomponent textile fiber consisting of a continuous envelope which encases a continuous, central, internal region. **D 123, D13**

sheath-core, adj —a descriptive term for a multicomponent textile fiber consisting of a continuous envelope which encases a continuous, central, internal region. (See also *component.*) **D 4466, D13**

sheathed crate—See **crate.** **D 996, D10**

sheathed thermocouple, n —a thermocouple having its thermoelements, and sometimes its measuring junction, embedded in ceramic insulation compacted within a metal protecting tube. **E 344, E20**

sheathed-thermocouple assembly, n —the cut-to-length finished assembly consisting of thermoelements having one end joined in a measuring junction, and contained within and electrically isolated from, a protective sheath closed at the measuring end, except the thermoelements of the class G thermocouple join the sheath at the junction. The protective sheath has a moisture seal at the reference junction end of the sheath. The assembly may include a thermocouple connector but does not include a reference junction or extension leads mechanically joined to the thermoelements. **E 344, E20**

sheathed thermocouple material—an assembly of two solid continuous thermoelements embedded in ceramic insulation compacted within a metal protecting sheath. **E 344, E20**

sheathed thermocouple material, *n*—a combination of two or more continuous thermoelements embedded in ceramic insulation compacted within a metal protecting sheath. **E 344**, E20

sheathed thermocouple wire, *n*—one or more pairs of thermoelements (without measuring junction(s)) embedded in ceramic insulation compacted within a metal protecting tube. **E 344**, E20

sheathed thermoelement, *n*—a thermoelement embedded in ceramic insulation compacted within a metal protecting tube. **E 344**, E20

sheath-enclosed-scale thermometer, *n*—the cylindrical glass envelope which encloses the scale and capillary tube. **E 344**, E20

sheathing, *n*—lumber or sheet materials, such as plywood, fiberboard or other suitable panel or sheet material fastened to the frame across the openings of a crate to deter pilferage, or entry of dirt or water or of other articles. **D 996**, D10

sheathing—cellulosic fiberboard for use in housing and other building construction, which may be integrally treated, impregnated or coated to give it additional water resistance. **D 1554**, D07

sheathing nail—See **common nail**, **threaded common nail**, **diaphragm nail**, **fiberboard nail**, **gypsum-sheathing nail**, **hardboard nail**. **F 547**, F16

sheathing/siding nail—stainless-steel, annularly threaded, 1½ by 0.120-in. nail with slightly countersunk ¼-in. head and sharp medium diamond point. **F 547**, F16

sheen, *n*—the specular gloss at a large angle of incidence for an otherwise matte specimen. **E 284**, E12

sheepskin paint roller cover, *n*—a cover in which the paint applying material is wool fleece still attached to its tanned natural skin. **D 16**, D01

sheer, *n*—a fabric that is transparently thin or diaphanous. **D 123**, D13

sheer, *n*—a fabric that is transparently thin or diaphanous. **D 7022**, D13

sheet—as in *inch-pound specifications*, a rolled flat product up to and including 0.188-in. thick and over 24-in. wide, in straight lengths or coils (rolls). **B 846**, B05

sheet—as in *SI specifications*, a rolled flat product up to and including 5-mm thick and over 600-mm wide, in straight lengths or coils (rolls). **B 846**, B05

sheet, *n*—rolled wrought product that is rectangular in cross section, with thickness 0.006 in. and greater [over 0.15 mm] but less than 0.250 in. [up through 6.30 mm], and with sheared, slit, or sawed edges.

Alclad sheet, *n*—composite sheet product comprised of an aluminum-alloy core having on both surfaces (if on one side only, it is *Alclad one-sidesheet*) a metallurgically bonded aluminum or aluminum-alloy coating that is anodic to the core, thus electrolytically protecting the core alloy against corrosion.

Alclad one-side sheet, *n*—alclad sheet with only one side coated.

coiled sheet, *n*—sheet in coils with slit edges.

flat sheet, *n*—sheet with sheared, slit, or sawed edges, which has been flattened or leveled.

mill finish sheet, *n*—sheet having a nonuniform finish which may vary from sheet to sheet and within a piece, and which may not be entirely free of stains or oil.

one-side bright mill finish sheet, *n*—sheet having a moderate degree of brightness on one side, and a mill finish on the other.

standard one-side bright finish sheet, *n*—sheet having a uniform bright finish on one side, and a mill finish on the other.

standard two-side bright finish sheet, *n*—sheet having a uniform bright finish on both sides. **B 881**, B07

sheet, *n*—a flat-rolled metal product of some maximum thickness and minimum width arbitrarily dependent on the type of metal; it is thinner than plate. **B 899**, B02

sheet, *n*—in *textiles*, a large rectangular usually plain woven fabri-

cated product which is used over a mattress on a bed. The product may be carded or combed yarn in a wide range of constructions.

D 123, D13

sheet, *n*—an individual piece of sheeting. (See also **film**, **sheeting**.) **D 883**, D20

sheet, *n*—in *textiles*, a large rectangular usually plain woven fabricated product which is used over a mattress on a bed. The product may be carded or combed yarn in a wide range of constructions. **D 7023**, D13

sheet, *n*—a thin, flat, rolled metal product having mill or cut edges. (If of steel, having dimensions of less than 0.229 in. (5.8 mm) thickness, and greater than 12.0 in. (305 mm) width and length.) **E 631**, E06

sheet—in *honeycomb core material*, a slice of honeycomb cut from a production block.

shelf life—See **storage life**.

shelters:

expandable shelters—those shelters that are expanded from the transport size to a larger size, at expansion ratios of three-to-one or less and perhaps to a different shape. (See Specification PS 27.)

highly expandable shelters—as classified by the U.S. Department of Defense (MIL-STD-907B), those shelters that have expansion ratios greater than three-to-one from their transport size.

knockdown shelters—as classified by the U.S. Department of Defense (MIL-STD-907B), those shelters that are reduced in height and nested with identical items for transportation.

large area shelters—as classified by the U.S. Department of Defense (MIL-STD-907B), those shelters that are disassembled and packed in dedicated or general-purpose containers for shipment.

nonexpandable shelters—as classified by the U.S. Department of Defense (MIL-STD-907B), those shelters that are used in the same size and shape in which they are transported.

E 631, E06

sheet—in *honeycomb core material*, a slice of honeycomb cut from a production block. **E 1749**, E06

sheet blanket, *n*—a thin blanket of cotton or cotton and synthetic blend having a nap on both sides.

D 123, D13

sheet blanket, *n*—a thin blanket of cotton or cotton and synthetic blend having a nap on both sides. **D 7023**, D13

sheet cast button, *n*—a button fabricated from a disc blanked from a cast sheet of formulated styrene-modified polyester resin.

D 123, D13

sheet cast button, *n*—a button fabricated from a disk blanked from a cast sheet of formulated styrene-modified polyester resin.

D 5497, D13

sheet disintegration, *n*—the breakup of an unstable liquid film into particles. **E 1620**, E29

sheet glass—flat glass made by continuous drawing. **C 162**, C14

sheeting, *n*—a form of plastic in which the thickness is very small in proportion to length and width and in which the plastic is present as a continuous phase throughout, with or without filler. (See also **film**.) **D 883**, D20

sheeting, *n*—the process of converting a rubber, rubber mix, rubber dough, or latex into a sheet. **D 1566**, D11

sheeting, *n*—a form of plastic in which the thickness is very small in proportion to length and width and in which the plastic is present as a continuous phase throughout, with or without filler. (See also **film**.) **F 1251**, F04

sheet-metal nail—nail stamped out of sheet metal and formed to desired shape. (See **roofing nail**.) **F 547**, F16

sheet molding compound (SMC), *n*—a fiber-reinforced thermosetting compound, in sheet form. **D 883**, D20

sheet, resilient flooring, *n*—flexible resilient flooring, packaged in roll form, in which the length substantially exceeds the width.

F 141, F06

sheet-roofing fastener nail—See **purlin nail**.

F 547, F16

sheet-roofing nail—See **roofing nail**.

F 547, F16

shelf-life—*in building construction*, the maximum time packaged materials can be stored under specified conditions and still meet the performance requirements specified. C 717, C24

shelf life—maximum time interval during which a material may be stored and remain in a usable condition; usually related to storage conditions. D 653, D18

shelf life, n—Synonym for **storage life**. D 907, D14

shelf life—the length of time packaged materials can be stored under specified conditions and still remain effective in use (C 717, C24).

D 996, D10

shelf life, n—See **storage life, shelf**. D 1566, D11

shelf life, *n*—the period of time, under specified storage conditions, for which the reference material (RM) will possess the same properties or true values, within established acceptance limits.

D 4175, D02

shelf life—See **storage life**. E 1749, E06

shelf roughness—roughness on upward facing surfaces where dissolved solids have settled on parts during a plating operation.

B 374, B08

shell, *n*—the outer walls of a hollow masonry unit. Shell can either be an end shell or a face shell. C 1232, C15

shell—See **packing**. D 996, D10

shell—a portion from the butt end of a horsehide, from which leather of tight, firm, fiber structure and fine grain is made. (See also **cordovan**.) D 1517, D31

shell hardening, *n*—a surface hardening process in which a suitable steel object, when heated through and quench hardened, develops a martensitic layer or shell that closely follows the contour of the piece and surrounds a **core** of essentially pearlitic transformation product. A 941, A01

shelters:

expandable shelters—those shelters that are expanded from the transport size to a larger size, at expansion ratios of three-to-one or less and perhaps to a different shape. (See Specification PS 27.)

highly expandable shelters—as classified by the U.S. Department of Defense (MIL-STD-907B), those shelters that have expansion ratios greater than three-to-one from their transport size.

knockdown shelters—as classified by the U.S. Department of Defense (MIL-STD-907B), those shelters that are reduced in height and nested with identical items for transportation.

large area shelters—as classified by the U.S. Department of Defense (MIL-STD-907B), those shelters that are disassembled and packed in dedicated or general-purpose containers for shipment.

nonexpandable shelters—as classified by the U.S. Department of Defense (MIL-STD-907B), those shelters that are used in the same size and shape in which they are transported.

E 1749, E06

shield, *n*—a nonconducting medium for altering the current distribution on an anode or cathode. B 374, B08

shield, *v*—to alter the normal current distribution on an anode or cathode by the interposition of a nonconductor. B 374, B08

shield, *n*—a conducting layer placed around an insulated conductor or cable to limit the penetration of electric or electromagnetic fields. D 1711, D09

shield—a conductive protective member, partly or wholly enclosing one or more elements of electric equipment or test specimen, for the purpose of reducing or eliminating the electric or magnetic flux, or both, within or beyond that element or elements.

D 2864, D27

shield, electric or magnetic, *n*—a conductive protective component

that encloses, in whole or in part, one or more elements of electric equipment or test specimen in order to reduce or eliminate the electric or magnetic flux, or both, within or beyond that element or elements. D 1711, D09

shielding—in an electron-optical instrument, the protection of the electron beam from distortion due to extraneous electric and magnetic fields. Since the metallic column of the microscope is at ground potential, it provides electrostatic shielding. Magnetic shields may be made of a high permeability material. E 7, E04

shielding effectiveness—the ability of a sandwich panel of suitable thickness and physical characteristics to exclude (protect) sensitive components or units from electromagnetic radiation (interference).

shop drawing—See **drawing**. E 631, E06

shielding effectiveness—the ability of a sandwich panel of suitable thickness and physical characteristics to exclude (protect) sensitive components or units from electromagnetic radiation (interference).

E 1749, E06

shielding glass—a transparent glass containing oxides of heavy elements, such as lead, to absorb ionizing radiation. C 162, C14

shier, *n*—*in wovenfabrics*, fine fillingwise cracks randomly distributed across the fabric width. (Compare **let-off mark** and **crack mark**.) D 123, D13

shier, *n*—*in wovenfabrics*, fine fillingwise cracks randomly distributed across the fabric width. (*Syn.* shire) (Compare **let-offmark** and **crack mark**) D 3990, D13

shim—See **shim spacer; spacer**. C 717, C24

shim—*in plywood*, a long narrow repair in the panel surface not more than $\frac{3}{16}$ in. (4.8 mm) wide made of wood or suitable synthetic compound. D 1038, D07

shim—a material, typically placed under the IQI which is radiologically similar to the object being imaged. E 1316, E07

shim spacer, *n*—*in building construction in glazing*, a spacer designed and placed to position the face surfaces of a pane of glass or a panel between the stops and to prevent glass or panel contact with the stops. C 717, C24

shiner, *n*—a streak, usually short, caused by a lustrous section of a filament yarn. D 123, D13

shiner, *n*—a streak, usually short caused by a lustrous section of filament yarn. D 3990, D13

shiner or shiner-scale—a defect characterized by minute fishscaling occurring in overfired ground coat. C 286, B08

shingle—a thin, oblong piece of wood with one end thinner than the other, lapped lengthwise in covering roofs and outer walls of buildings produced by sawing. D 9, D07

shingle—(1) a small unit of prepared roofing designed for installation with similar units in overlapping rows on inclines normally exceeding 25 %;

(2) to cover with shingles; and

(3) to apply any sheet material in overlapping rows like shingles. D 1079, D08

shingle backer—a specially fabricated sheathing-grade cellulosic fiberboard used as a backer strip in coursed shingle construction. D 1554, D07

shingle-backer nail—See **shake nail**. F 547, F16

shingle nail

wood-shinglenail—bright or galvanized, regular-stock-steel, plain-shank or annularly threaded, $\frac{1}{4}$ by 0.076 to 2 by 0.106-in. nails with flat $\frac{7}{32}$ to $\frac{9}{32}$ -in. head and medium or blunt diamond point. Also, bright or colored (baked-lacquer finished), aluminum-alloy, plain-shank or helically threaded, $\frac{7}{8}$ by 0.080 to $\frac{1}{4}$ by 0.099-in. nails with flat $\frac{5}{32}$ to $\frac{9}{32}$ -in. head and medium or blunt diamond point. Also, aluminum-alloy, annularly threaded, $1\frac{1}{8}$ and 2 by 0.101-in. nails with special type of thread and with flat slightly countersunk $\frac{5}{32}$ -in. head and long needle point for fastening cedar shingles to fiberboard nail-base sheathing.

asbestos-shingle nail—bright or galvanized, regular-stock-steel, annularly threaded, 1 to 2 by 0.113-in. nails with flat $1\frac{1}{32}$ -in. head and long diamond or needle point. Also, aluminum-alloy, helically threaded, $1\frac{1}{8}$ to $2\frac{1}{2}$ by 0.099 to 0.135-in.

nails with smooth or striated flat $\frac{3}{16}$ to $\frac{7}{16}$ -in. head or $\frac{3}{32}$ to $\frac{1}{2}$ -in. casing head and medium diamond or needle point. Also, aluminum-alloy, annularly threaded, $1\frac{1}{8}$ and 2 by 0.101-in. nails with special type of thread and with flat slightly countersunk 0.190-in. striated head and long needle point; for fastening asbestos shingles to fiberboard nail-base sheathing.

asphalt-shingle nail—See **roofing nail**.

siding nail—See **brick-siding nail, hardboard nail, roofing nail, sheathing/siding nail**.

aluminum-siding nail—plain-shank or helically threaded, aluminum-alloy 1 by 0.099 to $2\frac{1}{2}$ by 0.135-in. nails with flat $\frac{1}{4}$ to $\frac{3}{16}$ -in. head and medium diamond point.

asbestos-siding face nail—bright, colored (baked-lacquer finished) or galvanized, regular-stock-steel, hardened-steel, bronze, aluminum or stainless-steel, annularly threaded, file-grip or screw-thread, $1\frac{1}{4}$ by 0.080 to 2 by 0.105-in. nails with smooth or striated flat $\frac{3}{16}$ -in. or button head and medium diamond or needle point.

common siding nail—bright or colored (baked-lacquer finished), galvanized, regular-stock-steel or hardened-steel, plain-shank or threaded, $1\frac{3}{4}$ by 0.080 to 3 by 0.128-in. nails with flat $\frac{3}{32}$ to $\frac{1}{8}$ -in. head and medium diamond point.

corrugated-siding nail—See **roofing nail**.

hardboard-siding nail—See **hardboard nail**.

insulated-siding nail—bright or colored (baked-lacquer finished) aluminum-alloy, $1\frac{1}{2}$ by 0.113 to $2\frac{1}{2}$ by 0.135-in. nails with flat $\frac{7}{32}$ to $\frac{1}{2}$ -in. head and medium diamond point.

insulating-siding nail—See **brick siding nail**.

wood-siding nail—bright and colored (baked-lacquer finished), plain-shank or helically threaded, aluminum-alloy, $1\frac{1}{8}$ by 0.106 to $2\frac{7}{8}$ by 0.148-in. nails with $\frac{3}{16}$ to $\frac{1}{2}$ -in. casing or $\frac{1}{4}$ to $\frac{3}{16}$ -in. sinker head and medium or blunt diamond point. Also, bright or colored (baked-lacquer finished), stainless-steel, annularly threaded, $2\frac{1}{8}$ and $2\frac{3}{8}$ by 0.083 and 0.095-in. nails with slightly countersunk $\frac{3}{16}$ -in. head and medium diamond point. (See **common siding nail**.)

F 547, F16

shingling—(1) the procedure of laying parallel felts so that one longitudinal edge of each felt overlaps, and the other longitudinal edge underlaps, an adjacent felt. (See also **ply**). Normally, felts are shingled on a slope so that the water flows over rather than against each lap;

(2) the application of shingles to a sloped roof. D 1079, D08

ship and galley tile—a special quarry tile having an indented pattern on the face of the tile to produce an antislip effect. C 242, C21

shiplapped lumber—See **lumber**. D 996, D10

shipment, n—goods or commodities which are transported together as a unit; a quantity of product for which a bill of lading has been signed by the carrier. D 123, D13

shipment, n—*forasbestos*, any consignment formed of one or several lots of asbestos fiber. D 2946, C17

shipment, n—goods or commodities which are transported together as a unit; a quantity of product for which a bill of lading has been signed by the carrier. D 4849, D13

shipment (of gypsum panel products), n—the quantity of gypsum panel products shipped by a manufacturer and included on a single invoice. C 11, C11

shipping container—See **container**. D 996, D10

Shipping unit, n—*in textiles*, any type of packaging used to facilitate the handling and shipping of fibers, yarns and fabrics. D 123, D13

Shipping unit, n—*in textiles*, any type of packaging used to facilitate the handling and shipping of fibers, yarns and fabrics. D 4849, D13

shirt, n—a cloth garment for the upper part of the body made of either woven or knitted fabric usually having sleeves, a neck opening, a front opening and a tail long enough to be tucked inside trousers or skirt. F 1494, F23

shirt back length, n—*in garment construction*, a measurement centered below the collar band to bottom edge of shirttail.

F 1494, F23

shirt front length, n—*in garment construction*, a measurement from the placket top, below the collar band to the bottom edge of the shirt's hem in front.

F 1494, F23

shirt sides, n—*in garment construction*, a measurement of length from below armhole to the bottom hem.

F 1494, F23

shivering (peeling)—the splintering that occurs in fired glazes or other ceramic coatings as a result of critical compressive stresses.

C 242, C21

shives, n—the woody parts of the flax plant which are not fibers.

D 123, D13

shives, n—the woody parts of the flax plant which are not fibers.

D 6798, D13

SHMP—sodium hexametaphosphate. (NaHMP) D 6161, D19

shock—the short duration high force initial part of an impact.

F 869, F08

shock absorption—the reduction of peak force by increasing the time over which the force is applied. The reduction of ground reaction forces is of primary importance in athletic footwear. (*Syn.* shock attenuation)

F 869, F08

shock attenuation—see **shock absorption**.

F 869, F08

shock load, n—the sudden application of an external force.

D 1566, D11

shock pulse—a substantial disturbance characterized by a rise of acceleration from a constant value and decay of acceleration to the constant value in a short period of time.

D 653, D18

shock test—test that simulates shock loads applied to an anchorage system using an external load of short duration. E 2265, E06

shock treatment, n—the addition of an antimicrobial agent sufficient to cause rapid and substantial (several orders of magnitude) reductions in number of living microbes in a fluid or system receiving that concentration.

D 4175, D02

shock wave—a wave of finite amplitude characterized by a shock front, a surface across which pressure, density, and internal energy rise almost discontinuously, and which travels with a speed greater than the normal speed of sound. (ISRM)

D 653, D18

shoe finish—coatings applied to leather or other shoe materials at tanneries and shoe manufacturers before retailing to the consumer.

D 2825, D21

shoe fold, n—a fabric folded from both ends into twelve or sixteen folds to the piece, the length of the fold depending upon the length of the piece. (Compare **book fold**.)

D 123, D13

shoe fold, n—a fabric folded from both ends into twelve or sixteen folds to the piece, the length of the fold depending upon the length of the piece. (Compare **book fold**.)

D 4850, D13

shoe leather—this term is self-explanatory and embraces a variety of leathers including:

(1) *sole leather*—made from cattle hides and to a small extent from horsehides and buffalo hides, comprising both the heavier grade, used for outer soles of shoes and the lighter grades and offal (heads, shoulders and bellies) used to a greater or less extent for heels, insoles, toecaps, counters, etc.;

(2) *upper leather*—made principally from calfskins, goat-skins, cattlehides, horsehides, and other classes of animal skins, going into shoe uppers, and

(3) *miscellaneous shoe leathers*, including welting, lining stock, tongue stock, facing stock, etc.

D 1517, D31

shop drawing—a drawing prepared by the fabricator based on a **working drawing** and used in a shop or on a site for assembly.

shoot—see **XRF-shoot**.

E 631, E06

shop drawing—See **drawing**.

E 1480, E06

shop drawings—*when applied to dimension stone*, a highly detailed drawing that shows the net dimensions, joint dimensions, anchor locations and orientations, of the dimension stone and the relationship with the other building materials being used. C 119, C18

Shore A hardness

Shore A hardness—a measurement of hardness for rubbers and plastics using a Shore A hardness gage (durometer). **E 631, E06**

Shore A hardness—a measurement of hardness for rubbers and plastics using a Shore A hardness gage (durometer). **E 1749, E06**

shorelines—a defect characterized by a series of rings or lines in the surface of porcelain enamel similar in appearance to the lines on the shore produced by receding water. **C 286, B08**

shore seal boom—boom that, when grounded, seals against the shoreline. **F 818, F20**

shorn pile, n—pile that is removed when the face pile is sheared. **D 123, D13**

shorn pile, n—pile that is removed when the face pile is sheared. **D 5684, D13**

short—a comparative term signifying a fast-setting glass. **C 162, C14**

short, n—an imperfection in a molded plastic part due to an incompletely filled out condition. **D 883, D20**

short, n—in a molded material, an incompletely filled out condition. **F 412, F17**

short barb, n—barbs having an average length of $0.1875 \pm 5\%$. **F 1379, F14**

short-circuit—see *internal discharge*. **F 1827, F26**

short-circuit current, n—of a photovoltaic device, the current flowing between the positive and negative terminals under illumination when zero voltage appears across these terminals. **E 1328, E44**

short-fiber content (SFC), n—that percentage of fibers (by number or by weight) in a test specimen, that is shorter than 12.5 mm (0.5 in.) in length. **D 123, D13**

short-fiber content (SFC), n—that percentage of fibers (by number or by weight) in a test specimen, that is shorter than 12.7 mm (0.5 in.) in length. **D 7139, D13**

short-finish—an imperfection resulting from incomplete polishing. **C 162, C14**

short float, n—for inflatable restraints fabrics, a warp or filling yarn extending over five or fewer filling or warp yarns with which it should be interlaced. **D 6799, D13**

short knot, n—for inflatable restraints fabrics, a small knob of yarn and associated tails where two yarns are tied together by interlocking loops for the purpose of maintaining yarn continuity. **D 6799, D13**

shortness, n—a qualitative term that describes an adhesive that does not string, cotton, or otherwise form filaments or threads during application. **D 907, D14**

short plumbing (hospital) threads—a special modified form of the tapered pipe thread basically achieved by elimination of the imperfect threads. This thread is normally used only on chromium-plated nipples to ensure that a minimum of thread shall remain exposed after the nipple is threaded into a fitting. **B 846, B05**

short point—point with 40° or greater included angle for 0.040 to 0.065-in. wire diameter; 45° or greater included angle for 0.072 to 0.225-in. wire diameter; 55° or greater included angle for 0.250 to 0.325-in. wire diameter. **F 547, F16**

short range ordering—the reversible short-ranged, order-disorder transformation in which the nickel and chromium atoms occupy specific (ordered) localized sites in the Type EP or Type KP thermoelement alloy crystal structure. **E 344, E20**

short-term exposure limit (STEL), n—the airborne concentration of a substance in a continuous 15-minute time period which should not be exceeded at any time during a workday. **D 1356, D22**

short-term exposure limit (STEL)—the 15-min time-weighted average exposure which shall not be exceeded at any time during a work day, even if the Occupational Exposure Limit is not exceeded. Exposures above the Occupational Exposure Limit up to the STEL should not be longer than 15 min and should not occur more than 4 times per day. The minimum interval between these exposures should be 60 min.

The following specified periods of time must be addressed either by determining a value or by stating the “time” is not addressed:

- workday (number of hours specified)
- workweek (number of hours specified)
- lifetime (that is, cumulative)
- very short term maximum (for example, short-term exposure limit, ceiling, etc.)

Other specified periods of time *may* be addressed. **E 1542, E34**

short-term measure, n—an early action designed to have an authorized duration of less than one year for the effective control or management of a contaminant released to the environment. **D 5681, D34**

short term standard deviation, σ_{ST} , n—the inherent variation present when a process is operating in a state of statistical control, expressed in terms of standard deviation. **E 456, E11**

short-term strength—the failure strength of a material under a short-term loading (that is, up to about 10 min in a uniaxial compression test). **D 7099, D18**

short term weld factor—a dimensionless number that provides a relative measure of the tensile strength of a welded thermoplastic test specimen to the tensile strength of the manufactured sheet. **C 904, C03**

shot, n—small spherically shaped particles of metal. **B 899, B02**

shot—a short energizing cycle in a magnetic particle examination. **E 1316, E07**

shot blasting—blasting with small spherical objects, such as metallic shot, propelled against a metallic surface. See **abrasive blasting**. **B 374, B08**

shotcrete, n—a mortar or concrete that is projected pneumatically at high velocity onto a surface.

dry-mixture shotcrete, n—shotcrete in which most of the mixing water is added at the nozzle.

wet-mix shotcrete, n—shotcrete in which most of the ingredients, including water, are mixed prior to introduction into the delivery hose. **C 125, C09**

shotcrete—mortar or concrete conveyed through a hose and pneumatically projected at high velocity onto a surface. Can be applied by a “wet” or “dry” mix method. (ISRM) **D 653, D18**

shotcreting, n—an installation technique using a pump to convey tempered refractory castable to a nozzle where an admixture and air pressure are injected, spraying the castable stream onto a substrate where the castable becomes sufficiently stiff to withstand the force of gravity. **C 71, C08**

shot peening—a process whereby hard, small spherical objects (such as metallic shot) are propelled against a metallic surface for the purpose of introducing compressive stresses into that surface, hardening it or obtaining decorative effects. **B 374, B08**

shot sawn—a surface with random grooves and markings, produced by gangsawing with chilled steel shot. **C 119, C18**

shot volume, n—the total hollow space of a mold including cavity or cavities, runner(s), and sprue. **D 883, D20**

should—used to denote a recommendation. Not suitable for specification use to denote mandatory requirements. **F 1789, F16**

shoulder, n—in zippers, the bearing surface of an interlocking element by which the chain is contained inside the flanges of the slider. **[D13.54] D 2050**

shoulder circumference, n, in body measurements, with arms down at sides, the maximum distance around the shoulders at the top of the arm. **D 123, D13**

shoulder—half of a double shoulder. **D 1517, D31**

shoulder, n—the bearing surface of an interlocking element by which the chain is contained inside the flanges of the slider. **D 2050, D13**

shoulder, n—of tire, that region of a tire formed by the conjunction of the tread and sidewall. **F 538, F09**

shoulder—edge, when present, at junction of thread crest and flank. If double crested, primary shoulder is nearer head and should be

- equal to or larger in diameter than secondary shoulder, which is closer to point. **F 547, F16**
- shoulder and arm length, n** —the distance from the side of the neck base across the shoulder joint and along the outside of the arm over the elbow to the prominent wrist bone, taken with the arm bent 1.57 rad (90°) and the hand placed on the hip. **D 5219, D13**
- shoulder, b_v** —the widest point, of the ski in the shovel section of the ski. **F 472, F27**
- shoulder contact**—the region on a glass container surface located between the neck and sidewall sections, which normally contacts other similarly shaped and upright containers. **C 162, C14**
- shoulder girth, n** —the horizontal circumference around the shoulders, taken at the front break-point level with the arms down. **D 5219, D13**
- shoulder joint, n** —in anatomy, the junction of the collarbone and the shoulder blade. (See also **acromion**.) **D 123, D13**
- shoulder joint, n** —the juncture of the collarbone and the shoulder blade. **D 5219, D13**
- shoulder length, n** —in body measurements, the distance from the side neck base to the armscye line at the shoulder joint. **D 123, D13**
- shoulder length, n** —the distance from the side of the neck base to the top of the shoulder joint, taken with the arm down. **D 5219, D13**
- shoulder rib, n** —a rib at or near the outer edge or shoulder of the tread band. **F 538, F09**
- shoulder row, n** —a row located at or near the shoulder of the tread band. **F 538, F09**
- shoulder slope, n** —in body measurements, the angle formed when the slant of the shoulder line deviates from the horizontal line that originates at the side neck base. **D 123, D13**
- shoulder slope, n** —the degree of difference between the shoulder slant and the horizontal line that originates at the side neck base, taken with a goniometer positioned on the shoulder and moved until the baseline is parallel to the floor. **D 5219, D13**
- shoulder to elbow length, n** —the distance from the top of the shoulder joint along the outside of the arm to the prominent point of the elbow, taken with the arm bent 1.57 rad (90°) and the hand placed on the hip. **D 5219, D13**
- shoulder wear, n** —a type of irregular wear characterized by an increased wear rate in the outer edge of the shoulder rib or row compared to the inner shoulder edge. **F 538, F09**
- shovel length, l_s** —the projected length of the forward turn-up, measured from the tip to the contact point where a 0.5-mm feeler gage intersects the running surface with the ski body pressed against a plane surface. **F 472, F27**
- shovel length, L_s** —the projected length of the forward turn-up, measured from the tip to the contact point where an 0.1-mm feeler gage intersects the running surface with the snowboard unweighted on a plane surface. **F 1107, F27**
- shovel slicing**—mechanical action of causing bedding material to uniformly contact the pipe haunches. **C 896, C04**
- shovel surface area**—that surface forward of the shovel contact point. The shovel contact point is located at l_s from the tip. **F 472, F27**
- shovel surface area**—that surface forward of the shovel contact point. The shovel contact point is located at L_s from the tip. **F 1107, F27**
- shoving, n** —the horizontal displacement of a localized area of the pavement surface that may also include some vertical displacement. **E 867, E17**
- shoving, n** —the horizontal displacement of a localized area of the pavement surface which may also include some vertical displacement. **E 1778, E17**
- shower curtain, n** —a hanging fabric used to prevent water spillage from a shower area. **D 123, D13**
- shower curtain, n** —a hanging fabric used to prevent water spillage from a shower area. **D 7023, D13**
- showering**—a particular form of corona discharge characterized by strongly ionized streamers or streams of luminous plasma. It generally occurs at a field value just below that which is required for a complete breakdown. **B 542, B02**
- show-through, n** —the printed image can be observed on the opposite side of the sheet under normal lighting conditions. **D 6488, D01**
- show through, n** —optical density of an image on the backside of a printed area. **F 1857, F05**
- shredded rubber, n** —pieces of scrap tires resulting from mechanical processing. **D 5681, D34**
- shredded tire, n** —a size reduced scrap tire where the reduction in size was accomplished by a mechanical processing device, commonly referred to as a shredder. **D 5681, D34**
- shredded tire, n** —a size reduced scrap tire. The reduction in size was accomplished by a mechanical processing device, commonly referred to as a shredder. **D 5681, D34**
- shredder**—a size-reduction machine that tears or grinds materials to a smaller and more uniform particle size. **D 5681, D34**
- shredder, n** —a machine used to reduce whole tires to pieces. **D 5681, D34**
- shred sizing, n** —a term which generally refers to the process of particles passing through a rated screen opening rather than those which are retained on the screen. **D 5681, D34**
- shred sizing, n** —generally refers to the process of particles passing through a rated screen opening rather than those which are retained on the screen. Examples include:
- 1 by 1 in. (2.5 by 2.5 cm), n* —a sized reduced scrap tire, with all dimensions 1 in. (2.5 cm) maximum.
- 2 by 2 in. (5.1 by 5.1 cm), n* —a size reduced scrap tire, with all dimensions 2 in. (5.1 cm) maximum.
- X in. minus, n* —sized reduced scrap tires, the maximum size of any piece has a dimension no larger than X plus 1 in. (X plus 2.5 cm), but 95 % of which is less than X in. (2.54 X cm) in any dimension (that is, 1 in. (2.5 cm) minus; 2 in. (5.1 cm) minus; 3 in. (7.6 cm) minus, and so forth). **D 5681, D34**
- shrend**—{archaic} term for dry gage, v. **C 162, C14**
- shrink, vt**—to cause to contract, to compact cloth by causing to contract when subjected to washing, boiling, steaming or other processes. **F 1494, F23**
- shrinkage, n** —a decrease in dimensions of a compact which may occur during sintering. (Converse of **growth**.) **B 243, B09**
- shrinkage, n** —the decrease in dimension of a refractory material during manufacture or service. **C 71, C08**
- shrinkage**—a decrease in length, area, or volume. **C 717, C24**
- shrinkage**—a reduction in size of a composition which occurs during its hardening process, curing process, or both. **C 904, C03**
- shrinkage, n** —a decrease in volume due to chemical reaction or drying. **C 1180, C12**
- shrinkage**—reduction in dimensions due to lowering the moisture content below the fiber saturation point. **D 9, D07**
- shrinkage, n** —a decrease in one or more dimensions of an object or material. **D 123, D13**
- shrinkage, n** —a decrease in one or more dimensions of an object or material. **D 4391, D13**
- shrinkage, n** —a decrease in dry or more dimensions of an object or material. **D 4845, D13**
- shrinkage, n** —a dimensional change resulting in a decrease in the length of a specimen. **D 4849, D13**
- shrinkage, n** —a decrease in one or more dimensions of an object or material. **D 5684, D13**
- shrinkage, n** —a decrease in one or more dimensions of an object or material. **F 1494, F23**
- shrinkage-compensating**—in grouting, a characteristic of grout made using an expansive cement in which volume increase, if restrained, induces compressive stresses that are intended to offset the tendency of drying shrinkage to induce tensile stresses. See also **self-stressing grout**. **D 653, D18**
- shrinkage index, SI (D)**—the numerical difference between the plastic and shrinkage limits. **D 653, D18**
- shrinkage limit, SL , w_s (D)**—the maximum water content at which a

shrinkage limit, SL , w_s (D)

reduction in water content will not cause a decrease in volume of the soil mass. **D 653, D18**

shrinkage, linear—a reduction in the length of a cast bar of a composition during its hardening process, curing process, or both. **C 904, C03**

shrinkage ratio, R (D)—the ratio of: (1) a given volume change, expressed as a percentage of the dry volume, to (2) the corresponding change in water content above the shrinkage limit, expressed as a percentage of the weight of the oven-dried soil. **D 653, D18**

shrinkage temperature—the temperature at which measurable shrinkage occurs when leather is gradually heated in an aqueous medium. **D 1517, D31**

shrinkage, unrestrained—a reduction in size of a composition which occurs during its hardening process, curing process, or both, with no external forces applied that can inhibit such reduction. **C 904, C03**

shrinkage, volume—a reduction in occupied space of a composition during its hardening process, curing process, or both. **C 904, C03**

shrink mark—an imperfection, a depression in the surface of a molded material where it has retracted from the mold. **D 883, D20**

shrink mark—depression in the surface of a molded material where it has retracted from the mold. (D20) **F 412, F17**

shroud, n —in packaging, a protective cover placed over a load unit, or package to cover the top and four sides. **D 996, D10**

shutter—a mechanical device which permits regulation of the time during which light is allowed to act on a light sensitive medium. **E 7, E04**

shuttle mark, n —in woven fabrics, a fine fillingwise line caused by damage to a group of warp yarns by shuttle abrasion. **D 123, D13**

shuttle mark, n —in woven fabrics, a fine fillingwise line caused by damage to a group of warp yarns by shuttle abrasion. (*Syn.* box mark) **D 3990, D13**

SI—an abbreviation for the International System of Units. **A 340, A06**

SI—abbreviation for Le Système International d'Unités (SI), The International System of Units (SI): The Modern Metric System. **D 4175, D02**

SI—The International System of Units (abbreviation for "le Système International d'Unités) as defined by the General Conference on Weights and Measures (CGPM)—based upon seven base units, two supplementary units, and derived units, which together form a coherent system.

side mount—See **railing systems**. **E 631, E06**

sick building syndrome, SBS, n —condition in which a building's occupants experience health or comfort effects, or both, that appear to be linked to time spent therein, but where no specific illness or cause can be identified. Condition may be localized in a particular room or zone, or may spread throughout the building. **E 2114, E06**

side—a side is half of a hide along the back bone line and with the tail not more than 6 in. (152 mm) long. **D 1517, D31**

side camber, W —the maximum distance from a line drawn between the widest points of the ski and the sidecut of the ski. **F 472, F27**

side centered—equivalent to end centered with a different choice of axes. (See **end centered**.) **E 7, E04**

side-construction tile, n —tile designed to receive its compressive stress at right angles to the axes of the cells. **C 43, C15**

side cut—a board, plank, cant, or timber which does not contain the pith. **D 9, D07**

side cut—that line describing the curved portion of the ski contour limited by the lines at the b_H and b_V dimensions, and defined by the bottom edge. **F 472, F27**

sidecut—that line describing the curved portion of the snowboard contour limited by the lines at the b_H and b_V dimensions and defined by the bottom edge. **F 1107, F27**

sidecut geometry—the configuration of the curve bordering the running surface and defined by the bottom edge. **F 1107, F27**

sidecut magnitude—the maximum distance from a line drawn between the widest points of the snowboard and the edge of the snowboard. **F 1107, F27**

side-fired furnace—a furnace with fuel supplied from the side. **C 162, C14**

side geometry—the configuration of the curve bordering the running surface and defined by the bottom edge. **F 472, F27**

side lap, n —the distance by which the side edge of one tile overlaps the side edge of an adjacent tile in the same course; for interlocking tile this corresponds to the width of that part of the tile that contains the ribs, grooves, or channels which provide for interlocking. (See *Discussion* under **head lap**.) **C 43, C15**

side lap, n —the shortest horizontal distance between the exposed side edge of a course of roofing or siding material and the nearest underlying area of roof deck or side wall not covered by the preceding adjacent course. **C 1154, C17**

side lap—the shortest horizontal distance between the exposed side edge of a course of asbestos-cement roofing or siding material and the most proximate underlying area of roof deck or side wall not covered by the preceding adjacent course. **D 2946, C17**

side leather—shoe upper leather made from the grain side of cattlehides. The name comes from the practice of splitting the hide along the backbone into two sides before tanning. The skins are usually shaved on the flesh side to uniform thickness and the grain is corrected. **D 1517, D31**

side mount—a railing-system support that anchors the post of picket of a railing system to a vertical or inclined surface, such as a fascia or stair stringer.

silent hours—See **hours of operation**.

sill—See **windows and doors**.

E 631, E06

side mount—a railing-system support that anchors the post or baluster of a railing system to a vertical or inclined surface, such as a fascia or stair stringer. **E 1481, E06**

side point—an eccentric nonsymmetrical point. **F 547, F16**

side-port furnace—a furnace with ports on the sides. **C 162, C14**

sideslip angle, (rad or degree), n —in a vehicle, the angle between the projection of a test vehicle's longitudinal axis on the road plane and the velocity vector at some specified point in the test vehicle. **F 538, F09**

sidestrike—activation of stapling head resulting from forcing container resting on table against head. **F 592, F16**

side surface bend—procedure whereby a load is applied on the weld in line with the weld axis. **C 904, C03**

side-tone, n —appearance at the flop angle. **E 284, E12**

side-tone scattering, n —scattering of light in a material resulting in a milky appearance only when the specimen is viewed at the flop angle. **E 284, E12**

side waist length, n —the distance from the mid-underarm point of the armscye to the waist level, taken along the side of the body (contour). **D 5219, D13**

sidewall, n —the side of a tire between the tread shoulder and the rim bead. **D 5681, D34**

sidewall, n —of atire, that portion of a tire between the tread and the bead. **F 538, F09**

sidewall component, n —an individual part of the sidewall construction, either a separate compound or a separately assembled piece. **F 538, F09**

sidewall, glass container—the midsection of a glass container located between the heel and shoulder contact regions; also referred to as barrel. **C 162, C14**

sidewall rubber, n —the exterior rubber layer of a tire that extends over the sidewall part of the carcass. **F 538, F09**

siege—{archaic} floor of a pot furnace, often called "bench." **C 162, C14**

Siemens—a measure of electrical conductance in water, equivalent to a mho. See **Mho, Ohm**. **D 6161, D19**

sieve—a standard wire mesh or screen, especially when used in graded sets to determine the mesh size or particulate size distribution of particulate or granular solids. **C 242, C21**

sieve, n —a standard wire mesh or screen, especially when used in

- graded sets to determine the mesh size or particular size distribution of particulate and granular solids. C 1145, C28
- sieve**, *n*—in laboratory work an apparatus, in which the apertures are square, for separating sizes of material. D 8, D04
- sieve**—an apparatus with square apertures for separating sizes of material. D 1079, D08
- sieve**, *n*—a plate, sheet, or woven wire cloth, or other device, with regularly spaced apertures of uniform size, mounted in a suitable frame or holder, for use in separating material according to size. The terms sieve and screen can be used interchangeably. E 1638, E29
- sieve analysis**, *n*—particle size distribution; usually expressed as the weight percentage retained upon each of a series of standard sieves of decreasing size and the percentage passed by the sieve of finest size. Synonymous with **screen analysis**. B 243, B09
- sieve analysis**—the particle size distribution of a particulate or granular solid or sample thereof, when determined by weight percent passage through, or retention on, a graded set of sieves. C 242, C21
- sieve analysis**, *n*—the particle size distribution of a particulate or granular solid or sample thereof, when determined by passage through and retention on a graded set of sieves. C 1145, C28
- sieve analysis**—determination of the proportions of particles lying within certain size ranges in a granular material by separation on sieves of different size openings. D 653, D18
- sieve analysis**, *n*—the act of obtaining a particle size distribution using sieves. E 1638, E29
- sieve classification**, *n*—the separation of powder into particle size ranges by the use of a series of graded sieves. B 243, B09
- sieve fraction**, *n*—that portion of a powder sample that passes through a standard sieve of specified number and is retained by some finer sieve of specified number. B 243, B09
- sight glass**—the glass window for a viewing port, generally for a pressurized system. C 162, C14
- sight line**—*in building construction in glazing*, the line of intersection of an opaque material with a transparent material. C 717, C24
- sigma** (σ)—solid phase found originally in binary iron-chromium alloys which is in stable equilibrium at temperatures below 820°C. Now used to identify any structure which possesses the same complex body-centered crystal structure. E 7, E04
- signal**—the data present in a radiological measurement which is directly correlated with the degree of radiation attenuation by the object being examined. E 1316, E07
- signal, acoustic emission (emission signal)**—an electrical signal obtained by detection of one or more acoustic emission events. E 1316, E07
- signal amplitude, acoustic emission**—the peak voltage of the largest excursion attained by the signal waveform from an emission event. E 1316, E07
- signal conditioner**, *n*—the component that receives the output from a sensor and processes it for subsequent use. D 1129, D19
- signal gradient**—same as **differential readout**. E 1316, E07
- signal height**—*EIA*, the number of counts in the channels of a backscattering spectrum due to a specific element in the target. E 673, E42
- signal overload level**—that level above which operation ceases to be satisfactory as a result of signal distortion, overheating, or damage. E 1316, E07
- signal overload point**—the maximum input signal amplitude at which the ratio of output to input is observed to remain within a prescribed linear operating range. E 1316, E07
- signal strength**—the measured area of the rectified AE signal with units proportional to volt-sec. E 1316, E07
- signal-to-background ratio**—*AES*, the ratio of signal (above background) to that of the nearby background on the high kinetic energy side of the elastically scattered Auger electrons. E 673, E42
- signal to background ratio**—*SIMS, XPS, for a spectral peak*, the ratio of the maximum counts in the peak above the background to the magnitude of the background. E 673, E42
- signal-to-noise ratio**—the ratio of the signal intensity (above background) to that of noise in determining that signal. E 673, E42
- signal-to-noise ratio**—the ratio of values to signal (response containing relevant information) to that of noise (response containing nonrelevant information). E 1316, E07
- signal-to-noise ratio**—the ratio of the amplitude of an ultrasonic indication to the amplitude of the maximum background noise. E 1316, E07
- signal-to-noise ratio, S/N**—the ratio of the signal, *S*, to the noise, *N*, as indicated by the instrumental read-out indicator. E 131, E13
- signature, acoustic emission (signature)**—a characteristic set of reproducible attributes of acoustic emission signals associated with a specific test article as observed with a particular instrumentation system under specified test conditions. E 1316, E07
- significance level, α , *n***—the stated upper limit for the probability of a decision being made that a hypothesis about the value of a parameter is false when in fact it is true. (See **confidence level, probability level**.) D 123, D13
- significance level**—the decimal probability that a result will exceed the critical value. E 1547, E15
- significance level**—the stated probability (risk) that a given test of significance will reject the null hypothesis (that a specified effect is absent) when the hypothesis is true. E 1823, E08
- significant**—statistically significant. An effect or difference between populations is said to be present if the value of a test statistic is significant, that is, lies outside of selected limits. E 1823, E08
- significant digit**, *n*—any of the figures 0 through 9, except leading zeros and some trailing zeros, which is used with its place value to denote a numerical quantity to some desired approximation. E 456, E11
- significant loss**, *n*—any loss that introduces a bias in final results that is of appreciable economic importance to the concerned parties. D 121, D05
- significant loss**, *n*—any loss that introduces a bias in final results that is of appreciable importance to concerned parties. D 5681, D34
- significantly alter**—any action which would change the mechanical or performance capabilities of the fastener following its original manufacture. F 1789, F16
- significant surface**—surface area where the minimum thickness to be met shall be designated on the applicable drawing or by the provision of a suitably marked sample. However, if not designated, significant surfaces shall be defined as those normally visible, directly or by reflection, which are essential to the appearance or serviceability of the fastener when assembled in normal position, or which can be the source of corrosion products that deface visible surfaces on the assembled fastener. F 1789, F16
- silent hours**—See **hours of operation**. E 1480, E06
- silent hours**—See **hours of operation**. E 1480, E06
- silent hours, *n* (heures d'inactivité)**—period when a facility is essentially unoccupied and only security and building operations staff are present. E 631, E06
- silica**, *n*—pulverized silicon dioxide (SiO_2) used as a filler or a part of the cementitious material. C 1154, C17
- silica**, *n*—*for asbestocement*, pulverized silicon dioxide (SiO_2) used as a filler or a part of the cementitious material. In the latter case, the material shall meet the requirements of Specification C 618. D 2946, C17
- silica glass**—See **fused silica**. C 162, C14
- silica** (SiO_2)—the common oxide of silicon usually found naturally as quartz or in complex combination with other elements as silicates. C 242, C21
- silicate gel**, *n*—a jelly-like substance consisting of polymerized silicate and entrapped coolant. D 4725, D15
- silicate type inclusions**—inclusions composed essentially of silicate glass, normally plastic at forging and hot-rolling temperatures, which appear in steel in the wrought condition as small elongated

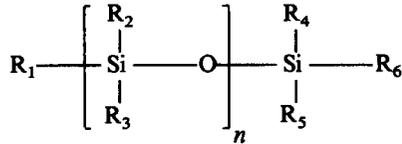
silicate type inclusions

inclusions usually dark in color under reflected light as normally observed. E 7, E04

silicon carbide refractories, *n*—refractory products consisting predominantly of silicon carbide. C 71, C08

silicone elastomer, *n*—an elastomer containing cross-linked silicone polymer and fillers, usually silica. F 1251, F04

silicone fluid—a generic term for a family of relatively inert liquid organosiloxane polymers used as electrical insulation. They have the generic formula:



where the attached R groups may be H, methyl, vinyl, phenyl, alkyl, or substituted phenyl or alkyl radicals. D 2864, D27

silicone plastics—plastics based on polymers in which the main polymer chain consists of alternating silicon and oxygen atoms. D 883, D20

silicone polymer, *n*—a polymer of alternating silicon-oxygen atoms consisting of repeating of diorganosiloxy groups. F 1251, F04

siliconizing—in *diffusion coatings*, diffusion of silicon into solid metal at elevated temperatures. B 374, B08

silk screen process—a decorating process in which a design is printed on glass through a silk mesh, woven wire, or similar screen. C 162, C14

sill—generally a horizontal wood member forming the lowest part of the framework of a construction, from relatively small size as in a window frame to a much larger size as in a railroad bridge; a threshold or door sill. D 9, D07

sill ice—ice in a concordant tabular mass, formed by water intruded or injected under pressure into porous earth material. D 7099, D18

sillimanite—See **andalusite**. C 242, C21

silo—synonym for **bin**. D 653, D18

siltation—See **deposition**. D 4410, D19

silt barrier—boom with very deep skirt used to control the movement of suspended sediments. F 818, F20

silt (inorganic silt) (rock flour)—material passing the No. 200 (75- μ m) U.S. standard sieve that is nonplastic or very slightly plastic and that exhibits little or no strength when air-dried. D 653, D18

silt size—that portion of the soil finer than 0.02 mm and coarser than 0.002 mm (0.05 mm and 0.005 mm in some cases). D 653, D18

silt size (fluvial sediment)—0.004 to 0.062 mm in diameter. D 4410, D19

silver migration—a process by which silver, when in contact with insulating materials under electrical potential, is removed ionically from its original location, and is redeposited as a metal (silver dendrite) at some other location. F 2112, F01

silver/silver chloride reference electrode—a reference electrode with an internal reference element of silver and silver chloride. The filling solution must contain chloride and be saturated with respect to silver chloride. Saturated KCl, 1 M KCl, and equitransferent filling solutions are all commonly used. Ag/AgCl electrodes have better thermal characteristics than calomel electrodes and are therefore preferable for specific ion measurements and precision pH measurements. D 4127, D19

similarities were noted/differences as well as similarities—these expressions are meaningless without an explanation as to the extent and significance of the similarities or differences between the known and questioned material. These terms should never be substituted for gradations of opinions. E 1658, E30

simple (concerning lattices)—having similar atoms or groups of atoms separated by integral translations only. E 7, E04

simple linear regression—a statistical method of estimating the

linear relationship between a dependent variable *y* and an independent variable *x* using the linear model

$$y = b_o + b_z X + \epsilon$$

E 131, E13

simple liquid—a single-phase liquid having a vapor pressure of less than 16 psi Reid vapor pressure at 100°F (830 mm Hg at 37.8°C) and a Saybolt viscosity of less than 10 000 s (2160 cSt) at 25°C. E 1547, E15

simple machine stitch pattern, *n*—in *home sewing*, a repeating segment of machine stitches, with each repeat consisting of one or more stitches long. (Compare **complex machine stitch pattern**.) D 123, D13

simple machine stitch pattern, *n*—in *home sewing*, a repeating segment of machine stitches, with each repeat consisting of one or more stitches long. (Compare **complex machine stitch pattern**.) D 5646, D13

simple payback (SPB) period—the time required for the cumulative benefits from an investment to pay back the investment cost and other accrued costs, not considering the time value of money. E 631, E06

simple payback (SPB) period, *n*—the time required for the cumulative benefits from an investment to pay back the investment cost and other accrued costs, not considering the time value of money. E 833, E06

simple seam, *n*—See **plain seam**. D 4965, D13

simple shear—shear strain in which displacements all lie in one direction and are proportional to the normal distances of the displaced points from a given reference plane. The dilatation is zero. (ISRM) D 653, D18

simplex airblast nozzle—see **piloted airblast nozzle**. E 1620, E29

simplex channel, *n*—a data transmission system capable of transmitting in only one direction. (See **duplex channel**.) F 1457, F05

simplex nozzle—a swirl chamber atomizer comprising a single set of tangential liquid inlets (or slots) combined with a single circular discharge orifice. E 1620, E29

simulated service corrosion test, *n*—evaluation of the effects of a circulating engine coolant on metal test specimens and automotive cooling system components under controlled, essentially isothermal laboratory conditions. D 4725, D15

simultaneous, *adj*—the application of two or more techniques to the same sample at the same time. (ICTAC)

NOTE—A hyphen is used to separate the abbreviations of the techniques; for example, simultaneous thermogravimetric analysis and differential scanning calorimetry would be TGA-DSC. E 473, E37

simultaneous response—the assignment of multiple emergency medical resources to the scene of an illness or injury based on initially available information and local operational policies. These may have varying levels of care capability (for example ALS and BLS, ground and air). Subsequent care or transportation, or both, of the patient is provided by the unit which most closely meets the patient's needs. A simultaneous response differs from a sequential response. F 1177, F30

single-action pressing, *n*—a method by which a powder is pressed in a stationary die between one moving and one fixed punch. B 243, B09

single axle load, [lb (kg)], *n*—the loads transmitted to the road surface by the tires of all wheels lying between two parallel transverse vertical planes 3.3 ft (1 m) apart, extending across the full width of the vehicle; a portion of the gross-vehicle weight. E 867, E17

single base, *adj*—in *lubricating grease*, relating to a thickener comprised of soaps of only one metal. D 4175, D02

single-beam spectrum, *n*—a spectrum determined through one physical path. E 131, E13

single-cased well—a monitoring well constructed with a riser but without an exterior casing. D 653, D18

single coil, *n*—a configuration where there is one coil with one diameter, the coil being either helical or concertina style.

F 1379, F14

single-component developer—see **single-component toner**.

F 335, F05

single-component toner—a dry powder in an electrostatic copying process that does not contain a carrier and is used to form a visible image.

F 335, F05

single fire—See *single fire* under **firing**.

C 242, C21

single-fluid atomizer—see **pressure atomizer**.

E 1620, E29

single-grained structure—see **soil structure**.

D 653, D18

single-impact damage, *n*—See **damage**.

G 40, G02

single input wire construction—a stranded conductor design which varies the number of wires within a range of conductor sizes in order to permit that range of conductor sizes to be constructed from wires of a single diameter.

B 354, B01

single island canopy—used for all types of cooking equipment in a single line island configuration. See *canopy*.

F 1827, F26

single-issue polygraph test, *n*—a PDD test in which the relevant questions cover the exact same issue. To be a single-issue polygraph test, the examinee must be able to answer the relevant questions either all truthfully, or all deceptively. An example would be the single-issue Zone Comparison Test.

E 2035, E52

single jet atomizer—see **plain jet atomizer**.

E 1620, E29

single-junction reference electrode—a reference electrode containing a single electrolyte. The electrolyte (1) provides a constant level of the ion sensed by the reversible reference element and (2) forms a low-junction potential liquid junction with the sample solution.

D 4127, D19

single-level pile, *adj*—*in floor coverings*, having all pile tufts at the same level.

D 123, D13

single-operator operational precision, SOOP, *n*—the standard deviation of the results of a series of determinations by a single operator employing the method with its associated sample container preparation, collection, splitting, preservation, transmission, and storage on a homogeneous sample.

D 1129, D19

single-operator precision—See **precision**.

D 1356, D22

single-pass internal reflection element—in internal reflection spectroscopy, an internal reflection element in which the radiant power transverses the length of the element only once; that is, the radiant power enters at one end of the optical element and leaves via the other end.

E 131, E13

single pass shred, *n*—a shredded tire that has been processed by one pass through a shear type shredder and the resulting pieces have not been classified by size.

D 5681, D34

single-phase thermosiphon—a passive heat transfer device, filled with a liquid or a gas, installed to remove heat from the ground.

D 7099, D18

single sampling, *n*—*in acceptance sampling*, a sampling plan for which the decision to accept or reject a lot is based on a single sample.

D 123, D13

single-sided griddle—See **griddle**.

F 1827, F26

single spread, *n*—see *single spread* under **spread**.

D 907, D14

single-stimulus method, *n*—any psychophysical method in which a judgment follows the presentation of only one stimulus at a time.

E 253, E18

single stitch zigzag, *n*—*in home sewing*, a simple machine stitch pattern made by the needle moving up and down and alternately from one side to the other while the fabric moves through the feed mechanism in either the forward or reverse direction with all segments having equal length.

D 123, D13

single stitch zigzag, *n*—*in home sewing*, a simple machine stitch pattern made by the needle moving up and down and alternately from one side to the other while the fabric moves through the feed mechanism in either the forward or reverse direction with all segments having equal length and equal width. (Compare **multiple stitch zigzag**.)

D 5646, D13

single-strand breaking force, *n*—*in tensile testing*, the breaking

force of one strand that follows a specified path, usually a straight line, between the clamps of a tensile testing machine. D 123, D13

single-strand breaking force, *n*—*in tensile testing*, the breaking force of one strand that follows a specified path, usually a straight line, between the clamps of a tensile testing machine. (Compare **breaking force**.)

D 4848, D13

single-strand strength, *n*—deprecated term. Use **single-strand breaking strength**.

D 4848, D13

single-strike film ribbon—an inked ribbon wherein the substrate is a plastic film material such as polyethylene, where each area of the ribbon is capable of producing only one image.

F 221, F05

single-strike paper ribbon—an inked ribbon wherein the substrate is paper, where each area of the ribbon is capable of producing only one image.

F 221, F05

singlet state—an electronic state with a total spin quantum number of zero.

E 131, E13

single twist, *n*—the amount of twist in each individual single yarn element in a tire cord structure based on the length of the element after twist has been removed from the cord.

D 123, D13

single twist, *n*—the amount of twist in each individual single yarn element in a tire cord structure based on the length of the element after twist has been removed from the cord.

D 6477, D13

single yarn, *n*—the simplest strand of textile material suitable for operations such as weaving, knitting, etc.

D 123, D13

single yarn—See *single yarn* under **yarn**.

D 3878, D30

single yarn, *n*—the simplest strand of textile material suitable for operations such as weaving, knitting, etc.

D 4849, D13

single zone, *n*—a space in which the pressure differences between any two places, as indicated on a manometer, differ by no more than 2.5 Pa (0.01 in. H₂O) during fan pressurization at a building pressure difference of 50 Pa (0.2 in. H₂O) and by no more than 5 % of the highest building pressure difference achieved.

skin—See **facing**.

E 631, E06

sink, *n*—as used in reference to indoor air quality, refers to a surface or material which absorbs, stores and releases energy or matter.

E 2114, E06

sinker—bright or coated, slender, regular-stock-steel, 1 1/8 by 0.067 to 5/8 by 0.244-in. nails with 1/64 to 1/2-in. sinker head and medium diamond point, with diameter of head smaller than that of cooler and common nail of same designation.

F 547, F16

sinker head—flat, slightly countersunk (115° to 130°) head, as found on sinkers and corker nails; smaller in diameter than head on cooler and common nails.

F 547, F16

sinking indentation—a hardness indentation around which the metal has been depressed below the plane of the specimen.

E 7, E04

sinter, *v*—to increase the bonding in a mass of powder or a compact by heating below the melting point of the main constituent.

B 243, B09

sinter—a ceramic material or mixture fired to less than complete fusion, resulting in a coherent mass, or the process involved.

C 242, C21

sinter crack, *n*—*in a rigid die system*, a defect that occurs during the sintering operation.

B 243, B09

sintered glass—glassware made by fusing glass particles.

C 162, C14

sinter forging, *n*—see **powder forging**.

B 243, B09

sintering, *n*—in catalysis, a reduction of the surface area of a catalyst carrier or other solid catalytic material caused by heat.

D 3766, D32

sintering time, *n*—the total elapsed time during which the P/M part/specimen is within (±) a specified percentage of the stated sintering temperature.

B 243, B09

sipe, *n*—a molded or cut rectangular void which is substantially narrower than the major grooves or voids.

F 538, F09

siphon nozzle—a pneumatic atomizer in which an air stream aspirates and atomizes liquid from a reservoir located beneath the nozzle.

E 1620, E29

sisal plier—See **plier**; **mattress blade**.

F 592, F16

site inspection (SI), *n*—an on-site investigation to determine whether a release or potential release exists and the nature of the associated threats. The purpose is to augment the data collected in the preliminary assessment and to generate, if necessary, sampling and other field data to determine whether further action or investigation is appropriate.

D 5681, D34

site remediation, *n*—those actions taken in the event of a release or threatened release of a hazardous substance in to the environment, to prevent or minimize the impact of the release, or to mitigate a substantial hazard to present or future environmental conditions. This early action may or may not lead to ultimate restoration of the site.

D 5681, D34

sitting spread, *n*—*in body measurements*, the circumference of the widest part of the hips with the subject seated.

D 123, D13

sixel encoding, *n*—a method of grouping data, so that each byte resembles a code for an ASCII character.

F 1457, F05

size, *v*—to repress a sintered compact to decrease the dimensional variation (not to be confused with **coin** or **restrike**).

B 243, B09

size—the representative dimension that best describes the extent in space of a particle, agglomerate, or aggregate.

C 242, C21

size, *n*—usually a liquid composition to prevent excessive absorption of all paints into plaster, old wall paint, and similar porous surfaces; also a liquid composition used as a first coat on metal to improve adhesion of succeeding coats (latter usage is limited to the metal decorating industry).

The terms **sealer** and **size** are almost synonymous, but usage has established certain differences. A **sealer** is ordinarily a thin varnish or clear lacquer and is usually applied on wood and metal surfaces. Ordinary painter's **size** is a thin solution of glue, starch or other water-soluble substance and is usually applied on plaster surfaces, but **size** used in metal decorating is a thin varnish.

D 16, D01

size, *n*—one of a series of graduated measurements in manufactured articles of clothing conventionally identified by numbers, letters, or words.

F 1494, F23

size characterization, *n*—the process by which information relating to the nature, extent, potential migration pathways, and receptors of environmental contaminants is gathered, interpreted, and documented. Site characterization efforts to provide a basis for the following: (1) the development of a conceptual site model (CSM), (2) the selection and design of a site remediation plan, or (3) the measuring point against which the effectiveness of a remedy can be evaluated, or some combination thereof.

D 5681, D34

size consist, *n*—the particle size distribution of a coal.

D 121, D05

size effect—influence of specimen size on its strength or other mechanical parameters.

D 653, D18

size factor—the factor included in deriving the allowable bending stress for rectangular members which takes into account the somewhat lower unit strength developed in larger members as compared to smaller members.

D 9, D07

size list, *n*—a list of all size names, in order from smallest to largest, for a particular style.

D 6963, D13

size name, *n*—a user defined name for a graded size.

D 6963, D13

size reduction device or equipment—a device which size reduces (Synonyms: shredder, grinder, pulverizer, and mill).

D 5681, D34

size (sizing), *n*—application of a material (sealer, size) to the surface of an adherend, prior to that of the adhesive, in order to reduce the absorbency of the adherend.

D 907, D14

size thresholds, *n*—the instrument's lower and upper size settings for the particular cell population; adjustable "size gate." Cells or fragments outside the size settings are excluded from the analyses.

F 2312, F04

sizing, *n*—a generic term for compounds which, when applied to yarn or fabric, form a more or less continuous solid film around the yarn and individual fibers. (See also **filler**.)

D 123, D13

sizing, *n*—the process of applying a material on a surface in order to fill pores and thus reduce the absorption of the subsequently applied adhesive or coating or to otherwise modify the surface

properties of the substrate to improve the adhesion, and also, the material used for this purpose. (Synonym *size*.) (See also **primer**.)

D 907, D14

sizing, *n*—the addition of materials to a papermaking furnish, or the application of materials to a surface or board, which results in a paper or board that exhibits some resistance to liquid penetration.

D 1968, D06

sizing, *n*—a generic term for compounds which, when applied to yarn or fabric, form a more or less continuous solid film around the yarn and individual fibers.

D 4850, D13

sizing agent—asphalt, rosin, wax, or other additive introduced to the stock for a fibrous-felted board, prior to forming, or added to the blend of particles and resin for a particle board, to increase water resistance.

D 1554, D07

sizing, **size**—an organic coating applied to glass fibers directly below a bushing to provide some or all of the following: abrasion resistance, lubricity, antistatic characteristics, and chemical bonding to a subsequent matrix.

C 162, C14

sizing system, *n*—*in garment construction*, a method of designating garment sizes.

D 123, D13

sizing system, *n*—a method of designating garment sizes.

D 5219, D13

skater's cracks—curvilinear cracks in a roofing membrane that appear to relate neither to the direction of application of the membrane components nor the substrate components.

D 1079, D08

skein, *n*—a continuous strand of yarn, wound on a hand or motorized reel.

D 123, D13

skein, *n*—a continuous strand of yarn, wound on a hand or motorized reel.

D 4849, D13

skein break factor, *n*—*in yarn testing*, the comparative breaking force of a skein of yarn adjusted for the linear density of the yarn expressed in an indirect system; the product of the breaking force of the skein and the yarn number expressed in an indirect system.

D 123, D13

skein break factor, *n*—the comparative breaking strength of a skein of yarn adjusted for the linear density of the yarn expressed in an indirect system; the product of the breaking strength of the skein and the yarn number expressed in an indirect system.

D 4848, D13

skein break factor, *n*—*in yarn testing*, the comparative breaking force of a skein of yarn adjusted for the linear density of the yarn expressed in an indirect system.

D 4849, D13

skein breaking force, *n*—the force required to rupture a skein of yarn. (See **skein strength**).

D 4849, D13

skein breaking tenacity, *n*—the skein breaking load divided by the product of the yarn number in a direct numbering system and the number of strands placed under tension.

D 123, D13

skein breaking tenacity, *n*—the skein breaking strength divided by the product of the yarn number in direct numbering system and the number of strands placed under tension.

D 4848, D13

skein loop-length, *n*—the inside length of a coil of yarn mounted vertically as measured under a specified force.

D 123, D13

skein loop-length, *n*—the inside length of a coil of yarn mounted vertically as measured under a specified force.

D 4849, D13

skein shrinkage, *n*—a measure of true or intrinsic yarn shrinkage not including crimp contraction.

D 123, D13

skein shrinkage, *n*—a measure of true or intrinsic yarn shrinkage not including crimp contraction.

D 4849, D13

skein strength, *n*—the force required to rupture a skein of yarn, expressed in units of force, as breaking force.

D 123, D13

skein strength, *n*—the ability or capacity of a skein of yarn to withstand the ultimate tensile force required for rupture. (See **skein breaking force**).

D 4849, D13

skew, *n*—a fabric condition resulting when filling yarns or knitted courses are angularly displaced from a line perpendicular to the edge or side of the fabric.

D 123, D13

skew, *n*—a fabric condition resulting when filling yarns or knitted

courses are angularly displaced from a line perpendicular to the edge or side of the fabric. **D 3990**, D13

skew, *n*—a fabric condition resulting when filling yarns or knitted courses are angularly displaced from a line perpendicular to the edge or side of the fabric. **D 4850**, D13

skew—rotational deviation from correct horizontal and vertical orientation; may apply to a single character, line, or entire document. **F 149**, F05

skew, *n*—rotation of a bar code symbol about an axis parallel to the symbol's length. **F 1294**, F05

ski afterbody—that portion of the ski aft of point *O*, a distance of $l_C/2$. **F 472**, F27

ski body—that portion of the ski within the dimensions of l_C . **F 472**, F27

ski body center—point *O*, which is located at a distance of $l_C/2 + l_T$ from the tail of the ski. **F 472**, F27

ski, *n*—one of a pair or series of parallel runners usually wood, affixed to the underside of **boxes**, **crates**, or an item to allow entry of truck forks, or to facilitate sliding. (Compare **rubbing strip**.) **D 996**, D10

skid box—See **box**. **D 996**, D10

skid number (friction number), *n*—the number that is used to report the results of a pavement skid test conducted in accordance with Test Method E 274. **E 867**, E17

skid number-percent normalized gradient, *n*—the speed gradient divided by the skid number, both at the same speed and multiplied by 100. The percent normalized gradient is usually designated by the symbol PNG_v , where *v* is the speed at which the percent normalized gradient is determined.

$$PNG_v = 100(G/SN)_v$$

E 867, E17

skid number (SN), *n*—slide braking coefficient multiplied by 100. **F 538**, F09

skid number-speed gradient, *n*—the slope of skid number versus speed multiplied by -1. The gradient is normally designated by the symbol G_v , where *v* is the speed at which the slope is determined, *SN* is the skid number, and *V* is the speed:

$$G_v = -(dSN/dV), \text{ that may be approximated by:}$$

$$-(SN_1 - SN_2)/(V_1 - V_2)$$

E 867, E17

skid platform—a single platform of wood, metal, plastic, or combination of these materials, elevated a short distance above the floor by runners or legs to facilitate mechanical handling. (Compare **pallet**.) **D 996**, D10

skid resistance (friction number), *n*—the ability of the traveled surface to prevent the loss of tire traction. **E 867**, E17

ski forebody—that portion forward of point *O*, a distance of $l_C/2$. **F 472**, F27

skim coat, calender, *n*—a layer of rubber compound applied to a fabric by pressure normal to the surface. **D 1566**, D11

skim coating (the act of), *n*—the process of applying a thin layer of rubber or rubber mix to a sheet material by means of a calender, without shear forces, between the rubber and the sheet. **D 1566**, D11

skimmer block—a partially submerged object near the exit end of a melting furnace, designed to (1) keep foam, unmelted batch, etc. from exiting the tank; (2) isolate atmospheres on either side; or (3) interrupt surface flow of glass from the melter, or combinations of these. **C 162**, C14

skim rubber, *n*—rubber obtained from the dilute latex that is separated during the concentration of natural rubber latex. **D 1566**, D11

skin, *n*—*in building construction*, a thin layer at the surface of a sealant, cellular rubber gasket, sealant backing, or joint filler that differs in physical properties from the material beneath it. **C 717**, C24

skin, *n*—a relatively dense layer at the surface of a cellular polymeric material. **D 883**, D20

skin—the pelt of a small animal, such as calf, pig, sheep, etc. Also used interchangeably with **hide**. **D 1517**, D31

skin, *n*—a relatively dense layer at the surface of a cellular polymeric material. **D 1566**, D11

skin—See **facing**. **E 1749**, E06

skin, *n*—a relatively dense layer at the surface of a cellular polymeric material. (D20) **F 412**, F17

skin, *n*—the outer integument or covering of the body, consisting of the dermis and the epidermis, and resting upon the subcutaneous tissues. **F 2312**, F04

skin allograft therapy, *n*—the treatment of skin wound or skin ulcer by the temporary topical application of skin allograft(s). **F 2312**, F04

skin, applied, *n*—a thin surface layer of elastomeric material applied to a cellular product. **D 1566**, D11

skin back—See **broken filament**. **D 3990**, D13

skin depth—see **depth of penetration**. **E 1316**, E07

skin effect—the phenomenon wherein the depth of penetration of electric currents into a conductor decreases as the frequency of the current is increased. At very high frequencies, the current flow is restricted to an extremely thin outer layer of the conductor. (See also **depth of penetration**.) **E 1316**, E07

skin effect—the phenomenon that causes the magnetization produced by alternating current to be contained near the surface of a ferromagnetic part. **E 1316**, E07

skin effect, magnetic—the nonuniform magnetodynamic term applies to the nonuniform distribution of induction existing at various points in the cross section of a magnetic core. Skin effect is produced primarily by eddy current phenomena and it increases with the frequency of ac excitation. It can ordinarily be neglected in testing at commercial power frequencies. **A 340**, A06

skin friction, *f* (FL⁻²)—the frictional resistance developed between soil and an element of structure. **D 653**, D18

skinogen, *n*—(Synonym—**biofilm**.) **D 4175**, D02

skin packaging—See **packaging**. **D 996**, D10

skin passed sheet, *n*—Synonym for **extra smooth sheet**. **A 902**, A05

skin replacement surgery, *n*—surgery that permanently replaces lost skin with healthy skin. **F 2312**, F04

skin substitute, *n*—a biomaterial, engineered tissue, or combination of biomaterials and cells or tissues that can be substituted for a skin allograft, a skin autograft, an epidermal autograft, or a dermal autograft in a clinical procedure. **F 2312**, F04

skin temperature, *n*—average temperature of a flat skin surface as measured from the *field of view* of an IR skin type thermometer, with an appropriate adjustments for skin emissivity. **E 344**, E20

skin wool—See **pulled, wool**. **D 4845**, D13

skip—an unsurfaced area on dressed lumber; sometimes designated as skip dressing. **D 9**, D07

skip—See **float**. **D 3990**, D13

skip distance—in angle beam examination, the distance along the test surface, from sound entry point to the point at which the sound returns to the same surface. It can be considered the top surface distance of a complete vee path of sound in the test material. **E 1316**, E07

skirt—continuous portion of the boom below the floats. **F 818**, F20

skirting leather—a specialized vegetable-tanned cattlehide leather used for skirts or hanging portions of saddles that come between the legs of a rider and the horse. **D 1517**, D31

ski size—**F 472**, F27

ski tail, T—the extreme rear edge of the ski. **F 472**, F27

ski tip, S—the extreme forward point or edge of the ski. **F 472**, F27

skiver—the grain split of a sheepskin used for hat sweatbands and small leather goods. **D 1517**, D31

skiving—cutting off a thin layer of leather to bring it to uniform thickness. **D 1517**, D31

skylight

skylight—flat glass installed at an angle greater than 15° from the vertical in a building exterior. **C 162, C14**

slab—a piece of stone produced by shaving or splitting in the first milling or quarrying operation. A slab has two parallel surfaces. **C 119, C18**

slab—in belting leather, the parts of a bend left after the centers are cut out. (See also **split**.) **D 1517, D31**

slabbing—the loosening and breaking away of relatively large flat pieces of rock from the excavated surface, either immediately after or some time after excavation. Often occurring as tensile breaks which can be recognized by the subconchoidal surfaces left on remaining rock surface. (ISRM) **D 653, D18**

slab glass—optical glass obtained by cutting or forming the chunk glass into plates or slabs. **C 162, C14**

slabjacking—in *grouting*, injection of grout under a concrete slab in order to raise it to a specified grade. **D 653, D18**

slack end, n—a warp yarn woven under insufficient tension. **D 123, D13**

slack end, n—a warp yarn woven under insufficient tension. (*Syn.* slack thread, slack warp) **D 3990, D13**

slack filling—See **slack pick**. **D 3990, D13**

slack pick, n—a single filling yarn woven under insufficient tension. **D 123, D13**

slack pick, n—a single filling yarn woven under insufficient tension. (*Syn.* loose pick, slack filling) **D 3990, D13**

slack quenching, n—the incomplete **hardening** of a steel object due to **quenching** from the austenitizing temperature at a rate slower than the **critical cooling rate** for the particular steel composition, resulting in the formation of one or more transformation products in addition to martensite. **A 941, A01**

slack selvage, n—slack ends in the fabric edge. **D 123, D13**

slack selvage, n—slack ends in the fabric edge. (*Syn.* baggy selvage, loose edge, stringy selvage, wavy selvage) **D 3990, D13**

slack tannage—(1) incompletely tanned leather, evidenced by a raw or undertanned streak in the central layer of a piece.

(2) A light tannage, that is, deliberately less than usual.

slack thread—See **slack end**. **D 3990, D13**

slack warp—See **slack end**. **D 3990, D13**

slag—partially fused mixture of spilled batch, overflowed glass, breeze coal, and clay from the sieve. **C 162, C14**

slag—the fused agglomerate which separates in metal melting and floats on the surface of the molten metal. (See also **blast-furnace slag**.) **D 1079, D08**

slag cement, n—a hydraulic cement consisting predominantly of ground, granulated blast-furnace slag. **C 219, C01**

slagging of refractories, n—destructive chemical reaction between refractories and external agencies at high temperatures resulting in the formation of a liquid. **C 71, C08**

slaking—the chemical reaction that produces hydrated lime when quicklime and water are mixed. **C 51, C07**

slaking—deterioration of rock on exposure to air or water. **D 653, D18**

slaking—the process of breaking up or sloughing when an indurated soil is immersed in water. **D 653, D18**

slam-off, n—in *wovenfabrics*, a distortion due to the entrapment of the filling carrier in the shed. **D 123, D13**

slam-off, n—in *wovenfabrics*, a distortion due to the entrapment of the filling carrier in the shed. (Compare **smash**) **D 3990, D13**

slant—a piece of vitrified clay pipe made so that one end has a plane of approximately 45° or 60° to its longitudinal axis. The end may be made with a contoured surface to fit another pipe. **C 896, C04**

slanted magazine—a magazine attached at an angle to tool; used for storing clips of slanted nails or staples. **F 592, F16**

slat, n—a thin flat strip of material used as a member of a **box, crate, pallet, basket**, or other similar structure. A basket **stave**. **D 996, D10**

slate—microcrystalline metamorphic rock most commonly derived from shale and composed mostly of micas, chlorite, and quartz. The micaceous minerals have a subparallel orientation and thus impart strong cleavage to the rock which allows the latter to be split into thin but tough sheets. **C 119, C18**

slater's cement, n—a type of caulking compound, usually gray in color, and used to cover exposed bolt heads or at the side and end laps of corrugated roofing and in other places where water-resistant putty-like material is desired. **C 1154, C17**

slaters' cement—a type of caulking compound, usually gray in color, and used to cover exposed bolt heads or at the side and end laps of corrugated roofing and in other places where water-resistant putty-like material is desired. **D 2946, C17**

slating nail—galvanized, regular-stock-steel, 1 by 0.106 to 2 by 0.148-in. nails with slightly countersunk 5/16 to 7/16-in. flat head and medium diamond point. Also, aluminum-alloy, 7/8 by 0.106 to 1 1/2 by 0.135-in. nails with large flat 5/16 to 3/8-in. head and medium diamond point. Also, solid copper, 7/8 by 0.109 to 3 by 0.148-in. nails with large flat head and medium diamond point. **F 547, F16**

slats—dried, untanned sheepskins, with little or no wool. **D 1517, D31**

sleek—an imperfection; a fine scratchlike mark having smooth boundaries, usually produced by a foreign particle in the polishing operation. **C 162, C14**

sleeve—a coupling which contains or compresses the sealing element and meets the requirements of the standard. The sleeve may be affixed to one end of the pipe at the factory. **C 896, C04**

sleeve, n—in *packaging*, a form, made of various materials and in various shapes, usually open at both ends, that is slipped over an item. **D 996, D10**

sleeve, n—(1) *inconcrete, masonry, or other construction*, a tubular section of sheet metal or other material placed to provide a pocket or opening for the insertion of a railing or other member. (2) an internal or external tubular splice between abutting sections of **pipe, tubing**, or similar members.

sliding glass door—See **windows and doors**.

slip joint—See **joint**.

slope, n—See **pitch**.

slump—See **block flow**.

small quantity—see **hazardous-waste small quantity generator**. **E 631, E06**

sleeved grout pipe—see **tube A manchette**. **D 653, D18**

sleeve interconnection, n—an interconnection in which an implant component passes through any opening that limits motion in one or more planes. **F 1582, F04**

sleeve, post—a specified length of tube or pipe set into a concrete wall, grade beam, or slab, into which fence posts are later placed. **F 552, F14**

sleeve roll-up—a sleeve carrier formed of flat canvas-like material in which a pair of sleeves is rolled lengthwise. **F 819, F18**

sleeves, n—the tubular fireclay shapes that encase an immersed metal rod in the valve assembly of a bottom-pouring ladle. **C 71, C08**

sleeve shoulder roll—the rolled or reinforced edge of an insulating sleeve nearest to the shoulder. **F 819, F18**

sleeve, top rail—a fitting used to join two pieces of top rail when a swedged top rail is not used. **F 552, F14**

sleeve-type reference electrode—a reference electrode in which the filling solution contacts the sample solution by means of a narrow ring-shaped opening between a removable outer sleeve and the inner body of the electrode. The space between the body and sleeve widens above the tip to form a reservoir for the filling solution. Sleeve-type electrodes provide exceptionally stable junction potentials, making them especially suitable for specific ion and precision pH measurements. The junction area, due to its size and the high-leak rate of the internal filling solution, does not easily become clogged. **D 4127, D19**

sleeving, n—braided, knitted, or woven fabric of cylindrical form

- having a width less than 100 mm (4 in.) (circumference less than 200 mm (8 in.)). (See also **tubing**.) **D 123, D13**
- sleeving, n**—braided, knitted, or woven fabric of cylindrical form having a width less than 100 mm (4 in.) (circumference less than 200 mm (8 in.)). **D 7018, D13**
- slenderness ratio, n**—the effective unsupported length of a uniform column divided by the least radius of gyration of the cross-sectional area. **E 6, E28**
- slender, slim nail**—nails with shank diameter usually at least one gage smaller than common nails of same length. **F 547, F16**
- sley, n**—the number of warp ends per 25 mm (1 inch) of fabric width, exclusive of selvage. **D 123, D13**
- sley, n**—the number of warp ends per 25 mm (1 in.) of fabric width, exclusive of selvage. **D 4850, D13**
- sliced veneer**—See under **veneer**. **D 1038, D07**
- slicer**—machine for producing veneer by slicing. **D 1038, D07**
- slide pump sprayer**—a sprayer consisting of a telescoping pump operated by both hands. On the outlet end of the pump is mounted a spray nozzle. On the inlet of the pump is attached a line leading to a container containing the spray solution. **E 1102, E35**
- slider**—that member of a sliding contact pair, normally the smaller, which may be moved through a range of locations on the opposing member. **B 542, B02**
- slider, n—in zippers**, the part that opens a zipper when it is moved in one direction and closes the zipper when it is moved in the opposite direction. **D 123, D13**
- slider, n**—the part that opens a zipper when it is moved in one direction and closes the zipper when it is moved in the opposite direction. **D 2050, D13**
- slider, automatic lock**—See **automatic lock slider**. **D 2050, D13**
- slider, cam lock**—See **cam lock slider**. **D 2050, D13**
- slider, flange lock**—See **flange lock slider**. **D 2050, D13**
- slider, pin lock**—See **pin lock slider**. **D 2050, D13**
- slider, ratchet lock**—See **ratchet lock slider**. **D 2050, D13**
- slider, releasing**—See **releasing slider**. **D 2050, D13**
- slide surface, n—in the rotor of an open-end spinning machine**, that part of the internal surface of the rotor on which the fibers are deposited and are caused to slide to the collecting surface. **D 123, D13**
- slide surface, n—in the rotor of an open-end spinning machine**, that part of the internal surface of the rotor on which the fibers are deposited and are caused to slide to the collecting surface. **D 3888, D13**
- sliding**—a defect in the draining characteristics of slip wherein patches of the coating slide, producing an uneven coating. **C 286, B08**
- sliding**—relative displacement of two bodies along a surface, without loss of contact between the bodies. (ISRM) **D 653, D18**
- sliding braking coefficient, n—of a tire**, the braking coefficient for a non-rotating tire that occurs after wheel lock-up. **F 538, F09**
- sliding electrical contacts**—contacting members that perform their function while undergoing relative tangential motion. **B 542, B02**
- sliding wear, n**—wear due to the relative motion in the tangential plane of contact between two solid bodies. **G 40, G02**
- slightly cloudy pyridine**—quantitative index of turbidity observed with aqueous solution of pyridine, the latter containing trace amounts of oil. **D 4790, D16**
- slime**—biological deposits of gelatinous or filamentous matter. **D 6161, D19**
- sling, n**—a runner. **F 1773, F08**
- slinger**—see **centrifugal atomizer**. **E 1620, E29**
- slinging, n**—see **spraying**. **D 6488, D01**
- sling psychrometer**—See **psychrometer**. **D 1356, D22**
- slip, n**—a suspension of clay and mineral particles in a water medium applied to a ceramic body that, when fired, may function as a glaze or an engobe. **C 43, C15**
- slip**—a slurry containing chemical additives to control rheology. **C 242, C21**
- slip**—translation of a portion of a crystal relative to the adjacent portion. **E 7, E04**
- slip**—displacement of an anchor with respect to the surrounding base material. **E 2265, E06**
- slip angle, n—of a tire**, the angle between the X' -axis and direction of travel of the center of tire contact. **F 538, F09**
- slip angle, critical, n**—the value of the slip angle at the maximum of lateral force coefficient. **F 538, F09**
- slip bands**—See **slip lines**. **E 7, E04**
- slip casting, n**—a method of forming metal or ceramic shapes by pouring a stabilized fluid suspension of powder, usually water based, into the shaped cavity of a fluid-absorbing mold, followed by debinding and sintering. **B 243, B09**
- slip casting**—See **drain casting** and **solid casting** under **casting**. **C 242, C21**
- slip coating**—a ceramic material or mixture other than a glaze, applied to a ceramic body and fired to the maturity required to develop specified characteristics. **C 242, C21**
- slipcover, n**—a removable, fitted protective textile cover, often decorative and specifically made for upholstered furniture. (See **furniture covering**.) **D 123, D13**
- slipcover, n**—a removable, fitted protective textile cover, often decorative and specifically made for upholstered furniture. (See **furniture covering**.) **D 7023, D13**
- slipe wool**—See **pulled, wool**. **D 4845, D13**
- slip-fiber**—asbestos that is located in, or derives from, veins or seams in which the fibers are oriented approximately parallel to each other and inclined at a small angle to the boundaries of the vein or seam and usually not as closely packed as are cross-fibers. **D 2946, C17**
- slip friction number, n**—the quotient of the longitudinal friction force in the road plane over the normal load force at any instant in time and location, multiplied by 100. **E 867, E17**
- slip glaze**—See **slip glaze** under **glaze**. **C 242, C21**
- slip joint**—a joint allowing axial sliding movement of joined parts. **E 631, E06**
- slip lines (slip bands)**—traces of slip planes observed at low magnifications on the polished surface of a crystal which has been deformed after polishing; since no differences in orientation exist, repolishing will remove the traces. With increasing resolving power and magnification, an individual line may be revealed as a series of parallel lines. The "line" which is visible at low magnifications is then described as a slip band. **E 7, E04**
- sliplining**—a method of inserting new pipe into an existing pipeline. **C 896, C04**
- slippage, n**—the movement of adherends with respect to each other during the bonding process. **D 907, D14**
- slippage**—relative lateral movement of adjacent components of a built-up membrane. It occurs mainly in roofing membranes on a slope, sometimes exposing the lower plies or even the base sheet to the weather. **D 1079, D08**
- slippage cracking, n**—cracking associated with the horizontal displacement of a localized area of the pavement surface. **E 867, E17**
- slippage cracking, n**—cracking associated with the horizontal displacement of a localized area of the pavement surface. **E 1778, E17**
- slipping layer, n**—a layer applied to a dye diffusion thermal transfer ribbon which promotes smooth flow of the ribbon through the printer. **F 1623, F05**
- slip planes**—in a given metal, slip occurs most easily along certain crystallographic planes. Hence, these planes are termed slip planes. **E 7, E04**
- slip process**—See **wet process** under **process**. **C 242, C21**
- slip resistance**—the frictional force opposing movement of an object across a surface. **C 242, C21**
- slip resistance**—frictional force opposing movement of an object

slip resistance

across a surface, usually with reference to the sole or heel of a shoe on a floor. **D 2825, D21**

slip resistance, n—the ability to counteract loss of traction. **F 141, F06**

slip resistance—resistance of sheet carbon to slippage when placed between multiple sheets of copy paper. **F 221, F05**

slip ring—a continuous metal ring by means of which electrical current can be conducted to or from brush contacts. One electrical contact member is designed to rotate with respect to the other. **B 542, B02**

slip ring assembly—two or more slip rings with connecting leads or terminals that have been mounted to a common structure. **B 542, B02**

slip ring capsule—an assembly that includes a slip ring assembly, brushes, and bearings for conducting current on multiple circuits from a stationary body to one that may rotate. **B 542, B02**

slip roll ink buildup, n—an undesirable accumulation of ink on the dampening rolls of a continuous type dampening system. **D 6488, D01**

slip (rupture) crack, n—*in a rigid die system*, a defect that occurs typically at the junction between levels of a multilevel part (occurs during the pressing cycle while powder is transferring from one level (area) to another). **B 243, B09**

slip, slurry—a suspension of finely divided ceramic material in liquid. **C 286, B08**

slipsole—a half-sole extending from the toe of the shoe to the shank on the bottom surface. **F 869, F08**

slip speed, n—the difference between the speed of the axis of the measuring wheel, which is equal to the traveling speed of the measuring device, and the tangential velocity measuring wheel with undeflected radius *r*. **E 867, E17**

slip-to-skid friction number, n—the value of the slip friction number at which the test wheel reaches zero rotational speed during a brake test. **E 867, E17**

slit—a narrow aperture, usually rectangular in shape. **E 7, E04**

slit failure—a form of brittle failure which exhibits only a very small crack through the wall of the pipe with no visible (to the naked eye) material deformation in the area of the break. **F 412, F17**

slit system—a group of two or more slits arranged to define a beam. **E 7, E04**

sliver—(slī-ver) a bundle of untwisted, substantially parallel glass fibers. **C 162, C14**

sliver, n—a continuous strand of loosely assembled fibers that is approximately uniform in cross-sectional area and without twist. **D 123, D13**

sliver—a continuous strand of loosely assembled fibers that is approximately uniform in cross-sectional area and without twist. **D 1695, D01**

sliver, n—a continuous strand of loosely assembled fibers that is approximately uniform in cross-sectional area and without twist. **D 4845, D13**

sliver, n—a continuous strand of loosely assembled fibers that is approximately uniform in cross-sectional area and without twist. **D 4849, D13**

sliver knitted fabric, n—a single-jersey fabric in which untwisted staple fibers are knitted in at each loop to form a pile surface on the technical back of the jersey structure. **D 123, D13**

sliver knitted fabric, n—a single-jersey fabric in which untwisted staple fibers are knitted in at each loop to form a pile surface on the technical back of the jersey structure. **D 7022, D13**

slivers—particles of nearly square or rectangular cross-section with a length parallel to the grain of the wood of at least four times the thickness. **D 1554, D07**

slope, n—*in roofing*, the incline of a roof expressed as a ratio of the height in millimetres (inches) of vertical rise per horizontal distance in metres (feet). **C 1154, C17**

slope—the excavated rock surface that is inclined to the vertical or horizontal, or both, as in an open-cut. (ISRM) **D 653, D18**

slope—the tangent of the angle between the roof surface and the horizontal plane, expressed as a percentage, or in inches of rise per foot of horizontal distance. (See also **incline**). **D 1079, D08**

slope—the incline of a roof expressed as a ratio of the height in millimetres (inches) of vertical rise per horizontal distance in metres (feet). **D 2946, C17**

slope—the angle between the horizontal axis and the line formed by plotting electrode potentials against ion level on semilogarithmic graph paper. By analogy, slope has also come to be a measure of electrode response to the ion being detected. Theoretical Nernstian slope, which is temperature-dependent, is 59.16 mV at 25°C for a ten-fold change in the activity of a monovalent ion and 29.58 mV for a divalent ion. Less than theoretical slopes (that is, smaller millivolt changes per decade) are observed if potentials are plotted against concentration, if interferences are present, or if liquid electrodes need renewal. Greater than theoretical slopes are relatively rare and usually indicate that more than one electrode process is occurring. **D 4127, D19**

slope—the ratio of rise (change in Y-axis) to run (change in X-axis) for a linear curve or tangent to a point on a non-linear curve. **E 2161, E37**

slope indicator, n—the rate of change of the slip friction number expressed as an angle near the peak slip friction number. **E 867, E17**

slot scanner, n—the scanning portion of a point-of-sale system embedded within a retail checkout counter. **F 1294, F05**

slot seam, n—a complex seam formed on the inside of the object, having a decorative seam underlay slightly visible from the face side held in place by two visible rows of stitching. **D 123, D13**

slot seam, n—*inhome sewing*, a complex seam formed on the inside of the product, having a decorative seam underlay slightly visible from the face side, and held in place by two visible rows of stitching. **D 4965, D13**

slotted head—head provided with cut or struck slot for insertion of screwdriver or to simulate head of wood screw. **F 547, F16**

slough-off, n—*inwoven fabrics*, a defect caused by several coils of yarn slipping off the filling bobbin simultaneously and being woven into the fabric in a group. **D 123, D13**

slough-off, n—*inwoven fabrics*, a defect caused by several coils of yarn slipping off the filling bobbin simultaneously and being woven into the fabric in a group. **D 3990, D13**

sloughs—a stagnant or sluggish channel of water in a flood plain. **D 4410, D19**

slow crack growth (SCG), n—subcritical crack growth (extension) which may result from, but is not restricted to, such mechanisms as environmentally-assisted stress corrosion or diffusive crack growth. **C 1145, C28**

slow stable crack extension [L]—a displacement controlled crack extension beyond the stretch zone width. The extension stops when the applied displacement is held constant. **E 1823, E08**

slow test—see **consolidated-drain test**. **D 653, D18**

slub, n—an abruptly thickened place in a yarn. (See **lump, piecing, slough-off, slug**. Compare **cockles**) **D 123, D13**

slub, n—an abruptly thickened place in a yarn. (*Syn.* **lump, piecing, slough-off, slug**) (Compare **cockles**) **D 3990, D13**

slub, n—an abruptly thickened place in a yarn. (*Syn.* **lump, piecing, slough-off, slug**. Compare **cockles**) **D 4849, D13**

sludge—a water charged sedimentary deposit. **D 653, D18**

sludge, n—a water-formed sedimentary deposit. **D 1129, D19**

sludge, n—an undesirable residue in rubber latex. **D 1566, D11**

sludge, n—*in internalcombustion engines*, a deposit, principally composed of insoluble resins and oxidation products from fuel combustion and the lubricant, that does not drain from engine parts but can be removed by wiping with a cloth. **D 4175, D02**

sludge, n—a precipitate or sediment from oxidized mineral oil and water. **D 4175, D02**

sludge, n—*in manualtransmissions and final drive axles*, a deposit principally composed of the lubricating oil and oxidation products

that do not drain from parts but can be removed by wiping with a cloth. **D 4175, D02**

sludge—any mixture of solids that settles out of solution. Sludges contain liquids that are not apparent as free liquids. **D 5681, D34**

sludge—a water-formed sedimentary deposit. **D 6161, D19**

sludge blanket—suspended bed of solids in a solids contact or sludge blanket clarifier. **D 6161, D19**

sluffing—a condition wherein scales peel off or become loose, either partially or entirely, from the pultrusion.

NOTE—This term is applied to an occurrence during the pultrusion process and is not to be confused with scraping, prying, or physically removing the scale from the pultrusion. “Sluffing” is sometimes spelled “sloughing”. **D 3918, D20**

slug—any nonfibrous glass in an insulating glass fiber product. **C 162, C14**

slug, *n*—in raw silk, a thickened place several times the diameter of the yarn, 3 mm (1/8 in.) or over in length. **D 123, D13**

slug—a volume of water or solid object used to induce a sudden change of head in a well. **D 653, D18**

slug, *n*—in glass, unattenuated particles of glass of substantially larger diameter than the average filament diameter. (*Syn.* lump, piecing, slough-off, slub) **D 3990, D13**

slug, *n*—in raw silk, a thickened place several times the diameter of the yarn three millimetres (3/8 in.) or over in length. **D 3990, D13**

slug, *n*—See **liquid jet**. **G 40, G02**

slugged bottom—See **heeltap**. **C 162, C14**

slump—a measure of consistency of freshly mixed concrete or grout. See also **slump test**. **D 653, D18**

slump—See **block flow**. **E 1749, E06**

slumping, *n*—the lack of shape retention of a molded part, during subsequent processing, because of the effect of gravity. **B 243, B09**

slumping—See **sagging**. **C 162, C14**

slump test—a test to determine consistency of slip whereby measurement is made of the spreading of a specified volume of slip over a flat plate. **C 286, B08**

slump test—the procedure for measuring slump (Test Method C 143). **D 653, D18**

slunk—the skin of an unborn or prematurely born animal, especially calf. **D 1517, D31**

slurring, *n*—slurring is a printing defect that occurs in offset printing, manifested as changes in the geometry of the halftone dots. **D 6488, D01**

slurry—a suspension of solids in water. **B 374, B08**

slurry—a prepared mixture consisting of a free-flowing suspension of undissolved solid(s) in a liquid medium; not a paste. **C 242, C21**

slurry, *n*—any pourable suspension of a high content of insoluble particulate solids in a liquid medium, most often water. **C 1145, C28**

slurry—a suspension of solid particles in a liquid that can be separated by filtration or sedimentation (does not include emulsions). **E 1547, E15**

slurry, *n*—a suspension of solids in liquid. **E 1620, E29**

slurry, *n*—a mixture of water and any finely divided insoluble material in suspension. **E 2201, E50**

slurry, *n*—a suspension of solid material in liquid (**C 242**) **G 40, G02**

slurry-broadcast resin monolithic surfacing—a flooring system whereby a dry inert filler is added to a catalyzed resin binder to yield a semi-flowable consistency. This mixture is then poured onto the substrate and spread to desired thickness, followed immediately by seeding the fresh surface to excess with a dry inert filler. Upon hardening, any unbonded filler is removed. The application may be repeated once or several times to yield a greater thickness of surfacing. A top coat may be applied. **C 904, C03**

slurry cutoff wall—a vertical barrier constructed by excavating a vertical slot under a bentonite slurry and backfilling it with

materials of low permeability for the purpose of the containment of the lateral flow of water and other fluids. **D 653, D18**

slurry grout—a fluid mixture of solids such as cement, sand, or clays in water. **D 653, D18**

slurry seal, *n*—an application of a fluid mixture of bituminous emulsion, fine aggregate, mineral filler, and water to an existing pavement. **D 8, D04**

slurry trench—a trench that is kept filled with a bentonite slurry during the excavation process to stabilize the walls of the trench. **D 653, D18**

slush grouting—application of cement slurry to surface rock as a means of filling cracks and surface irregularities or to prevent slaking; it is also applied to riprap to form grouted riprap. **D 653, D18**

slushing—the manipulation of dipped ware to distribute the slip uniformly and remove excess material. **C 286, B08**

small quantity—see **hazardous-waste small quantity generator**. **E 1605, E06**

small timbers—a term used mostly to designate square or near-square dimension and timber sizes over 2 and under 9 in. in nominal thickness. **D 9, D07**

smash, *n*—in wovenfabrics, a relatively large hole characterized by broken warp ends and floating picks. (Compare **slam-off**) **D 123, D13**

smash, *n*—in wovenfabrics, a relatively large hole characterized by broken warp ends and floating picks. (*Syn.* break-out) (Compare **slam-off**) **D 3990, D13**

SMBS—sodium metabisulfite, Na₂S₂O₅. **D 6161, D19**

smear fastness, *n*—the ability of an ink and substrate combination to resist ink transfer from a printed area to an unprinted area when swiped by objects or instruments. **F 1857, F05**

smear resistance—the ability of a polished surface to remain uncuffed when touched. **D 2825, D21**

smell, *n*—See **aroma**. **E 253, E18**

smelt—a specific batch or lot of frit. **C 286, B08**

smelter—a furnace in which the raw materials of a frit batch are melted. **C 242, C21**

smelter—a furnace in which the raw materials of the frit batch are melted. **C 286, B08**

smelter drippings—drippings of molten glassy material formed on the crown of the smelter. **C 286, B08**

smelt (*n*)—a specific batch or lot of frit. **C 242, C21**

smelt (*v*)—the act of melting a batch of frit. **C 242, C21**

smog, *n*—a term derived from smoke and fog, applied to extensive atmospheric contamination by aerosols, these aerosols arising partly through natural processes and partly from the activities of human subjects. **D 1356, D22**

smoke—in flat glass, streaked areas appearing as slight discoloration. **C 162, C14**

smoke, *n*—small gas-borne particles resulting from incomplete combustion, consisting predominantly of carbon and other combustible material, and present in sufficient quantity to be observable independently of the presence of other solids. **D 1356, D22**

smoke, *n*—the airborne solid and liquid particulates and gases evolved when a material undergoes pyrolysis or combustion. **E 176, E05**

smoke, *n*—the airborne solid and liquid particulates and gases evolved when a material undergoes pyrolysis or combustion. **E 176, E05**

smoked—(1) a term applied to the discoloring of glass in a reducing flame. **C 162, C14**

(2) glass covered with smoky film from open-fired lehrs. **C 162, C14**

smoke developed index, *n*—a comparative measure expressed as a dimensionless number, derived from measurements of smoke obscuration versus time in Test Method E 84. **E 176, E05**

smoke developed index, *n*—a number or classification indicating a

smoke developed index, *n*

comparative measure derived from smoke obscuration data collected during the test for surface burring characteristics.

E 176, E05

smoke obscuration, *n*—reduction of light transmission by smoke, as measured by light attenuation.

E 176, E05

smoke obscuration, *n*—reduction of light transmission by smoke, as measured by light attenuation.

E 176, E05

smoke obscuration, *n*—the reduction in visibility due to smoke (ISO Guide 52).

E 176, E05

smoke point, *n*—the maximum height of a smokeless flame of fuel burned in a wick-fed lamp.

D 4175, D02

smoke toxicity, *n*—the propensity of smoke to produce adverse biochemical or physiological effects. (See **smoke**.)

E 176, E05

SMOKE unit, *n*—the concentration of smoke particulates in a cubic metre of air that reduces the percent transmission of light through a 1-m path to 10 %. SMOKE = standard metric optical kinetic emission.

E 176, E05

smoldering, *n*—the combustion of a solid material without accompaniment of flame but generally with the production of smoke. (See also **afterglow** and **glow**.)

D 123, D13

smoldering, *n*—the combustion of a solid material without accompaniment of flame but generally with the production of smoke. (See also **afterglow** and **glow**.)

D 4391, D13

smoldering, *n*—combustion of a solid without flame, often evidenced by visible smoke.

E 176, E05

smooth—a non-reflective surface with a barely-visible surface pattern of random markings, produced by mechanical abrasion.

C 119, C18

smooth—{archaic} finely ground surface prior to polishing.

C 162, C14

smooth crack growth behavior—generally, crack extension in chevron-notch specimens which is characterized by slow, continuously advancing crack growth, and a relatively smooth force displacement record. However, any test behavior is automatically characterized as smooth crack-growth behavior unless it satisfies the conditions for crack-jump behavior.

E 1823, E08

smooth-edge carpet plywood strip nail—hardened-steel, $1\frac{1}{16}$ by 0.105-in. nail with countersunk flat $\frac{7}{32}$ -in. head and long diamond point.

F 547, F16

smooth finish, *n*—the surface texture resulting when faces are not altered or marked in the extrusion process, but are left as formed by the die.

C 43, C15

smoothing, *n*—a process in a CAD vendor's system that adds curve interpolation points to a curve. (See **curve interpolation point**.)

D 6963, D13

smoothing—XPS, a mathematical treatment of the data to reduce the noise.

E 673, E42

smoothness, *n*—a measure of the surface roughness or topography of a thermal substrate, critical for optimum printhead contact.

F 1623, F05

smooth-surfaced roof—a built-up roof without mineral aggregate surfacing.

D 1079, D08

smooth-trowel finish, *n*—a uniform finish free of grainy or coarse areas, trowel marks, or other avoidable imperfections.

C 11, C11

smooth - two - side hardboard (S2S)—hardboard produced from a dry mat pressed between two smooth hot platens.

D 1554, D07

smooth (-wall) blasting—a method of accurate perimeter blasting that leaves the remaining rock practically undamaged. Narrowly spaced and lightly charged blastholes, sometimes alternating with empty dummy holes, located along the breakline and fired simultaneously as the last round of the excavation. (ISRM)

D 653, D18

smudge—the tendency of an image to smear or streak onto an adjacent area when rubbed; involves the redeposition of abraded material.

F 221, F05

smudge—a coloration on the CF surface caused by contact with ruptured capsules on the CB surface.

F 549, F05

smudge resistance—the ability of an image to withstand smudging.

F 221, F05

smudging—the tendency of a developed electrostatic image to smear upon rubbing.

F 335, F05

SNA—abbreviation for **system network architecture**.

F 1457, F05

snag, *n*—*in fabrics*, a yarn or part of a yarn pulled or plucked from the surface.

D 123, D13

snag, *n*—*in fabrics*, a yarn or part of a yarn pulled or plucked from the surface.

D 3990, D13

snag, *n*—*in fabrics*, a yarn or part of a yarn pulled or plucked from the surface.

D 4850, D13

snagging resistance, *n*—*in fabrics*, the property of a fabric whereby yarns or parts of yarns are prevented or inhibited from being pulled or plucked from the surface.

D 123, D13

snagging resistance, *n*—*in fabrics*, the property of a fabric whereby yarns or parts of yarns are prevented or inhibited from being pulled or plucked from the surface.

D 4850, D13

snake, snaking—(1) progressive longitudinal cracking in continuous flat glass operation.

(2) *archaic*, variation in the width of the sheet during the sheet glass-drawing process.

(3) movement from side to side of the flat glass ribbon.

C 162, C14

snap—{archaic} a device for gripping a piece of formed glass for fire polishing and finishing.

C 162, C14

snap, *n*—vivid color imagery, high chroma color.

F 1857, F05

snap action, *n*—the force required to disengage a snap fastener resulting from a pull exerted perpendicular to the plane of material to which the snap fastener is attached.

D 123, D13

snap fastener, *n*—a device for attaching one material to another consisting of matching male and female parts, each of which is attached to a separate material so that the parts can be joined by a low compressive force and separated by a low perpendicular tensile force.

D 123, D13

snap temper, *n*—a precautionary interim stress-relieving treatment applied to a high-hardenability steel immediately after **quenching** to prevent cracking because of delay in **tempering** it at the prescribed higher temperature.

A 941, A01

snarl—See **kink**.

D 3990, D13

S-N curve—a plot of stress against the number of cycles to failure. The stress can be maximum stress, S_{max} ; minimum stress, S_{min} ; stress range, ΔS or S_r ; or alternating stress, S_a . The curve indicates the S-N relationship for a specified value of S_m , A , or R and a specified probability of survival. For N , a log scale is commonly used. For S , either a logarithmic or a linear scale is used.

E 1823, E08

S-N curve for *p* % survival—a curve fitted to the fatigue life for p % survival values at each of several stress levels. It is an estimate of the relationship between applied stress and the number of cycles-to-failure that p % of the population would survive where p may be any percent, such as 95, 90, and so forth.

E 1823, E08

S-N curve for 50 % survival—a curve fitted to the median values of fatigue life at each of several stress levels. It is an estimate of the relationship between applied stress and the number of cycles-to-failure that 50 % of the population would survive.

E 1823, E08

S-N diagram, *n*—a plot of stress against the number of cycles to failure. The stress can be maximum stress S_{max} , minimum stress S_{min} , stress range S or S_r , or alternating stress S_a . The diagram indicates the S-N relationship for a specified value of S_m (*mean stress*) A , or R (*load or stress ratio*), and a specified probability of survival. For N , a log scale is almost always used. For S , a linear scale is used most often, but a log scale is sometimes used.

F 1582, F04

Snell's law, *n*—the product of the sine of the angle of refraction by the refractive index of the refracting medium is equal to the product of the sine of the angle of incidence by the index of refraction of the medium containing the incident beam.

E 284, E12

- sniffing probe*—Same as **sampling probe**. E 1316, E07
- snip**—the area of a stone surface from which a chip has been dislodged. C 119, C18
- snipe*—See **machine bite**. D 9, D07
- snow, n**—a solid form of wet deposition composed of white or translucent ice crystals chiefly in complex hexagonal form and often agglomerated into snowflakes. D 1356, D22
- snow**—ice crystals precipitated from the atmosphere, mainly in complex hexagonal form, and often agglomerated into snowflakes. D 7099, D18
- snow anchor, n**—a device driven into or buried in snow to provide a belay or protection anchor. F 1773, F08
- snow ball*—See **fuzz ball**. D 3990, D13
- snowboard**—a single plane device ridden with a sideways stance with the feet somewhat perpendicular to the longitudinal axis of the device. The user slides on snow similar to the way a skier does, except with both feet attached to a single, wide ski. F 1107, F27
- snowboard afterbody**—that portion of the snowboard aft of Point *O*, a distance of $L_c/2$. F 1107, F27
- snowboard bindings (feet retainers)**—apparatuses that attach the rider's feet to the snowboard. The three types of snowboard bindings have been identified as follows:
- hard boot snowboard bindings*—these are designed to be used with hard boots, retaining the boots by means of attaching the boot sole to the binding.
- soft boot snowboard bindings*—these are designed to be used with soft boots, retaining the boots by means of binding straps across the toe and ankle areas.
- step-in snowboard bindings*—these are designed to be used with boots designed specifically for that binding. The boot and binding interlock by mechanical means. F 1107, F27
- snowboard body**—the portion of the snowboard within the dimension of L_c . F 1107, F27
- snowboard body center**—Point *O*, located a distance of $L_c/2 + L_t$ from the tail of the snowboard. F 1107, F27
- snowboard boots**—footwear appropriate for use with snowboard and snowboard bindings. The three types of snowboard boots have been identified as follows:
- hard snowboard boots*—plastic shell alpine ski-type outer boots with the inner boot consisting of an alpine ski boot-type bladder for comfort and warmth. They are designed to be used with hard boot snowboard bindings.
- soft snowboard boots*—outer boots typically consisting of a rubber or plastic lower portion and a leather or nylon upper portion; the inner boot consists of an alpine ski boot-type bladder for warmth and support. They are designed to be used with soft boot snowboard bindings.
- step-in snowboard boots*—these are defined to be used with bindings designed specifically for that boot. The boot and binding interlock by mechanical means. F 1107, F27
- snowboard forebody**—that portion forward of Point *O*, a distance of $L_c/2$. F 1107, F27
- snowboard longitudinal centerline**—(1) *symmetrical snowboard*: the longitudinal axis of symmetry; (2) *asymmetrical snowboard*: the longitudinal line that passes through the center of the insert pattern or through the manufacturer-indicated centers of binding mount areas on snowboard without inserts. F 1107, F27
- snowboard shoulder**—the widest point in the shovel section of the snowboard. F 1107, F27
- snowboard tail**—the extreme rear edge of the snowboard. F 1107, F27
- snowboard tip**—the extreme forward point of the snowboard. F 1107, F27
- snowboard width, W**—the horizontal perpendicular distance between two vertical parallel planes, placed on either edge of the snowboard, parallel to the longitudinal centerline of the snowboard. F 1107, F27
- snowcover**—the accumulation of fallen snow. D 7099, D18
- snowdrift**—an accumulation of wind-blown snow, often much thicker than the surrounding snowcover. D 7099, D18
- snow flaking, n**—the appearance of tiny, white unprinted specks (voids) in type or solids, or both, in offset printing that can be caused by excessive emulsification. D 6488, D01
- snow flaking, n**—small white spots in a printed area caused by the absence of ink. D 6488, D01
- snow, hard pack, n**—*in tire testing*, packed base without loose snow. F 538, F09
- snowline**—the boundary of a highland region in which snow never melts. D 7099, D18
- snow, medium hard pack, n**—*in tire testing*, packed base with some loose snow. F 538, F09
- snow, medium pack, n**—*in tire testing*, groomed packed base with 2.5 to 5.0 cm (1 to 2 in.) loose snow. F 538, F09
- snowmelt**—(1) melting of the snowcover; (2) the period during which the melting of the snowcover occurs at the end of winter. D 7099, D18
- snowpatch**—a relatively small area of snowcover, remaining after the snowmelt period. D 7099, D18
- snow, soft pack, n**—*in tire testing*, freshly fallen or deeply groomed base snow with 5.0 to 7.5 cm (2 to 3 in.) loose snow. F 538, F09
- snuffed top grain, top grain snuffed*—see **corrected grain**. D 1517, D31
- soaking, n**—prolonged holding at a selected temperature. A 941, A01
- soaking heat, n**—a test condition in which the specimen is completely immersed in an atmosphere maintained at a controlled temperature. C 168, C16
- soaking pit**—a conditioning furnace used to bring the glass in open pots to a uniform temperature for casting. C 162, C14
- soap, n**—a cleaning agent usually consisting of sodium or potassium salts of fatty acids. D 123, D13
- soap**—the product formed by the saponification or neutralization of fats, oils, waxes, rosins, or their acids with organic or inorganic bases.
- anhydrous soap*—soap, free of water and all other concomitants.
- blended soap (for example, blended palm oil soap)*—a soap in which more than half but not all of the fatty acid stock is from the source stated.
- built soap*—a mixture of soap and one or more builders containing not less than 50 % of anhydrous soap.
- neutral soap*—an essentially unbuilt soap substantially free from uncombined alkali or fatty matter.
- soap powder*—a mixture in powdered form of soap and one or more alkaline detergents, but composed principally of the latter.
- straight soap (for example, straight palm oil soap)*—a soap in which the fatty acid stock is solely from the source stated.
- superfatted soap*—a toilet soap containing any one or more of the following: unsaponified oils, fats (triglycerides), fatty acids, lanolin and its derivatives, fatty esters or alcohols, and similar agents. See **fatty matter, free**. D 459, D12
- soap, n**—a cleaning agent usually consisting of sodium or potassium salts of fatty acids. D 3136, D13
- soap, n**—*in lubricatinggrease*, a product formed in the saponification (neutralization) of fats, fatty acids, or esters by inorganic bases. D 4175, D02
- soap skimmings (tall oil), n**—the curd, not acidified or otherwise processed, skimmed from the black liquor of the alkaline paper pulp industry, from which tall oil is obtained. D 804, D01
- soapstone (steatite)**—a talc-rich rock with a characteristic slippery feel. Soapstone is quarried for special purposes, such as fireplaces and laboratory counter tops, because of its refractory nature and resistance to acids. C 119, C18
- socket**—the portion of a jointing system that is designed to accept a plain-end pipe or a spigot-end pipe. C 896, C04
- socket**—the portion of a jointing system that is designed to accept a plain-end pipe or spigot-end pipe. F 412, F17

socket end

socket end—the end portion of a piping component which is designed to accept a plain-end piping component or spigot-end piping component. **F 412, F17**

socket-fused joint—see **joint, socket-fused**. **F 412, F17**

socket welding (machine)—a joining technique for thermoplastic pipe whereby the joining surfaces of the pipe and the fitting are inserted into a heating mandrel that is equipped with appropriate sized male and female heater bushings. The surfaces are heated to the melt point, removed, and held together under pressure until fused. **C 904, C03**

sock lining—a piece of material placed over the entire insole on the inside of a shoe to protect the foot from stitches on the inside in certain types of constructions. **F 869, F08**

soda—an industrial term for sodium oxide (Na_2O). Loosely, a carbonate of sodium. **C 162, C14**

soda lime glass—an abbreviated term for soda-lime-silicate glass. **C 162, C14**

soda-lime-silicate glass—glass compositions containing soda (Na_2O), lime (CaO), and silica (SiO_2) as the main ingredients. **C 162, C14**

sodium carboxymethylcellulose—see **carboxymethylcellulose**. **D 1695, D01**

sodium cycle, n—the operation of a cation-exchange unit wherein the removal of specific cations from the influent water is accomplished by exchange with an equivalent amount of sodium ion from the exchange material. **D 1129, D19**

sodium rhodizonate method—for lead detection, use of a dilute solution of sodium rhodizonate to spot test a painted surface qualitatively for the presence of lead. **E 631, E06**

sodium rhodizonate method—for lead detection, use of a dilute solution of sodium rhodizonate to spot test a painted surface qualitatively for the presence of lead. **E 1605, E06**

sodium sulfide method—for lead detection, use of a dilute solution of sodium sulfide to spot test a painted surface qualitatively for the presence of lead. **E 631, E06**

sodium sulfide method—for lead detection, use of a dilute solution of sodium sulfide to spot test a painted surface qualitatively for the presence of lead. **E 1605, E06**

soft (as in soft asbestos)—description of asbestos with relatively high softness. **D 2946, C17**

softcopy, n—non-self-sustaining image. See **hardcopy**. **E 284, E12**

softener, n—a compounding material used to produce a mix of reduced viscosity, which facilitates incorporation of rubber additives. **D 1566, D11**

softener—water treatment equipment that uses a sodium based ion-exchange resin principally to remove cations as calcium and magnesium. **D 6161, D19**

softening—see **membranesoftening**. **D 6161, D19**

softening point—the temperature at which a bitumen becomes soft enough to flow as determined by an arbitrary, closely defined method. **D 1079, D08**

softening point drift—a change in the softening point during storage or application. (See also **fallback**). **D 1079, D08**

softening point (S.P.)—that temperature at which a glass fiber of uniform diameter elongates at a specific rate under its own weight when measured by Test Method C 338. The viscosity at the softening point depends on the density and surface tension. For example, for a glass of density 2.5 g/cm^3 and surface tension 300 dynes/cm, the softening point temperature corresponds to a viscosity of $10^{6.6} \text{ Pa} \cdot \text{s}$. **C 162, C14**

softening temperature—the temperature, under specified conditions, at which porcelain enamel or frit begins to flow. **C 286, B08**

softening temperature (ST), n—in reference to the fusibility of coal and coke ash according to Test Method D 1857, the temperature at which the cone has fused down to a spherical lump in which the height is equal to the width at the base. **D 121, D05**

softening temperature, ST, n—the temperature at which a pyromet-

ric cone has fused down to a spherical lump in which the height is equal to the width at the base. **D 5681, D34**

softening temperature, ST—the temperature at which the cone has fused down to a spherical lump in which the height is equal to the width at the base. **D 5681, D34**

soft fire—a flame with a deficiency of air. **C 162, C14**

soft glass—(1) a glass of relatively low viscosity at elevated temperatures.

(2) a glass with a low softening point.

(3) commonly refers to a glass easy to melt. **C 162, C14**

soft mica, n—mica which when slightly bent shows a tendency to delaminate. **D 1711, D09**

softness, n—in water, the relative absence of dissolved calcium, magnesium, and other salts that react with soluble soaps to form insoluble precipitates. (Compare **hardness**.) **D 123, D13**

softness—inherent property of asbestos implying a high degree of flexibility and low cohesion. **D 2946, C17**

soft window coverings, n—curtains, draperies, or other accessories on wall or window openings that are either lined or unlined and primarily constructed of textile fabrics. **D 123, D13**

soft window coverings, n—curtains, draperies, or other accessories on wall or window openings that are either lined or unlined and primarily constructed of textile fabrics. **D 7023, D13**

soft wire—wire that has been drawn or rolled to final size and then heated to remove the effects of cold working. **B 354, B01**

softwoods—generally, one of the botanical groups of trees that in most cases have needlelike or scalelike leaves; the conifers; also the wood produced by such trees. The term has no reference to the actual hardness of the wood. **D 9, D07**

soft (X-rays)—of long wavelength. **E 7, E04**

soil, n—of coatings, disfiguring foreign materials such as dirt, soot, or stain, other than microorganisms, deposited on or embedded in a dried film of applied coating material; also called *dirt*. **D 16, D01**

soil—solid foreign matter embedded in or adhered on the surface. **D 2825, D21**

soil, n—weathered, unconsolidated mineral or unconsolidated organic materials overlying parent geological substrates characteristic of terrestrial or wetland habitats. **E 943, E47**

soilability—the relative ease with which extraneous matter attaches to or builds up on the surface of a material. **C 286, B08**

soil aggregate, n—natural or prepared mixtures consisting predominantly of stone, gravel, or sand which contain a significant amount of minus 75- μm (No. 200) silt-clay material. **D 8, D04**

soilant, n—a discoloring substance with a dispersed color component that is not in solution, and therefore can cling to the surface of a coating without penetrating into the film. **D 16, D01**

soil application—application of chemical made primarily to the soil rather than to vegetation. **E 609, E35**

soil binder—see **binder**. **D 653, D18**

soil bioengineering, n—in erosion control, the applications of engineering practices and ecological principles to design and construct systems composed of plant materials, frequently in association with inert materials and manufactured products to repair past or prevent future soil erosion and shallow slope failures. **D 653, D18**

soil collection container—a container for holding and transporting the soil sample from the field to the laboratory. A sealable rigid walled container or a resealable plastic bag can be used. The internal volume must be sufficient to hold the entire collected sample. **E 631, E06**

soil compaction—see **compaction, soil**. **F 412, F17**

soil (earth)—sediments or other unconsolidated accumulations of solid particles produced by the physical and chemical disintegration of rocks, and which may or may not contain organic matter. **D 653, D18**

soiled cloth—see **artificially soiled cloth**. **D 459, D12**

soiled end, n—self-descriptive. **D 3990, D13**

soil-forming factors—factors, such as parent material, climate,

vegetation, topography, organisms, and time involved in the transformation of an original geologic deposit into a soil profile. **D 653, D18**

soil gas—vadose zone atmosphere. **D 653, D18**

soil horizon—see **horizon**. **D 653, D18**

soiling, *n*—for *pileym floor covering*, a process by which dirt and other foreign material becomes attached to the surface pile causing a change in appearance. **D 123, D13**

soiling, *n*—for *pileym floor covering*, a process by which dirt and other foreign material becomes attached to the surface pile causing a change in appearance. **D 6584, D13**

soil injection—the mechanical placement of a pesticide beneath the soil surface with a minimum disturbance of the soil. **E 609, E35**

soil injection—the mechanical placement of a pesticide beneath the soil surface with a minimum disturbance of the soil (see Definitions E 609). **E 1102, E35**

soil (in reference to detergency)—matter out of place. **D 459, D12**

soil-lead hazard, *n*—**bare soil** on the property surrounding the building that contains or is presumed to contain lead at a concentration equal to or exceeding limits set in regulations promulgated by authorities having jurisdiction. **E 1605, E06**

soil mechanics—the application of the laws and principles of mechanics and hydraulics to engineering problems dealing with soil as an engineering material. **D 653, D18**

soil modification, *n*—a change to the physical or chemical characteristics of soils. **E 2201, E50**

soil physics—the organized body of knowledge concerned with the physical characteristics of soil and with the methods employed in their determinations. **D 653, D18**

soil profile (profile)—vertical section of a soil, showing the nature and sequence of the various layers, as developed by deposition or weathering, or both. **D 653, D18**

soil-redeposition—deposition of removed soil on a surface during a cleaning process. **D 459, D12**

soil retention—the property of holding foreign matter in or on the surface after a cleaning process. **D 2825, D21**

soil retention agent—a substance that increases the time and agricultural or water remains in the targeted soil zone. **E 1519, E35**

soil stabilization—chemical or mechanical treatment designed to increase or maintain the stability of a mass of soil or otherwise to improve its engineering properties. **D 653, D18**

soil stabilization, *n*—a soil modification that improves the physical characteristics of soils. **E 2201, E50**

soil structure—the arrangement and state of aggregation of soil particles in a soil mass.

flocculent structure—an arrangement composed of flocs of soil particles instead of individual soil particles.

honeycomb structure—an arrangement of soil particles having a comparatively loose, stable structure resembling a honeycomb.

single-grained structure—an arrangement composed of individual soil particles; characteristic structure of coarse-grained soils. **D 653, D18**

soil suspension—highly diffused mixture of soil and water. **D 653, D18**

soil texture—see **gradation**. **D 653, D18**

soil-water pressure—the pressure on the water in a soil-water system, as measured by a piezometer for a saturated soil, or by a tensiometer for an unsaturated soil. **D 653, D18**

soil wedge—a wedge-shaped, downward-tapering, body of soil different in structure from the surrounding soil, which may be an ice wedge cast or produced by repeated frost cracking and filling with soil where no ice wedge was ever present. **D 7099, D18**

sol, *n*—a liquid dispersion of colloidal solid particles, commonly between 5 and 100 nm in size. **C 1145, C28**

solar, *adj*—(1) referring to radiometric quantities, indicates that the radiant flux involved has the sun as its source, or has the relative spectral distribution of solar flux. (2) referring to an optical

property, indicates a weighted average of the spectral property, with a standard solar spectral irradiance distribution as the weighting function. **E 772, E44**

solar azimuth angle, *n*—the angular distance measured clockwise from due north to the projection of the beam radiation on the horizontal plane. **G 113, G03**

solar constant, *n*—the total solar irradiance at normal incidence on a surface in free space at the earth's mean distance from the sun (1 AU). **E 349, E21**

solar constant—the total solar irradiance at normal incidence on a surface in free space at the earth's mean distance from the sun (1 AU = 1.496×10^{11} m).

NOTE—The current accepted value of the solar constant at 1 AU is $1366.1 \text{ W}\cdot\text{m}^{-2}$ and is subject to change. See Tables E 490. **E 772, E44**

solar cooling systems—the complete assembly of subsystems and components necessary to convert solar energy into other forms of energy for space cooling purposes. **E 772, E44**

solar degradation—(1) the process by which exposure to solar energy deteriorates the properties of materials and components; (2) The deterioration produced by exposure to solar energy. **E 772, E44**

solar energy—the radiant energy originating from the sun. Approximately 99 % of solar energy lies between wavelengths of 0.3 to 3.5 μm .

solar energy system—See **building subsystem**. **E 631, E06**

solar energy—the radiant energy originating from the sun. Approximately 99 % of solar energy lies between the wavelengths of 300 to 3500 nm. **E 772, E44**

solar energy system—a **building subsystem** to convert solar energy into thermal energy for space heating or cooling, water heating, or process energy. **E 631, E06**

solar energy system, active—a solar energy system that uses mechanical equipment (pumps, fans) that is not an integral part of a structure to collect and transfer thermal energy, either to the point of use or to be stored for later use. **E 772, E44**

solar energy system, drainback—a solar energy system in which the heat transfer fluid is drained out of the collector and exposed piping, and into a storage tank, a holding tank, or expansion tank in order to protect the collector and piping from damage due to freezing. **E 772, E44**

solar energy system, draindown—a solar energy system in which the heat transfer fluid is drained out of the collector and exposed piping to an external drain in order to protect the collector and piping from damage due to freezing. **E 772, E44**

solar energy system, hybrid—any solar energy system that combines the characteristics of two separate systems. Particularly, a solar energy system supplemented by a conventional energy system may be termed a hybrid system. **E 772, E44**

solar energy system, open—a solar energy system that has its storage tank exposed (open) to atmospheric pressure. **E 772, E44**

solar energy system, passive—a solar energy system that uses natural convection, conduction, or radiation to distribute thermal energy through a structure, or a portion of that structure within the limits of the indoor design temperature conditions. It can include movable components such as dampers, insulation, or blinds, which may be moved periodically either manually or automatically. **E 772, E44**

solar energy system, thermosiphon—a solar energy system in which the heat transfer fluid circulates by convection as the less dense, warm fluid rises and is displaced by the denser, cooler fluid. **E 772, E44**

solar flux—for these measurements, the direct and diffuse radiation from the sun received at ground level over the solar spectrum, expressed in watts per square metre. **E 631, E06**

solar fraction—ratio of the amount of input energy contributed by the solar energy system to the total input energy required for the application. **E 772, E44**

solar heating and cooling systems—the complete assembly of

solar heating and cooling systems

subsystems and components necessary to convert solar energy into thermal energy and use this energy in combination with auxiliary energy, where required, for combined heating and cooling purposes. **E 772, E44**

solar heating system—the complete assembly of subsystems and components necessary to convert solar energy into thermal energy and use this energy in combination with auxiliary energy, where required, for heating purposes. **E 772, E44**

solar irradiance, n —as related to natural weathering of materials, the irradiance of the sun incident on the earth's surface, having wavelengths between about 295 nm and 4050 nm (4.05 microns). **G 113, G03**

solar irradiance at a point of a surface, $E_s = d\Phi_s/dA$ —the quotient of the solar flux incident on an element of a surface containing the point, by the area of that element, measured in watts per square metre. **E 772, E44**

solar irradiance, average, E_s —the time integral of solar irradiance over a specified time period divided by the duration of that time period. **E 772, E44**

solar irradiance, diffuse, $E_s(d)$ —the downward scattered solar flux as received on a horizontal surface from a solid angle of 2π steradian (hemisphere) with the exception of a conical solid angle with a 100 milliradians (approximately 6°) included plane angle centered upon the sun's disk, measured in watts per square metre. **E 772, E44**

solar irradiance, direct, E_s —solar flux coming from the solid angle of the sun's disk incident on a surface perpendicular to the axis of that solid angle. In conventional instruments the acceptance cone includes a plane angle of about 6° . **E 772, E44**

solar irradiance duration—(1) a bright sunshine duration: time interval during which direct solar energy casts distinct shadows; (2) Geographically or topographically possible sunshine duration: maximum interval during which solar energy can reach a given surface. **E 772, E44**

solar irradiance, global $E_s(2\pi)$, n —solar irradiance received on an upward facing horizontal surface directly transmitted from the solid angle of the sun's disk or scattered in traversing the atmosphere, measured in watts per square metre. **G 113, G03**

solar irradiance, global, $E_s(2\pi)$ —solar irradiance received on an upward-facing horizontal surface directly from the solid angle of the sun's disk and scattered or diffusely reflected in traversing the atmosphere, measured in watts per square metre. **E 772, E44**

solar irradiance, infrared—as related to natural weathering of materials, terrestrial solar irradiance for which the wavelengths are longer than those for visible irradiance and shorter than about 4.05 microns. **G 113, G03**

solar irradiance, instantaneous—solar irradiance at a point in time measured in watts per square metre. **E 772, E44**

solar irradiance, ultraviolet, n —as related to natural weathering of materials, terrestrial solar irradiance for which the wavelengths are shorter than those for visible irradiance and longer than about 295 nm. **G 113, G03**

solar irradiance, visible, n —the portion of solar radiation capable of causing a visual sensation. **G 113, G03**

solar irradiation—see **radiant exposure**, the preferred term. **E 772, E44**

solarization—a change in appearance of glass as a result of exposure to sunlight. **C 162, C14**

solarization, v —change in transmittance, reflectance, or absorptance property of a material, such as glass, as a result of exposure to sunlight or other light sources. **G 113, G03**

solar noon—that instant of any day at which the sun reaches its zenith, or crosses the meridian. **E 772, E44**

solar radiation—see **solar energy**. **E 772, E44**

solar reflectance—the fraction of solar flux reflected by a surface. **E 631, E06**

solar rights—the legal right of a person who uses a solar energy device not to have his or her sunlight blocked by another person's new structure or foliage. **E 772, E44**

solar screening, n —of coated fiber glass yarn solar screening, a woven fabric that imparts a shielding or protection from light, heat, wind, and insects without excessive alteration or impairment of visual viewing, and that has a mesh in excess of 12 by 12 in. with a rib pattern in the warp direction formed by the weaving of two or more contiguous yarns with a minimum of space between such yarns followed by space equivalent to the width of one or more of the yarns in the rib. **D 123, D13**

solar screening, n —of coated fiber glass yarn solar screening, a woven fabric that imparts a shielding or protection from light, heat, wind, and insects without excessive alteration or impairment of visual viewing, and that has a mesh in excess of 12 by 12 with a rib pattern in the warp direction formed by the weaving of two or more contiguous yarns with a minimum of space between such yarns followed by space equivalent to the width of one or more of the yarns in the rib. **D 7018, D13**

solar spectrum—spectral distribution of typical terrestrial sunlight at air mass 1.5 as defined in Tables G 173 for direct normal or hemispherical. **E 772, E44**

solar thermal collector—see **collector, solar thermal**. **E 772, E44**

solar water heating system—the complete assembly of subsystems and components necessary to convert energy into thermal energy and use this energy in combination with auxiliary energy, where required, to provide hot water. **E 772, E44**

solar water heating system, direct—a solar water heating system in which the potable water passes directly from the water supply, through the collectors and storage, to the residential hot water supply. **E 772, E44**

solar water heating system, indirect—a solar water heating system in which a closed circulation loop isolates one fluid from contact with others in the system. This closed loop may contain a nonpotable fluid. **E 772, E44**

solderability—the capability of a metal to be wetted by solder. **B 846, B05**

solder embrittlement—reduction in ductility of a metal or alloy associated with local penetration by molten solder long grain boundaries. **E 7, E04**

solder sealing glass—a sealing glass characterized by a low softening point for use as an intermediate bonding material. **C 162, C14**

sole, n —the underside of the boot or rubber that would be in contact with the ground. **F 819, F18**

sole—the bottom of the foot or shoe. **F 869, F08**

sole leather butt bend—a double bend. **D 1517, D31**

solenoid—an electrical conductor formed into a coil. **E 1316, E07**

sol-gel membrane formation—multistep process for making membranes by a reaction between two chemically multifunctional materials, dissolved in a solvent, that results in a network structure with solvent retained in the network followed by heat treatment to achieve a desired pore structure. **D 6161, D19**

sol-gel processing, v —the chemical synthesis of oxides based on the hydrolysis of metal alkoxides to form sols and gels; as liquids, the sols are suitable for casting and infiltration. **C 1145, C28**

solid, n —(flammability regulations) a substance that has a viscosity greater than 1×10^3 St ($1 \times 10^{-1} \text{ m}^2\text{s}^{-1}$) at 104°F (40°C) or an equivalent viscosity at an agreed upon temperature. (This includes powders and granular materials.) **D 16, D01**

solid—a state of matter in which the relative motion of molecules is restricted and in which molecules tend to retain a definite fixed position relative to each other. A solid may be said to have a definite shape and volume. **E 1547, E15**

solid area, A' —the effective solid portion of the cross section of a core (perpendicular to the induction) which is composed of magnetic material. **A 340, A06**

solid bituminous material—one having a viscosity of over 1×10^5 cSt (mm^2/s) at 40°C or an equivalent viscosity at an agreed-upon temperature. This includes powders and granular materials. **D 1079, D08**

solid braid, n —in rope, a braided construction in which each strand alternately passes under and over one or more of the other strands

while all strands are rotating around the axis with the same direction of rotation. **D 123, D13**

solid casting—See *solid casting* under **casting**. **C 242, C21**

solid clincher—non-moving clincher. **F 592, F16**

solid-color, *adj*—not containing flake or gonioapparent pigments. **E 284, E12**

solid conductor—a conductor consisting of one wire. **B 354, B01**

solid conductor, *n*—a conductor consisting of one strand. **D 1711, D09**

solid cone atomizer—a cone atomizer in which a significant quantity of liquid is directed into the center region of the spray pattern. **E 1620, E29**

solid cone pattern, *n*—*Syn.* for **full cone pattern**. **E 1620, E29**

solid fiberboard—See **containerboard**. **D 996, D10**

solid flotation—boom that uses solid buoyant material for the flotation element. **F 818, F20**

solidification—a binding physical and chemical treatment process that transforms materials containing free liquids into a solid, soil-like, or clayey material. This solid material can be a monolithic block with structural integrity. **D 5681, D34**

solidification, *n*—the conversion of liquids, slurries or sludges into a material that can be more easily handled or compacted for disposal or use; a process for converting a liquid to a solidified material; fly ash is often used as a reagent or sorbent in a solidification process. **E 2201, E50**

solidification point, *n*—of *petroleum wax*, that temperature in the cooling curve of the wax where the slope of the curve first changes significantly as the wax sample changes from a liquid to a solid state. **D 4175, D02**

solidification point—an empirical constant defined as the temperature at which the liquid phase of a substance is in approximate equilibrium with a relatively small portion of the solid phase. **D 4790, D16**

solidification point of petroleum wax, *n*—that temperature in the cooling curve of the wax where the slope of the curve first changes significantly as the wax sample changes from a liquid to a solid state. **D 4175, D02**

solidification range—the temperature range between the liquidus and the solidus. **E 7, E04**

solidification shrinkage crack—a crack that forms, usually at elevated temperature because of the shrinkage stresses built up during solidification of a metal casting; a hot crack. **E 7, E04**

solidification temperature of a mold flux, *n*—the temperature at which, on cooling at a defined rate, there is a sudden change in the shape of the viscosity versus temperature curve and at which the mold flux starts to solidify. **C 71, C08**

solid impingement, *n*—impingement by solid particles. **G 40, G02**

solid impingement erosion, *n*—progressive loss of original material from a solid surface due to continued exposure to impacts by solid particles. (*Synonym*: **solid particle erosion, hard particle erosion**.) **G 40, G02**

solid masonry unit—unit whose net cross-sectional area in any plane parallel to the surface containing cores, cells, or deep frogs is 75 % or more of its gross cross-sectional area measured in the same plane. **C 1232, C15**

solid metal connector plate—metal connector plate without any prepunched or predrilled plate holes. **E 631, E06**

solid metal-coupon control specimen—solid metal connector plate sample of same material as metal connector plate under scrutiny of dimensions meeting the requirements of Test Methods E 8 (or other applicable standard or specification) without plate holes or integral plate projections.

space categories, *n* (catégories de locaux) (See also **floor area**):

assignable area, *n* (zoneassignable)—*floor areas* of a facility assigned to or available for assignment to occupant groups of functions, including interior walls, building columns, and building projections, and excluding circulation.

basement (sous-sol)—space partly below average grade having

less than one half of its clear height (measured from floor level to ceiling level) below average grade.

building core and service area, *n* (noyau d'un immeuble et aire de service)—**floor area** of a facility necessary for the general operation of a building that is not available for general occupancy, including: **primary circulation areas**, mechanical, electrical, telephone, and custodial rooms serving individual floors; toilet rooms, building lobbies and atria, stairways, elevators, vertical shafts and chases, loading docks; and also central, mechanical, electrical, telephone, and custodial spaces and penthouses, but excluding interstitial area.

building gross area, *n* (superficie brute d'un immeuble)—sum of the floor areas of a building included within the outside face of outer building wall for all stories.

building service area (aire deservice d'un immeuble)—Used preferred term **building core and service area**.

cellar (cave)—space wholly or partly below average grade have more than one half of its clear height (measured from floor level to ceiling level) below average grade.

circulation space—See **primary circulation; secondary circulation**.

primary circulation area (aire de circulation principale)—portion of a **building** that is a public corridor, lobby, or atrium; or is required for access by all occupants on a floor to stairs, elevators, toilet rooms, or building entrances.

secondary circulation area (aire de circulation secondaire)—portion of a **building** required for access to some subdivision of space, whether bounded by walls or not, that does not serve all **occupants** on a **floor**, and that is not defined as **primary circulation area**.

support space (locauxde soutien)—(*in offices*) part of **usable area** not assigned or dedicated to a specific task or function. Support space includes meeting rooms, waiting areas, storage, lounges, operational equipment (for example, computer rooms), copy areas, libraries, and similar areas.

usable area, *n* (superficieutilisable)—**floor area** of a facility assigned to, or available for assignment to, occupant groups or functions, including interior walls, building columns and projections, and **secondary circulation**.

workplace (poste de travail)—part of a **usable area**, intended for an individual or group to work in.

workspace (aire de travail)—part of **usable area**, intended for a specific function or type of work.

workstation (poste detravail) (aménagement ouvert)—all or part of a **workplace**, suitable for carrying out one function or type of work. **E 631, E06**

solid mopping—See **mopping**. **D 1079, D08**

solid particle erosion, *n*—Synonym for *solid impingement erosion*. **G 40, G02**

solid-phase chemical dosimeter—plastic, dyed plastic, or glass whose optical density, usually in the visible range, changes when exposed to ionizing radiation. Examples that are in use include dyed polymethylmethacrylate (red perspex), undyed poly(vinyl) chloride (PVC), dyed polyamide (blue dye in Nylon matrix), and dyed polychlorostyrene (green dye in chlorostyrene matrix). It is generally considered to be a secondary standard dosimetry system. **E 170, E10**

solids—two types of solids are present in mash. First, insoluble solids are present as solid matter present in the liquid portion of the mash. Secondly, soluble solids are dissolved in the liquid portion of the mash. **E 1705, E48**

solids concentration, *n*—the ratio, expressed as a percent, of the weight (mass) of solids to the sum of the weight of solids plus water. **D 121, D05**

solids contact clarifier—water treating device used in lime softening, waste water treatment and coagulation processes. **D 6161, D19**

solids content, *n*—the percentage by weight of the nonvolatile matter in an adhesive. (See **nonvolatile content**.) **D 907, D14**

solids loading ratio

solids loading ratio—the mass of solid particles per unit volume of mixture in a solid impingement environment. **G 40, G02**

solids loading ratio, *n*—See **particle concentration**. **G 40, G02**

solid solution—a solid phase in which the composition and properties including lattice parameter can vary continuously without changing the crystal structure; a primary or terminal solid solution is limited by and has the crystal structures of a pure metal, a secondary or intermediate solid solution has the basic crystal structure of an intermetallic compound but does not necessarily include its stoichiometric composition. **E 7, E04**

solid-state sintering, *v*—sintering of a powder or compact without formation of a liquid phase. **B 243, B09**

solid state track recorder (SSTR)—a plastic, mineral, or emulsion material that records the passage of energetic ionizing particles as latent tracks that may be chemically enlarged or developed for microscopy or other techniques. **E 170, E10**

solidus, *n*—the highest temperature at which under equilibrium conditions an alloy begins to melt on heating or is completely solid on cooling. **B 899, B02**

solidus—the locus of points in a phase diagram, representing the temperature, under equilibrium conditions, at which each composition in the system begins to melt during heating, or completes freezing during cooling. **E 7, E04**

solidus—locus of points in a phase diagram representing the temperature, under equilibrium conditions, at which each composition in a system begins to melt during heating or completes freezing during cooling. (**E 7, E04**). **E 1142, E37**

solid vinyl flooring, *n*—See **homogeneous vinyl flooring**. **F 141, F06**

solid vinyl tile, *n*—a resilient tile flooring composed of binder, fillers and pigments compounded with suitable stabilizers and processing aids. The tile meets requirements of Specification F 1700. The binder consists of polymers and/or copolymers of vinyl chloride, other modifying resins, and plasticizers which comprise at least 34 % by weight of the finished tile. The polymers and copolymers of vinyl chloride comprise at least 60 % of the weight of the binder. **F 141, F06**

solid waste—discarded solid materials, excluding recovered materials. **D 1968, D06**

solid waste composition or waste composition—the characterization of solid waste as represented by a breakdown of the mixture into specified waste components on the basis of mass fraction or of weight percent. **D 5681, D34**

solid waste disposal site—a place, location, tract of land, area, or premises used for the disposal of solid wastes as defined by state solid waste regulations. The term is synonymous with the term landfill and is also known as a garbage dump, trash dump, or similar term. **D 5681, D34**

solid waste stream, *n*—discarded material moving from the point of discard to ultimate disposition. **D 1968, D06**

solifluction—the process of slow, gravitational, down-slope movement of saturated, non-frozen earth material behaving as a viscous mass over a surface of frozen material. Solifluction features lobes, stripes, sheets, and terraces. **D 7099, D18**

solifluction apron—a fan-like deposit at the base of a slope, produced by solifluction. **D 7099, D18**

solifluction features—geomorphological features, of varying scale, produced by the process of solifluction. These include: aprons, lobes, sheets, and terraces. **D 7099, D18**

solifluction lobe—an isolated tongue-shaped solifluction feature formed by rapid solifluction on certain sections of a slope which exhibit variations in gradient. It is to be noted that the NSDIC definition includes dimensions of up to 25 m wide and 150 m or more long. **D 7099, D18**

solifluction sheet—a broad deposit of non-sorted, water-saturated, locally derived materials that is moving, or has moved, downslope. **D 7099, D18**

solifluction terrace—a low step, or bench, with a straight or lobate

front, the latter reflecting local differences in the rate of solifluction movement. **D 7099, D18**

soller slit—a slit containing a set of thin, closely spaced, parallel metal plates used for the purpose of largely eliminating convergent and divergent rays. **E 7, E04**

soloing, *n*—a technique of climbing where the climber is alone. A belay may or may not be used. **F 1773, F08**

solubility—the extent that one material will dissolve in another, generally expressed as mass percent, or as volume percent or parts per 100 parts of solvent by mass or volume. The temperature should be specified. **D 3064, D10**

solubility, *n*—a measure of the extent to which the material can be dissolved. **F 2312, F04**

solubility, excessive—the tendency of a porcelain enamel frit to dissolve, as a function of time and temperature, in the medium in which it is present in amounts sufficient to adversely affect the rheology of the porcelain enamel slip. **C 286, B08**

solubility parameter, *n*—of liquids, the square root of the heat of vaporization minus work of vaporization (cohesive energy density), per unit volume of liquid, at 298 K. **D 4175, D02**

solubility product— $[M^+]^a[X^-]^b/[MX]$ where the brackets indicate the concentrations of the components of the ionization equilibrium $M_aX_b \rightleftharpoons aM^+ + bX^-$. For sparingly soluble salts [MX] is essentially unity. **D 6161, D19**

soluble iron—the determination of “soluble iron” used in this test method corresponds operationally to the “complexed and dissolved” iron determination described by Vuorinen et al. in their study of the species of iron released from pyrite oxidation by *T. ferrooxidans*. They found that values of complexed and dissolved iron corresponded closely with “total iron” as determined after hot sulfuric acid digestion of samples, particularly at 1 to 2 % pulp density. **E 1705, E48**

soluble oil, *n*—an oil-rich concentrate that will mix with water to form an emulsion imparting such properties as lubrication, cooling, and corrosion inhibition. **D 4175, D02**

soluble oil, *n*—a combination of mineral oil base and one or more polar organic materials, such as petroleum sulfonates, sulfated vegetable oils, and fatty acids or their salts. **D 4725, D15**

solute—chemical species (for example, ion, molecule, etc.) in solution. **D 5681, D34**

solute phase—a condition of contaminant residence in which contaminants are dissolved in ground water in either the saturated or the vadose zone. **D 653, D18**

solutes—matter dissolved in a solvent. **D 6161, D19**

solution, *n*—a homogeneous or single-phase, variable-composition mixture of one substance (solute) in another (solvent), in which the former is dispersed as separated molecules, ions, or atoms. The solvent or the solution may be solid, liquid, or gas. **C 1145, C28**

solution—in a chemical system, a phase existing over a range of composition. **E 7, E04**

solution annealing—heating an austenitic stainless steel to a temperature that puts the carbides into solution. The steel is held at this temperature long enough to achieve grain growth. It is then quenched in a medium for fast cooling, which prevents most of the carbides from reprecipitating. The process achieves optimum creep strength. **F 1789, F16**

solution cavern—openings in rock masses formed by moving water carrying away soluble materials. **D 653, D18**

solution coating—in flexible barrier materials, (1) a process in which a substrate is covered with a homogeneous solution containing the coating material, followed by removal of the (usually organic) solvent(s). (2) Also, the product resulting from such a process. **F 17, F02**

solution coating—See Terminology F 17. **F 1327, F02**

solution-diffusion—molecular-scale process in which penetrant is sorbed into the upstream membrane far from the external phase, moves by molecular diffusion in the membrane to the downstream face and leaves into the external gas, vapor or liquid phase in contact with the membrane. **D 6161, D19**

solution heat treatment, *n*—heating a steel object to a suitable temperature, holding it at that temperature long enough to cause one or more constituents to enter into solid solution, and then cooling it rapidly enough to hold such constituents in solution.

A 941, A01

solution heat treatment—a thermal treatment of a product to put alloying elements into solution in the base metal by heating into the temperature range of solid solubility, followed by cooling at a sufficient rate to retain them in a supersaturated solid solution.

B 846, B05

solution polymerization, *n*—process in which monomers dissolved in a common solvent react to form a polymer.

D 1566, D11

solution treat—see *annealing, solution annealing*.

F 1789, F16

solvent, *n*—any liquid used to dissolve another material.

D 123, D13

solvent—the liquid part of an aerosol formulation used to dissolve solid or other liquid parts.

D 3064, D10

solvent, *n*—any liquid used to dissolve another material.

D 5253, D13

solvent—a chemical compound that is capable of dissolving another substance and a hazardous substance, used in a number of manufacturing/industrial processes including but not limited to the manufacture of paints and coatings for industrial and household purposes, equipment clean-up, and surface degreasing in metal fabricating industries.

D 5681, D34

solvent—here defined as water.

D 6161, D19

solvent—a liquid that can dissolve another substance.

E 609, E35

solvent, *n*—an inorganic or organic liquid used as a vehicle for the preparation of solutions or suspensions in the manufacture of an intermediate, API, or drug product.

E 2363, E55

solvent-activated adhesive, *n*—a dry adhesive on an adherend that is rendered tacky just prior to use by application of a solvent.

D 907, D14

solvent adhesive, *n*—an adhesive having a volatile organic liquid as a vehicle.

D 907, D14

solvent cement—an adhesive made by dissolving a plastic resin or compound in a suitable solvent or mixture of solvents. The solvent cement dissolves the surfaces of the pipe and fittings to form a bond between the mating surfaces provided the proper cement is used for the particular materials and proper techniques are followed.

F 412, F17

solvent-cemented joint—see *joint, solvent-cemented*.

F 412, F17

solvent cementing—making a pipe joint with a solvent cement. (See *solvent cement*.)

F 412, F17

solvent cement joint—a joint made by using a solvent cement to unite the components.

F 412, F17

solvent extraction—a process used in refining some mineral insulating oils in which an unrefined or a partially refined petroleum distillate is contacted countercurrently with an immiscible solvent so as to selectively remove undesirable materials from the mineral oil.

D 2864, D27

solvent holdout—the degree to which a paper base or other substrate can resist penetration of organic liquids either during coating or in the process of liquid development.

F 335, F05

solvent joint—a joint made by using a solvent to unite the components.

F 412, F17

solvent relative humidity, *n*—the humidity of air over a drycleaning bath and in equilibrium with the solvent and its small amount of water.

D 123, D13

solvent relative humidity, *n*—the humidity of air over a drycleaning bath and in equilibrium with the solvent and its small amount of water.

D 3136, D13

solvent remover—a volatile liquid penetrant used to remove excess penetrant from the surface being examined.

E 1316, E07

solvent resistance—a measure of the inertness of base papers and coatings toward the solvent used in the electrostatic coatings and liquid toner systems.

F 335, F05

solvent-soluble material in paper, *n*—the mass of material that can be extracted from a dry specimen by a specified solvent under

prescribed conditions, expressed as a percentage of the original dry mass.

D 1711, D09

solvent tannage—a tanning system utilizing organic solvents, such as acetone, in place of water to carry the tanning agents.

D 1517, D31

solvus—the locus of points in a phase diagram, representing the temperature, under equilibrium conditions, at which each composition of a solid phase becomes capable of coexistence with another solid phase, that is, a solid-solubility limit. Usually applied to the terminal solid solution.

E 7, E04

solvus—locus of points in a phase diagram representing the temperature under equilibrium conditions at which each composition of a solid phase becomes capable of coexistence with another solid phase, that is, a solid-solubility limit usually applied to the terminal solid solution.

E 1142, E37

somatic cell, *n*—is any cell other than a germ or stem cell. Somatic cells may be used as a component of a TEMP.

F 2312, F04

somatic cell therapy, *n*—“is the prevention, treatment, cure, diagnosis, or mitigation of disease or injuries in humans by the administration of autologous, allogeneic, or xenogeneic cells that have been manipulated or altered *ex vivo*. Manufacture of products for somatic cell therapy involves the *ex vivo* propagation, expansion, selection, or pharmacologic treatment of cells, or other alteration of their biological characteristics.” For the purposes of TEMPs somatic cell therapy technologies can be applied in tissue engineering to generate TEMPs, for human and non-human use.

F 2312, F04

somatic cell therapy products, *n*—“are defined as autologous (that is, self), allogeneic (that is, intra-species), or xenogeneic (that is, inter-species) cells that have been propagated, expanded, selected, pharmacologically treated, or otherwise altered in biological characteristics *ex vivo* to be administered to humans and applicable to the prevention, treatment, cure, diagnosis, or mitigation of disease or injuries.” Somatic cell therapy products may be used as a component of a TEMP.

F 2312, F04

sonde, *n*—an elongate cylindrical tool assembly used in a borehole to acquire a geophysical log.

D 121, D05

sonic anemometer/thermometer, *n*—an instrument consisting of a transducer array containing paired sets of acoustic transmitters and receivers, a system clock, and microprocessor circuitry to measure intervals of time between transmission and reception of sound pulses.

D 1356, D22

sonication, *n*—the act of subjecting a material to the shearing forces of high-frequency sound waves.

D 4175, D02

sonication, *n*—the act of subjecting a material to the shearing forces of high-frequency sound waves.

D 6384, D02

sonic nozzle—a pneumatic or vibratory atomizer in which energy is imparted, at frequencies below 20 kHz, to the liquid.

NOTE—For frequencies greater than 20 kHz, see *ultrasonicnozzle*.

NOTE—Alternatively, a pneumatic atomizer in which gas velocities reach or exceed the local speed of sound.

E 1620, E29

sonic temperature—See *temperature*.

D 1356, D22

sonic-whistle atomizer—a pneumatic type of sonic or ultrasonic nozzle.

E 1620, E29

soot, *n*—agglomerations of particles of carbon impregnated with tar, formed in the incomplete combustion of carbonaceous material.

D 1356, D22

soot, *n*—in *internalcombustion engines*, sub-micron size particles, primarily carbon, created in the combustion chamber as products of incomplete combustion.

D 4175, D02

soot fall—See *particle fall*.

D 1356, D22

sorbate—chemical species sorbed by a sorbent.

D 5681, D34

sorbed phase—a condition of contaminant residence in which contaminants are adsorbed into the surface of soil particles or absorbed by soil organic matter.

D 653, D18

sorbent, *n*—a solid or liquid medium in or upon which materials are collected by absorption, adsorption, or chemisorption.

D 1356, D22

sorbent

sorbent—a substance that sorbs the solute from solution (for example, soil, sediment, till, etc.). **D 5681, D34**

sorbent, n—a chemical compound that is added to the gas side of the steam generator to reduce (sorb) emissions; a substance that decreases the concentration or availability of another substance by a sorption mechanism such as absorption and/or adsorption; a material that is used to soak up free liquids by either adsorption or absorption or both. **E 2201, E50**

sorbent boom—sorbent material contained or arranged in the form of a long cylinder. **F 818, F20**

sorbent sampling, n—the collection of chemicals from an air or emission sample by allowing the air or emissions to contact a sorbent. **D 1356, D22**

sorbite—an aggregate of carbide and ferrite produced by tempering martensite at temperatures in the vicinity of 600°C and which may be resolved readily at relatively low magnification (for example, 500×).

(Contemporary) With reference to tool steels, an aggregate of carbide and ferrite produced by cooling at a rate too slow for martensite formation and too fast for pearlite formation. **E 7, E04**

sorption, n—in general, the taking up of some substance (sorbate) into or on the surface of another (sorbent), without specification of the type of process. **C 1145, C28**

sorption, n—the process of taking up or holding a material by adsorption or absorption, or both. **D 123, D13**

sorption, n—a process by which one material (the sorbent) takes up and retains another material (the sorbate) by the processes of absorption, adsorption, or chemisorption. **D 1356, D22**

sorption—a process in which molecules of a fluid are taken up by absorption or adsorption, or both. **D 2652, D28**

sorption, n—the process of taking up or holding a material by adsorption, absorption, or both. **D4920, D13**

sorption—depletion of an amount of solute initially present in solution by a sorbent. **D 5681, D34**

sorption—the taking up of gas by absorption, adsorption, chemisorption, or any combination of these processes. **E 1316, E07**

sorption affinity—the relative degree of sorption that occurs by a geomedia. **D 5681, D34**

sorted circle—a form of patterned ground that is equi-dimensional in several directions, with a dominantly circular outline, and a sorted appearance commonly due to a border of stones surrounding a central area of finer material. **D 7099, D18**

sorted net—a form of patterned ground with cells that are equi-dimensional in several directions, neither dominantly circular nor polygonal, and with a sorted appearance commonly due to borders of stones surrounding central areas of finer material. **D 7099, D18**

sorted polygon—a form of patterned ground that is equi-dimensional in several directions, with a dominantly polygonal outline, and a sorted appearance commonly due to a border of stones surrounding a central area of finer material. **D 7099, D18**

sorted step—a form of patterned ground with a step-like form and a downslope border of stones embanking on an area of relatively fine-grained bare ground upslope. **D 7099, D18**

sorted stripe—a form of patterned ground with a striped and sorted appearance due to parallel strips of stones and intervening strips of finer material, oriented down the steepest available slope. **D 7099, D18**

sorting—the process by which sedimentary particles are selectively separated from associated but dissimilar particles by flowing water. **D 4410, D19**

sorting sample, n—in waste management, a 100 to 150 kg (200 to 300 lb) portion of a vehicle load of municipal solid waste that is deemed to represent the characteristics of that load. **D 5681, D34**

sorting sample—a 200 to 300-lb (91 to 136-kg) portion deemed to represent the characteristics of a vehicle load of MSW. **D 5681, D34**

SOS—abbreviation for **start of scan**. **F 1457, F05**

sound absorption—(1) the process of dissipating sound energy. (2)

the property possessed by materials, objects and structures such as rooms of absorbing sound energy. (3) A ; [L^{-2}]; metric sabin—in a specified frequency band, the measure of the magnitude of the absorptive property of a material, an object, or a structure such as a room. **C 634, E33**

sound absorption coefficient, α ; [dimensionless]; metric sabin/ m^2 —of a surface, in a specified frequency band, the measure of the absorptive property of a material as approximated by the method of Test Method C 423. Ideally, the fraction of the randomly incident sound power absorbed or otherwise not reflected. **C 634, E33**

sound attenuation—the reduction of the intensity of sound as it travels from the source to a receiving location. Sound absorption is often involved as, for instance, in a lined duct. Spherical spreading and scattering are other attenuation mechanisms. **C 634, E33**

sound-deadening board—a specially manufactured cellulosic fiber-board product for use in building construction in wall and floor assemblies to reduce sound transmission. **D 1554, D07**

sound energy density, D ; [$ML^{-1}T^{-2}$]; J/m^3 —the quotient obtained when the sound energy in a region is divided by the volume of the region. The sound energy density at a point is the limit of that quotient as the volume that contains the point approaches zero. **C 634, E33**

sound energy, E ; [ML^2T^{-2}]; J —energy added to an elastic medium by the presence of sound, consisting of potential energy in the form of deviations from static pressure and of kinetic energy in the form of particle velocity. **C 634, E33**

sounding well—in grouting, a vertical conduit in a mass of coarse aggregate for preplaced aggregate concrete which contains closely spaced openings to permit entrance of grout. **D 653, D18**

sound insulation—the capacity of a structure to prevent sound from reaching a receiving location. Sound energy is not necessarily absorbed; impedance mismatch, or reflection back toward the source, is often the principal mechanism. **C 634, E33**

sound intensity, I ; [MT^{-3}]; W/m^2 —the quotient obtained when the average rate of energy flow in a specified direction and sense is divided by the area, perpendicular to that direction, through or toward which it flows. The intensity at a point is the limit of that quotient as the area that includes the point approaches zero. **C 634, E33**

sound isolation—the degree of acoustical separation between two locations, especially adjacent rooms. **C 634, E33**

sound level, L_{AF} —where the A designates the frequency weighting and the F designates fast exponential time weighting (the A is replaced by C to designate C-weighting, and the F by either S or I to designate slow or impulse time weighting), [nd], (dB), *n*—of airborne sound, a sound pressure level obtained using a signal to which a standard frequency-weighting and exponential time weighting has been applied.

NOTE—Standard frequency-weightings designated A and C, and exponential time weightings designated fast, slow, and impulses, are defined in ANSI S1.4, Specification for Sound Level Meters.

NOTE—The frequency-weighting and exponential time weighting must be specified unless made clear from the context.

NOTE—The frequency-weighting modifies the amplitude of the signal as a function of frequency to adjust for differences in perception of sound at different frequencies.

NOTE—In symbols, A-weighted sound level L_{AF} , at running time t is

$$L_{AF}(t) = 10 \log \left\{ \left[(1/0.125) \int_{-\infty}^t P_A^2(\nu)^{-(t-\nu)/0.125} d\nu \right] / P_0^2 \right\}$$

where 0.125 is the time constant in seconds for fast time weighting (1.0 for slow time weighting), ν is a dummy variable of integration, $P_A^2(\nu)$ is the squared, instantaneous, time varying, A-weighted sound pressure in Pascals, and P_0 is the reference sound pressure of 20 μ Pa. **C 634, E33**

sound power level, L_W —of airborne sound, ten times the common logarithm of the ratio of the sound power under consideration to

the standard reference power of 1 pW. The quantity so obtained is expressed in decibels. **C 634, E33**

sound power, W ; [ML²T⁻³]; W —in a specified frequency band, the rate at which acoustic energy is radiated from a source. In general, the rate of flow of sound energy, whether from a source, through an area, or into an absorber. **C 634, E33**

sound pressure level, L_p —of airborne sound, ten times the common logarithm of the ratio of the square of the sound pressure under consideration to the square of the standard reference pressure of 20 μ Pa. The quantity so obtained is expressed in decibels. **C 634, E33**

sound pressure, p ; [ML⁻¹T⁻²]; Pa—a fluctuating pressure superimposed on the static pressure by the presence of sound. In analogy with alternating voltage its magnitude can be expressed in several ways, such as instantaneous sound pressure or peak sound pressure, but the unqualified term means root-mean-square sound pressure. In air, the static pressure is barometric pressure. **C 634, E33**

sound stone—stone which is free of cracks, fissures, or other physical defects. **C 119, C18**

sound transmission class, STC—a single-number rating calculated in accordance with Classification E 413 using values of sound transmission loss. It provides an estimate of the performance of a partition in certain common sound insulation problems. **C 634, E33**

sound transmission coefficient, τ ; [dimensionless]—of a partition, in a specified frequency band, the fraction of the airborne sound power incident on the partition that is transmitted by the partition and radiated on the other side. **C 634, E33**

sound transmission loss, TL —of a partition, in a specified frequency band, ten times the common logarithm of the ratio of the airborne sound power incident on the partition to the sound power transmitted by the partition and radiated on the other side. The quantity so obtained is expressed in decibels. **C 634, E33**

sound wood—wood free of any form of decay, incipient or advanced, and from insect holes. **D 9, D07**

sour, v —in refurbishing textiles, to neutralize the alkalinity of a material after cleaning by using a weak acid such as acetic acid or an acid-forming salt. **D 123, D13**

sour, v —to increase the concentration of hydrogen sulfide. **D 4175, D02**

sour, v —in refurbishing textiles, to neutralize the alkalinity of a material after cleaning by using a weak acid such as acetic acid or an acid-forming salt. **D 5253, D13**

sour, *adj*—taste produced by substances such as citric acid when in solution. **E 253, E18**

source, n —for color determination, that which furnishes light and other radiation; real device by which radiant flux is produced (see **illuminant**). **D 2946, C17**

source, n —the location at which contamination has entered the natural environment. **D 5681, D34**

source, n —an object that produces light or other radiant flux, or the spectral power distribution of that light. (See also **standard source, CIE standard source A, CIE standard source B, CIE standard source C**.) **E 284, E12**

source—a machine or radioactive material that emits penetrating radiation. **E 1316, E07**

source, CIE standard, n —see **standard source**. **D 2946, C17**

source document—a document, paper or electronic, that serves as a basis for posting information to the records of property to provide an auditable record of all transactions, evidencing acquisition, receipt, consumption, utilization, maintenance, physical inventory, and disposition. Examples include purchase or fabrication order, receiving report, stores requisition, record of equipment usage, record of maintenance performed, inventory ticket, and shipping documentation. **E 2135, E53**

source documents—the original materials or facsimiles from which input for a data processing system is derived. **F 149, F05**

source-film distance—the distance between the radiation-producing area of the source and the film. **E 1316, E07**

space categories, n (catégories de locaux) (See also **floor area**):

source marking, n —the bar code marking of a specific item at the point of initial production of the item. **F 1294, F05**

source room—in architectural acoustical measurements, the room that contains the noise source or sources. **C 634, E33**

source sampling—See **sampling**. **D 1356, D22**

source-separated steel cans, n —post-consumer products that are generated as separated can fractions by commercial or household sources.

(a) *all other steel cans, n* —steel containers for food products or liquids, with a maximum capacity of 5 gal, that are not included in one of the other definitions.

(b) *bi-metal beverage cans, n* —steel cans with nonferrous metal convenience ends (normally made of aluminum), originally containing beer or carbonated beverages, but not including other contaminants.

(c) *bi-metal food cans, n* —steel cans with nonferrous metal (usually aluminum) convenience ends, originally containing snack foods, but not including other contaminants. **D 5681, D34**

source (X-rays)—the area emitting primary X-rays in a diffraction experiment. The actual source is always the focal spot of the X-ray tube but the virtual source may be a slit or pinhole, depending on the conditions of the experiment. **E 7, E04**

sour gas—natural gas containing concentrations of sulfur compounds which make it impractical to use without purification because of toxicity or corrosive effects, or both, on piping and equipment. **D 4150, D03**

Soxhlet apparatus, n —an apparatus for use in extracting organic or inorganic material with a suitable solvent in which the solvent is recirculated by evaporation and subsequent condensation. **D 1356, D22**

Soxhlet apparatus, n —a device, usually of glass, used to extract soluble material from a mixture of soluble and insoluble (generally solid) materials, by passing a volatile solvent through the sample and recirculating the solvent by refluxing. **D 4175, D02**

space, n —the element of a bar code symbol whose reflectance is greater than the global threshold (equivalent to a binary 0) as opposed to the bar or dark element. **F 1294, F05**

space application—dispersion of liquid, gas, or dry particles in an air space in such a manner that target pests are exposed to the chemical. **E 1102, E35**

space categories, n (catégories de locaux) (See also **floor area**):

assignable area, n (zone assignable)—**floor areas** of a facility assigned to or available for assignment to occupant groups of functions, including interior walls, building columns, and building projections, and excluding circulation.

basement (sous-sol)—space partly below average grade having less than one half of its clear height (measured from floor level to ceiling level) below average grade.

building core and service area, n (noyau d'un immeuble et aire de service)—**floor area** of a facility necessary for the general operation of a building that is not available for general occupancy, including: **primary circulation areas**, mechanical, electrical, telephone, and custodial rooms serving individual floors; toilet rooms, building lobbies and atria, stairways, elevators, vertical shafts and chases, loading docks; and also central, mechanical, electrical, telephone, and custodial spaces and penthouses, but excluding interstitial area.

building gross area, n (superficie brute d'un immeuble)—sum of the floor areas of a building included within the outside face of outer building walls for all stories.

building service area (aire de service d'un immeuble)—Use preferred term **building core and service area**.

cellar (cave)—space wholly or partly below average grade having more than one half of its clear height (measured from floor level to ceiling level) below average grade.

space categories, n (catégories de locaux) (See also floor area):

circulation space—See **primary circulation; secondary circulation**.

primary circulation area (aire de circulation principale)—portion of a **building** that is a public corridor, lobby, or atrium; or is required for access by all occupants on a floor to stairs, elevators, toilet rooms, or building entrances.

secondary circulation area (aire de circulation secondaire)—portion of a **building** required for access to some subdivision of space, whether bounded by walls or not, that does not serve all **occupants** on a **floor**, and that is not defined as **primary circulation area**.

support space (locaux de soutien)—(in offices) part of **usable area** not assigned or dedicated to a specific task or function. Support space includes meeting rooms, waiting areas, storage, lounges, operational equipment (for example, computer rooms), copy areas, libraries, and similar areas.

usable area, n (superficie utilisable)—**floor area** of a facility assigned to, or available for assignment to, occupant groups or functions, including interior walls, building columns and projections, and **secondary circulation**.

workplace (poste de travail)—part of a **usable area**, intended for an individual or group to work in.

workspace (aire de travail)—part of **usable area**, intended for a specific function or type of work.

workstation (poste de travail) (aménagement ouvert)—all or part of a **workplace**, suitable for carrying out one function or type of work. **E 1480, E06**

space charge aberration—an aberration resulting from the mutual repulsion of the electrons in a beam. This aberration is most noticeable in low-voltage, high-current beams. This repulsion acts as a negative lens causing rays which were originally parallel to diverge. **E 7, E04**

space compression, n—a method of packing a series of space characters into a shorter sequence; to save time for transmission, the receiving device then expands the shorter sequence to its original length. **F 1457, F05**

space lattice—See **lattice**. **E 7, E04**

spacer, n—in *building construction in glazing*, a piece of resilient material placed to maintain space between a pane of glass or a panel and its supporting frame. **C 717, C24**

spacer, n—a device made of any material that serves to maintain a predetermined distance between any two points in a **shipping container**, or between any interior part and articles contained therein. (Compare **divider**.) **D 996, D10**

space reflectance (Rs), n—in reference to bar codes, the highest reflectance value in a space or quiet zone. **F 1294, F05**

spacer layer—a material (usually dielectric) sometimes used to maintain a separation between the membrane layer and static layer of a membrane switch. **F 2112, F01**

spacing—the distance between adjacent blastholes in a direction parallel to the face. (ISRM) **D 653, D18**

spacing—distance between centers of adjacent crests, measured perpendicular to crests. **F 547, F16**

spacing (between latticeplanes)—See **interplanar distance**. **E 7, E04**

spacing of increments, n—pertains to the kind of intervals between increments. Two spacing methods are recognized: systematic and random. Systematic spacing is usually preferable.

systematic spacing 1, n—in which the movements of individual increment collection are spaced evenly in time or in position over the lot.

random spacing 2, n—in which the increments are spaced at random in time or in position over the lot. **D 121, D05**

spacing sleeve—sleeve that encases a portion of the anchor shaft but does not expand. **E 2265, E06**

spading—see **shovel slicing**. **C 896, C04**

spall, n—a fragment or chip as from concrete, brick, stone or other similar materials. **C 717, C24**

spall, v—to break off fragments or chips, as from concrete, brick, stone or other similar materials, by water freezing within the material, corrosion expansion of embedded metal, movement pressures, or other physical or chemical processes. **C 717, C24**

spalling—See **delamination**. **A 902, A05**

spalling, adj—the development of spalls. **C 717, C24**

spalling—(1) longitudinal splitting in uniaxial compression, or (2) breaking-off of plate-like pieces from a free rock surface. (ISRM) **D 653, D18**

spalling, n—in *tribology*, the separation of macroscopic particles from a surface in the form of flakes or chips, usually associated with rolling element bearings and gear teeth, but also resulting from impact events. **G 40, G02**

spalling of refractories, v—the cracking or rupturing of a refractory unit, which usually results in the detachment of a portion of the unit. **C 71, C08**

spalling of refractories, mechanical, n—the spalling of a refractory unit caused by stresses resulting from impact or pressure. **C 71, C08**

spalling of refractories, structural, n—the spalling of a refractory unit caused by stresses resulting from differential changes in the structure of the unit. **C 71, C08**

spalling of refractories, thermal, n—the spalling of a refractory unit caused by stresses resulting from nonuniform changes of the unit produced by a difference in temperature. **C 71, C08**

spalls—(1) fragments or chips from a piece of dimension stone. (2) waste stone usually of small size from the quarrying and milling of dimension limestone. **C 119, C18**

spall, spalling, or spontaneous spalling—a defect characterized by chipping that occurs without apparent external causes. **C 286, B08**

span, n—of a *thermometer or thermometric system*, the absolute value of the difference between the specified lower and upper temperature limits within a range. **E 344, E20**

spandex—a manufactured fiber in which the fiber-forming substance is a long-chain synthetic polymer comprised of at least 85 % of a segmented polyurethane.

*******sulfar**—a manufactured fiber in which the fiber-forming substance is a long chain synthetic polysulfide in which at least 85 % of the sulfide (-S-) linkages are attached directly to two aromatic rings. **D 123, D13**

spandrel glass—architectural glass that is used in a nonvision area or charting of a building. **C 162, C14**

span drift—See **analyzer**. **D 1356, D22**

spangle, n—in *hot-dipcoatings*, the crystalline structure that develops on a metallic-coated surface when the molten coating metal solidifies, especially on steel sheet and articles coated after fabrication. **A 902, A05**

span length, n—in *length testing of cotton with the Fibrograph*, the distance spanned by a specified percentage of the fibers in the test beard, taking the amount reading at the starting point of the scanning as 100 %. **D 123, D13**

span length, n—in *length testing of cotton with the Fibrograph*, the distance spanned by a specified percentage of the fibers in the test beard, taking the amount reading at the starting point of the scanning as 100 %. **D 7139, D13**

spares—pieces of property that duplicate existing items but are designed as replacements, as required, and are normally kept in reserve. **E 2135, E53**

spark, n—in *atomic emission spectrometry*, a high voltage capacitor discharge. **E 135, E01**

spark coil leak detector—a high-frequency discharge coil of the Tesla type which indicates pin holes in glass vacuum systems by a spark jumping between the core of the coil and the pin hole. **E 1316, E07**

spark, discharge—a non-self-sustaining discharge characterized by high luminosity and a ratio of lateral dimension to length that is substantially smaller than unity. **B 542, B02**

spark discharge, n—transient discrete electric discharge, which takes

- place between two conductors, which are at different potentials. The discharge bridges the gap between the conductors in the form of a single ionization channel. **E 1445, E27**
- sparking fuels, *n***—within the context of Test Method D 3175, fuels that do not yield a coherent cake as residue in the volatile matter determination but do evolve gaseous products at a rate sufficient to mechanically carry solid particles out of the crucible when heated at the standard rate. Such coals normally include all low-rank noncaking coals and lignites but may also include those anthracites, semianthracites, bituminous, chars, and cokes that lose solid particles as described above. These are defined as *sparking fuels* because particles escaping at the higher temperatures may become incandescent and spark as they are emitted. **D 121, D05**
- sparkle, *n***—the visual contrast between the appearance of highlights on the particles of a gonioapparent pigment and their immediate surround. **E 284, E12**
- spark line**—not recommended, see **ion line**. **E 135, E01**
- spark plug fouling, *n***—deposition of essentially non-conducting material onto the electrodes of a spark plug that may, but will not necessarily, prevent the plug from operating. **D 4175, D02**
- spark plug whiskering, or spark plug bridging, *n***—a deposit of conductive material on the spark plug electrodes that tends to form a bridge between them, thus shorting out the plug. **D 4175, D02**
- spark test**—an electrical test in which a spark is used to detect discontinuity of coating. **C 286, B08**
- spar varnish**—under **varnish**, see *spar varnish*. **D 16, D01**
- spatial averaging**—the combination of particle size distributions for regions or locations within a liquid dispersion into a distribution representative of a larger sampling region. **E 1620, E29**
- spatial domain filtering, *n***—a filtering operation performed directly on the profile record. **E 867, E17**
- spatial frequency**—a measure of detail in terms of equivalent, uniformly spaced, cyclical patterns. In an object or image plane, it may be expressed in units of cycles per millimetre (cy/mm) or line pairs per millimetre (lp/mm). In an imaging system, it may be expressed in units of cycles per milliradian (cy/mrad) or line pairs per milliradian (lp/mrad). **E 1316, E07**
- spatial grain size**—the average size of the three-dimensional grains, as opposed to the more conventional grain size determined by a simple average of observations made on a cross section of the material. **E 7, E04**
- spatial resolution**—because of ambiguities due to alternative definitions, it is recommended that “spatial resolution” not be used unless a specific definition is provided by the user. **E 1620, E29**
- spatial size distribution**—the size distribution of particles in a given volume of space, wherein there is no significant variation in the distribution during the sampling interval. **E 1620, E29**
- spatter, *n***—a type of extraneous or undesirable ink droplet originating when a portion of an ink droplet strikes the intended area and is deflected to an unintended area. **F 1857, F05**
- spatulate, *n***—to mix or blend by spreading and folding with a flat thin, usually metal, tool. **D 4175, D02**
- SPC—standard (heterotrophic) plate count**—measurement method for enumerating bacteria. **D 6161, D19**
- spear point**—symmetrical point with four bevel faces meeting at point center. **F 592, F16**
- special calibration board, *n***—a specially assembled noncombustible insulating board used for standardizing the operating condition of the equipment which is used only to measure the flux distribution at specified intervals along the specimen surface. It shall be roughly 20 ± 5 mm in thickness with a density of 750 ± 100 kg/m³. **E 176, E05**
- special calibration dummy specimen, *n***—a dummy specimen made of the same material as the dummy specimen, intended only for use in calibration of flux gradient along the specimen. **E 176, E05**
- special cause, *n***—source of intermittent variation in a process. **E 456, E11**
- special cause variation**—special cause variation is intermittent, unpredictable and unstable. In control chart analysis, it is signaled by a point beyond the control limits, a run, or some other nonrandom pattern of points within the control limits. **F 1789, F16**
- special design**—a concrete pipe design for sizes, loads, or service conditions not covered by a standard design. **C 822, C13**
- special indices of metamerism, *n***—indices of degree of metamerism associated with specific changes in illuminating or viewing conditions, such as change of illuminant or change of observer. **E 284, E12**
- specialty-shaped brick, *n***—a brick manufactured to a basic shape of other than a rectangular prism. **C 43, C15**
- special purpose boom**—boom that departs from the general characteristics of “fence type” and “curtain type” booms, either in design or intended use. **F 818, F20**
- special-purpose tile**—a tile, either glazed or unglazed, made to meet or to have specific physical design or appearance characteristics such as size, thickness, shape, color, or decoration; keys or lugs on backs or sides; special resistance to staining, frost, alkalies, acids, thermal shock, physical impact, high coefficient of friction, or electrical properties. **C 242, C21**
- special symbol/character**—in a character set, a character that is neither a numeral, letter, or a blank, for example, virgule, asterisk, dollar sign, comma, period, etc. **F 149, F05**
- special tools**—tools other than common hand tools or those designed specifically for use with a delivered product. **E 631, E06**
- specialty felt, *n***—one of a number of special purpose felt structures available for, but not limited to, a specific end-use application. **D 123, D13**
- specialty felt, *n***—one of a number of special purpose felt structures available for, but not limited to, a specific end-use application. **D 4845, D13**
- specialty fryer**—equipment with a wide and shallow cooking area that allows a layer of food to be lowered into oil on a screen or shallow basket (that is, donut and fish/chicken fryers). See **fryer**. **F 1827, F26**
- specific adhesion, *n***—see *specific adhesion* under **adhesion**. **D 907, D14**
- specific airflow resistance, *r***; [ML⁻²T⁻¹]; mks rayl (Pa·s/m)—the product of the airflow resistance of a specimen and its area. This is equivalent to the quotient of the air pressure difference across the specimen divided by the linear velocity, measured outside the specimen, of airflow through the specimen. **C 634, E33**
- specific area, *n***—of *wool*, the ratio of the fiber surface to fiber volume. **D 123, D13**
- specific area, *n***—of *wool*, the ratio of the fiber surface to fiber volume. **D 4845, D13**
- specification, *n***—a precise statement of a set of requirements to be satisfied by a material, product, system, or service that indicates the procedures for determining whether each of the requirements is satisfied. **D 123, D13**
- specification, *n***—a precise statement of a set of requirements to be satisfied by a material, product, system or service that indicates the procedures for determining whether each of the requirements is satisfied. **D 4439, D35**
- specification, *n*** (caractérisation(caractérisation technique))—precise statement of a set of requirements to be satisfied by a material, product, system, or service. **E 631, E06**
- specification, *n*** (caractérisation(caractérisation technique))—precise statement of a set of requirements to be satisfied by a material, product, system, or service. **E 1480, E06**
- specification limits, *n***—see **tolerance limits**. **E 456, E11**
- specifications, *n***—written requirement for processes, materials or equipment. **D 5681, D34**
- specific capacity**—the rate of discharge from a well divided by the drawdown of the water level within the well at a specific time since pumping started. **D 653, D18**

specific color phenomena, *n* (using instrumental methods of evaluation): E 344, E20

specific criteria, *n*—accreditation criteria related to the ability of a laboratory to conduct specific tests or specific types of tests. E 1187, E36

specific discharge, *n* (LT³)—the rate of flow of water through a porous medium per unit area measured at a right angle to the direction of flow. D 653, D18

specific energy—energy consumption expressed on the basis of unit mass of throughput. D 5681, D34

specific energy for cutting wear [$M L^{-1} T^{-2}$], *n*—*in solid impingement erosion*, the kinetic energy of impinging particles associated with removal of unit volume of target material by cutting wear. G 40, G02

specific energy for deformation wear [$M L^{-1} T^{-2}$], *n*—*in solid impingement erosion*, the kinetic energy of impinging particles associated with removal of unit volume of target material by deformation wear. G 40, G02

specific flux—flux divided by net pressure driving force. See **permeance**. D 6161, D19

specific gravity, *n*—the ratio of mass of a volume of a material at a stated temperature to the mass of the same volume of distilled water at a stated temperature. C 125, C09

specific gravity—as applied to wood, the ratio of the oven-dry weight of a sample to the weight of a volume of water equal to the volume of the sample at some specific moisture content, as green, air-dry, or oven-dry. D 9, D07

specific gravity, *n*—(1) ratio of the weight of a given volume of substance to the weight of an equal volume of water. (2) ratio of the density of a substance at a specified temperature to the density of water. See **density**. D 16, D01

specific gravity, *n*—of felt, the relative mass per unit volume of felt expressed as a percentage of the mass per unit volume of water. D 123, D13

specific gravity:

specific gravity of solids, G, G_v, S_s (D)—ratio of: (1) the weight in air of a given volume of solids at a stated temperature to (2) the weight in air of an equal volume of distilled water at a stated temperature.

apparent specific gravity, G_a, S_a (D)—ratio of: (1) the weight in air of a given volume of the impermeable portion of a permeable material (that is, the solid matter including its impermeable pores or voids) at a stated temperature to (2) the weight in air of an equal volume of distilled water at a stated temperature.

bulk specific gravity (specific mass gravity), G_m, S_m (D)—ratio of: (1) the weight in air of a given volume of a permeable material (including both permeable and impermeable voids normal to the material) at a stated temperature to (2) the weight in air of an equal volume of distilled water at a stated temperature. D 653, D18

specific gravity, *n*—the ratio of the density of the substance in question to the density of a reference substance at specified conditions of temperature and pressure. D 1356, D22

specific gravity—the ratio of the mass of a specimen to the mass of an equal volume of water, both at the same specified temperature. Generally, density is more useful. (see also **density**) D 1695, D01

specific gravity—see **relative density**. D 2864, D27

specific gravity, *n*—*deprecated term*, the ratio of the density of a substance to that of a reference substance such as water (for solids and liquids) or hydrogen (for gases) under specified conditions (see **relative density**). D 4175, D02

specific gravity—ratio of the mass of any volume of a substance to the mass of an equal volume of water at 4°C. D 4410, D19

specific gravity, *n*—the ratio of the density of the substance in question to the density of a reference substance at specified conditions of temperature and pressure. D 4439, D35

specific gravity, *n*—of felt, the relative mass per unit volume of felt expressed as a percentage of the mass per unit volume of water. D 4845, D13

specific gravity—the ratio of the mass (density) of a sample material to the mass (density) of an equal volume of water at the same specified temperature. D 6161, D19

specific gravity, *n*—the ratio of the mass of a given volume of material at a stated temperature to the mass of an equal volume of gas-free distilled water at a stated temperature, expressed by

$$\text{Specific Gravity } x/y = F \text{ (or } y/x \text{ C)}$$

where *x* is usually 60 °F and *y* is usually 15.56 °C. E 344, E20

specific gravity—the ratio of the mass of a unit volume of a material at a stated temperature to the mass of the same volume of gas-free distilled water at a stated temperature. The form of expression shall be the following:

$$\text{Specific gravity } x/y \text{ } ^\circ\text{C} \dots$$

where:

x = temperature of the material, and

y = temperature of the water.

See also **Baumé gravity** and **density**. E 1547, E15

specific gravity, apparent (of solids and liquids)—the ratio of the weight in air of a unit volume of a material at a stated temperature to the weight in air of equal density of an equal volume of gas-free distilled water at a stated temperature. If the material is a solid, the volume shall be that of the impermeable portion. The form of expression shall be the following:

$$\text{Apparent specific gravity } x/y \text{ } ^\circ\text{C}$$

where:

x = temperature of the material, and

y = temperature of the water. E 1547, E15

specific gravity in air—the ratio of the weight in air of a unit volume of a material at a stated temperature to the weight in air of equal density of an equal volume of gas free distilled water at a stated temperature. D 4790, D16

specific gravity (of solids and liquids)—the ratio of the mass of a unit volume of a material at a stated temperature to the mass of the same volume of gas-free distilled water at a stated temperature. If the material is a solid, the volume shall be that of the impermeable portion. The form of expression shall be the following:

$$\text{Specific gravity } x/y \text{ } ^\circ\text{C}$$

where:

x = temperature of the material, and

y = temperature of the water. E 1547, E15

specific heat, *n*—the ratio of the specific heat capacity of a material to the specific heat capacity of a reference material at the same temperature. E 1142, E37

specific heat capacity—the amount of heat required to raise the temperature of a unit mass of a substance by one degree. It is commonly expressed in Joules per kg per degree K. D 7099, D18

specific heat capacity, C—quantity of heat required to provide a unit temperature change to a unit mass of material. E 1142, E37

specific humidity (*q*), *n*—the ratio of the mass of water vapor, m_v , to the total mass, $m_v + m_a$, of the moist air:

$$q = \frac{m_v}{m_v + m_a}$$

D 4023

D 1356, D22

specific inductive capacity—the same as **permittivity, relative**.

D 2864, D27

specific luminance, *n*—see **coefficient of retroreflected luminance**.

E 284, E12

specific normal acoustic admittance, $y \equiv g - jb$; [$M^{-1}L^2T$]; reciprocal mks rayl ($m/Pa \cdot s$)—the reciprocal of the specific normal acoustic

- impedance. The real and imaginary components are called, respectively, **specific normal acoustic conductance** and **specific normal acoustic susceptance**. **C 634, E33**
- specific normal acoustic impedance**, $z \equiv r + jx$; [ML⁻²T⁻¹]; mks rayl (Pa·s/m)—at a surface, the complex quotient obtained when the sound pressure averaged over the surface is divided by the component of the particle velocity normal to the surface. The real and imaginary components of the specific normal acoustic impedance are called, respectively, **specific normal acoustic resistance** and **specific normal acoustic reactance**. **C 634, E33**
- specific packability**, *n*—for inflatable restraints, volumetric index of compressibility for a folded fabric specimen measured at specified levels of compression. **D 6799, D13**
- specific storage**—the volume of water released from or taken into storage per unit volume of the porous medium per unit change in head. **D 653, D18**
- specific storage**, *n* (L⁻¹)—the volume of water released from or taken into storage per unit volume of the porous medium per unit change in head. **D 653, D18**
- specific surface**, *n*—the surface area of one gram of powder, usually expressed in square centimetres. **B 243, B09**
- specific surface**—the surface per unit mass (or less frequently per unit volume) of a moisture-free sample. The specific external surface is used as a measure of the degree of fineness of fibrillation. **D 1695, D01**
- specific surface** (L⁻¹)—the surface area per unit of volume of soil particles. **D 653, D18**
- specific viscosity*—see **viscosity, specific**. **D 1695, D01**
- specific wear rate*, *n*—see **wear factor**. **G 40, G02**
- specific weight (of sediment deposits)**—the dry weight of sediment solids per unit volume of deposit in place. Synonymous with **volume-weight**. **D 4410, D19**
- specific yield**—the ratio of the volume of water that the saturated rock or soil will yield by gravity to the volume of the rock or soil. In the field, specific yield is generally determined by tests of unconfined aquifers and represents the change that occurs in the volume of water in storage per unit area of unconfined aquifer as the result of a unit change in head. Such a change in storage is produced by the draining or filling of pore space and is, therefore, mainly dependent on particle size, rate of change of the water table, and time of drainage. **D 653, D18**
- specified circuit resistance**—maximum allowable circuit resistance as measured between two terminations whose internal contacts, when held closed, complete a circuit. **F 2112, F01**
- specified dimensions**—dimensions to which masonry units or constructions are required to conform. Actual (measured) dimensions may differ from the specified dimensions by permissible variations. **C 1232, C15**
- specified element**, *n*—in steel, an element controlled to a specified minimum, maximum, or range, in accordance with the requirements of the applicable product specification. **A 941, A01**
- specified load**, *n*—as applied to loadbearing elements, the test load applied to the element in a Test Method E 119 test. **E 176, E05**
- specified temperature**—application temperature specified by the sealant manufacturer. **C 717, C24**
- specifying agency**—the individual engineer, firm, or political subdivision charged with and having the responsibility for the design of a facility, product, equipment, or material requirements. **C 896, C04**
- specifying agency**—the individual engineer, firm, or political subdivision charged with and having responsibility for the design of a facility, product, equipment, or material requirements. **F 412, F17**
- specifying authority**—professional(s) responsible for determining and furnishing information required to perform the test.
- specimen*—See **test specimen**. **E 631, E06**
- specimen**, *n*—a portion of a sample on which a specific test is performed. **A 902, A05**
- specimen**, *n*—a piece or portion of a sample selected and prepared for performing a test. **C 71, C08**
- specimen**—an individual unit on which a test can be made. **C 822, C13**
- specimen**—sample, or portion thereof, which is to be tested and the test results to be reported. **C 896, C04**
- specimen**, *n*—a specific portion of a material or laboratory sample upon which a test is performed or which is selected for that purpose. (Syn. *test specimen*). **C 1145, C28**
- specimen**, *n*—a specific portion of a material or a laboratory sample upon which a test is performed or which is selected for that purpose. **D 123, D13**
- specimen**—pieces or quantity taken or prepared from a sample for testing. **D 653, D18**
- specimen**, *n*—a piece or portion of a sample used to make a test. (ISO) **D 883, D20**
- specimen**—that portion of a sample unit required for a single measurement of a given property or characteristic. **D 1517, D31**
- specimen**, *n*—a piece of material appropriately shaped and prepared so that it is ready to use for a test. **D 1566, D11**
- specimen**, *n*—a piece or portion of a sample used to make a test. **D 4175, D02**
- specimen**, *n*—a specific portion of a material or laboratory sample upon which a test is performed or which is taken for that purpose. (Syn. *test specimen*) **D 4439, D35**
- specimen**, *n*—a specific portion of a material or a laboratory sample upon which a test is performed or which is selected for that purpose. **D 4845, D13**
- specimen**, *n*—a specific portion of a material or laboratory sample upon which a test is performed or which is taken for that purpose. **D 5681, D34**
- specimen**, *n*—in methods of chemical analysis, a piece of material selected to be typical of the whole under the assumption that the whole is composed of pieces of similar composition. (Contrast **sample**). **E 135, E01**
- specimen**, *n*—representative piece of the product which is to be tested together with any substrate or treatment. **E 176, E05**
- specimen**, *n*—the actual section of material, product, or assembly, to be placed in the test apparatus. **E 176, E05**
- specimen**, *n*—manufactured item of the product, representative prototype of the product, or mock-up of the product. **E 176, E05**
- specimen**, *n*—the manufactured item of the product, or representative prototype of the product. **E 176, E05**
- specimen**, *n*—a construction consisting of electrical system components and a fire-resistive barrier system. **E 176, E05**
- specimen**, *n*—representative piece of the product which is to be tested together with any substrate or treatment. The specimen may include an air gap. The specimen may also be tested as a stand-alone product without substrates if this is representative of end-use conditions. **E 176, E05**
- specimen**, *n*—a piece or portion of a sample used to make a test. **E 284, E12**
- specimen*—See **test specimen**. **E 1605, E06**
- specimen**, *n*—a piece or portion of a sample used to make a test. (D20, ISO) **F 412, F17**
- specimen**—a prepared portion of a sample upon which a test is intended to be performed **G 15, G01**
- specimen center of pin hole distance**, *H** [L], *n*—the distance between the center of the pin holes on a pin-loaded specimen. **E 1823, E08**
- specimen chamber (electron optics)**—the compartment located in the column of the electron microscope in which the specimen is placed for observation. **E 7, E04**
- specimen charge (electron optics)**—the electrical charge resulting from the impingement of electrons on a nonconducting specimen. **E 7, E04**
- specimen charging**—the accumulation of electrical charge on the specimen caused by particle bombardment. **E 673, E42**

specimen clamp, *n*

specimen clamp, *n*—the device which is used to transport the fiber test beard of cotton through the gathering, combing, brushing, length, length uniformity, strength, and elongation measurement operations. **D 123, D13**

specimen clamp, *n*—the device which is used to transport the fiber test beard of cotton through the gathering, combing, brushing, length, length uniformity, strength, and elongation measurement operations. **D 7139, D13**

specimen contamination (electron optics)—the contamination of the specimen caused by the condensation upon it of residual vapors in the microscope under the influence of electron bombardment. **E 7, E04**

specimen distortion (electron optics)—a physical change in the specimen caused by desiccation or heating by the electron beam. **E 7, E04**

specimen gage length, δd [L], *n*—the distance between the points of displacement measure (for example, clip gage, gage length). **E 1823, E08**

specimen grid—See **specimen screen**. **E 7, E04**

specimen holder (electron optics)—a device which supports the specimen and specimen screen in the correct position in the specimen chamber of the microscope. **E 7, E04**

specimen loader, *n*—an instrument which obtains the test specimen by lowering an open specimen clamp onto the surface of the raw cotton samples, closing the jaws of the specimen clamp and ascending with a portion of the fibers retained in the jaws awaiting the combing and brushing procedure. **D 123, D13**

specimen loader, *n*—an instrument which obtains the test specimen by lowering an open specimen clamp onto the surface of the raw cotton samples, closing the jaws of the specimen clamp and ascending with a portion of the fibers retained in the jaws awaiting the combing and brushing procedure. **D 7139, D13**

specimen normal, *n*—see **surface normal**. **E 284, E12**

specimen pathlength—see **sample pathlength**. **E 131, E13**

specimen screen (electron optics)—a disk of fine screen, usually 200-mesh stainless steel, copper, or nickel, which supports the replica or specimen support film for observation in the microscope. **E 7, E04**

specimen span, *S* [L]—distance between specimen supports. **E 1823, E08**

specimen stage—the part of the microscope which supports the specimen holder and specimen in the microscope, and can be moved in a plane perpendicular to the optic axis from outside the column. **E 7, E04**

specimen stage controls—the external controls by means of which the stage can be moved. **E 7, E04**

specimen strain—a distortion of the specimen resulting from stresses occurring during preparation or observation. In electron metallography, strain may be caused by stretching during removal of a replica or during subsequent washing or drying. Also, electrical and thermal stresses caused by the electron beam may arise during observation. **E 7, E04**

specimen temperature, *T* [θ]—in *fatigue testing*, the average temperature in the specimen test section during isothermal testing, or the temperature in the specimen test section at any instant of time during cyclic-temperature testing. **E 1823, E08**

specimen thermal conductance, C_s —the time rate of heat flow through a unit area of a specimen (window or door), induced by a unit temperature difference between the specimen surfaces. It is calculated as follows:

$$C_s = 1/(1/U_s - 1/h_1 - 1/h_{II})$$

where:

C_s = thermal conductance of specimen (surface to surface), $W/(m^2 \cdot K)$ [Btu/(ft² · h · °F)],

U_s = thermal transmittance of specimen (air to air under test conditions), $W/(m^2 \cdot K)$ [Btu/(ft² · h · °F)],

h_1 = surface conductance, room side, $W/(m^2 \cdot K)$ [Btu/(ft² · h · °F)], and

h_{II} = surface conductance, weather side, $W/(m^2 \cdot K)$ [Btu/(ft² · h · °F)].

E 631, E06

specimen thermal resistance, R_c —the mean temperature difference, at equilibrium, between two defined surfaces of a material or construction that induces a unit heat flow rate through unit area. It is calculated as follows:

$$R_c = 1/U_s - 1/h_1 - 1/h_{II}$$

where:

R_c = surface to surface thermal resistance of specimen, $m^2 \cdot K/W$ (ft² · h · °F/Btu).

E 631, E06

specimen thermal transmittance, U_s (sometimes called overall coefficient of heat transfer)—the heat transmission in unit time through unit area of a specimen and its boundary air films, induced by unit temperature difference between the environments on each side. It is calculated as follows when

$$t_{b2} = t_{II} (\pm 0.5^\circ C) \text{ and } t_{b1} = t_I (\pm 0.5^\circ C)$$

where:

t_{b1} = baffle surface temperature, room side, K or °C (°F),

t_{b2} = baffle surface temperature, weather side, K or °C (°F),

t_I = temperature of room side air, °C (°F), and

t_{II} = temperature of weather side air, °C (°F).

$$U_s = Q_s/A_s \cdot (t_I - t_{II})$$

where:

A_s = projected area of specimen (same as open area in surround panel), m^2 (ft²), and

Q_s = time rate of heat flow through the specimen, W (Btu/h).

The transmittance of the specimen can be calculated from the thermal conductance and the surface conductances as follows:

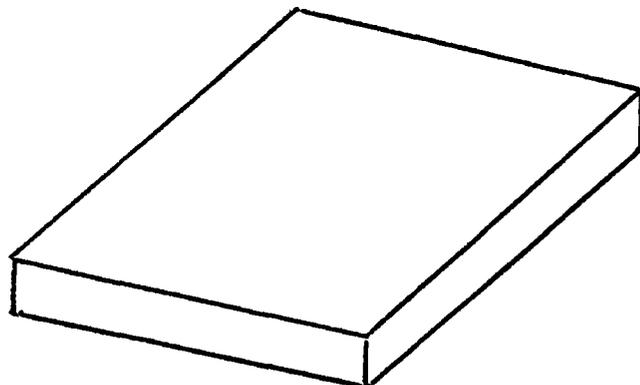
$$1/U_s = 1/h_I + 1/C_s + 1/h_{II}$$

where the values of h_1 and h_{II} are calculated using the appropriate equations in 3.1.4. **E 631, E06**

specimen thickness, *B* [L]—the distance between the parallel sides of a test specimen. **E 1823, E08**

specimen width, *W* [L]—the distance from a reference position (for example, the front edge of a bend specimen or the force line of a compact specimen) to the rear surface of the specimen. **E 1823, E08**

speck—a discrete particle of unreacted or unwanted material in a ceramic body or glaze.



F 109, C21

specking—the discoloration of an enamel surface due to foreign particles in the fired glass. **C 286, B08**

speckle—the random interference pattern which results from the illumination of an optically rough surface with coherent radiation. In laser systems, it results in the granular effect which can be seen in a scattered beam. **E 1316, E07**

speckled ware—a decorative finish with particles of one color appearing in a uniform background of another color or shade. **C 286, B08**

specks, *n*—in *woolenfabrics*, small pieces of undyed vegetable matter which can be removed by carbonizing or can be covered by dyeing or inking. **D 123, D13**

specks, *n*—in *woolenfabrics*, small pieces of undyed vegetable matter which can be removed by carbonizing or can be covered by dyeing or inking. (Compare **trash**) **D 3990, D13**

spectral, *adj*—for *color determination*, indicates either a function of wavelength as in spectral transmittance, or spectral concentration, as in spectral flux. **D 2946, C17**

spectral, *adj*—(1) *modifying a quantity*, descriptor that the quantity is a function of wavelength; (2) *for radiometric quantities*, pertaining to monochromatic radiant energy at a specified wavelength or, by extension, to radiant energy within a narrow wavelength band about a specified wavelength. **E 284, E12**

spectral—(1) for a radiometric quantity, concentration per unit wavelength (or frequency), indicated by the subscript λ following the symbol for the quantity, as $L_\lambda = dL/d\lambda$; at a specific wavelength, indicated by the subscript λ with the wavelength in parentheses, as L_λ (500 nm). (2) For a radiometric property, at a specific wavelength (or frequency), indicated by the wavelength in parentheses, as ρ (750 nm), or as a function of wavelength, indicated by the symbol (λ) following the symbol for the property, as $\epsilon(\lambda)$. See **radiometric properties** and **quantities**. **E 772, E44**

spectral, *adj*—of or relating to, or made by an array of components of an emission or wave separated and arranged in the order of some varying characteristic, such as wavelength, mass, or energy. **F 1294, F05**

spectral background, *n*—non-specific radiation within the spectrum that is not directly related to the observed line or overlapping lines. **E 135, E01**

spectral band, *n*—an arrangement of a specific set of adjacent wavelengths. **F 1294, F05**

spectral bandwidth—see **resolution**. **E 131, E13**

spectral bandwidth, $\Delta\lambda$, *n*—the wavelength interval, $\Delta\lambda$, of radiant energy leaving the exit slit of a monochromator measured at half the peak detected power. **E 284, E12**

spectral characteristic, *n*—the reflectance, reflectance factor, transmittance, or transmittance factor as a function of wavelength, used to characterize a specimen. **E 284, E12**

spectral concentration of a radiometric quantity, *n*—quotient of the quantity, taken over an infinitesimal range on either side of a given wavelength, by the range. $X_e, \lambda = dX_e/d\lambda$.

NOTE—Frequencies, wavenumbers, or their logarithms may also be used; if there is a risk of ambiguity, this should be avoided by means of the wording: “spectral concentration in terms of frequency,” and so forth. (See preliminary remarks at the beginning of “quantities” regarding use of the adjective spectral.) **E 349, E21**

spectral distribution curve, *n*—the curve showing the absolute or relative radiant power emitted or absorbed by a substance as a function of wavelength, frequency, or any other directly related variable. **E 135, E01**

spectral distribution curve of a radiometric quantity (radiant flux, radiant intensity, and so forth), *n*—curve representing the spectral concentration of the quantity as a function of wavelength.

NOTE—Commonly, the relative spectral distribution curve is used, that is, the curve representing the ratio of the spectral concentration of the quantity to a certain value of the same quantity. **E 349, E21**

spectral efficiency factor, $b(\mu)$, *n*—in *bispectral photometry*, the ratio of the total (integrated spectral) radiance from a point on a

specimen when irradiated at wavelength μ to the total radiance of the perfectly reflecting diffuser identically irradiated and viewed.

$$b(\mu) = L(\mu)/L(\mu)_d$$

E 284, E12

spectral emissivity—the ratio of the spectral radiance at a point on a particular specimen and in a particular direction from that point to that emitted by a blackbody at the same temperature. **E 344, E20**

spectral irradiance, $E(\lambda)$, *n*—See **solar irradiance at a point of surface and spectral** in Terminology E 772. **E 1328, E44**

spectral luminous efficiency function, $V(\lambda)$, *n*—the relative effectiveness of radiant power to stimulate the perception of light by the normal human observer, as a function of wavelength: the function adopted as standard by the CIE. **E 284, E12**

spectral position—the effective wavelength or wavenumber of an essentially monochromatic beam of radiant energy. **E 131, E13**

spectral power distribution, *n*—the absolute or relative radiant power emitted by a source, or incident upon a receiver as a function of wavelength. **G 113, G03**

spectral power distribution, SPD, $S(\lambda)$, *n*—specification of an illuminant by the spectral composition of a radiometric quantity, such as radiance or radiant flux, as a function of wavelength. **E 284, E12**

spectral radiance—the power radiated by a specimen in a particular direction per unit time, per unit wavelength, per unit projected area of the specimen, and per unit solid angle. **E 344, E20**

spectral (referring to radiometric quantities), *adj*—for monochromatic radiation at a specified wavelength (or frequency), or, by extension, for radiation within a narrow wavelength band about a specified wavelength.

NOTE—When certain quantities, such as absorbance for transmittance, and so forth, are considered for monochromatic radiation, they are functions of wavelength (or frequency, or wave number, and so forth). They then may be designated by the same term preceded by the adjective “spectral” and by the same symbol followed by λ (or ν , or σ , and so forth) in parentheses, example: spectral transmittance, $\tau(\lambda)$.

Spectral quantities are frequently plotted as a function of wavelength (or frequency) to produce a spectral curve.

If the spectral concentration of a quantity X is considered, it also may be designated by way of abbreviation by the name of the quantity preceded by the adjective “spectral” as before, and by the symbol for the quantity with the subscript λ (or ν , or σ , and so forth), but it must be remembered that X and X_λ are quantities of a different kind because $X_\lambda = dX/d\lambda$. **E 349, E21**

spectral resolution—see **resolving power**. **E 131, E13**

spectral response—the variation in sensitivity of a device to light of different wavelengths. **F 149, F05**

spectral response—the relative light sensitivity of an electrophotographic layer to light of differing wavelengths. **F 335, F05**

spectral response, *n*—the variation in sensitivity of a reading device to light of different wavelengths. **F 1294, F05**

spectral response, $R(\lambda)$, AW^{-1} , *n*—See **absolute spectral response**. **E 1328, E44**

spectral responsivity, $s(\lambda)$, *n*—of a detector, quotient of the detector output by the monochromatic input as a function of wavelength. **E 284, E12**

spectral slit width—the mechanical width of the exit slit, divided by the linear dispersion in the exit slit plane. **E 131, E13**

spectrochemical carrier, *n*—in *dc-arc spectrometry*, a material added to a specimen to facilitate selective vaporization of analytes into the analytical gap. **E 135, E01**

spectrocolorimeter, *n*—spectrometer, one component of which is a dispersive element (such as a prism, grating, or interference filter or wedge or tunable or discrete series of monochromatic sources) that is normally capable of producing as output only colorimetric data (such as tristimulus values and derived coordinates) but not the underlying spectral data from which colorimetric data are derived. See **colorimetric spectrometer**. **E 284, E12**

spectrogoniophotometer, *n*—goniophotometer having the capability of measuring as a function of wavelength; see the preferred term, **goniospectrophotometer**. E 284, E12

spectrograph—an instrument with one slit that uses photography to obtain a record of a spectral range simultaneously. The radiant power passing through the optical system is integrated over time, and the quantity recorded is a function of radiant energy. E 131, E13

spectrograph, *n*—a spectrometer for optical radiation measurements in which the receiver system detects radiant power simultaneously at many points across the spectral region of interest, for example by use of a photographic medium or an array-type photometric detector. E 284, E12

spectrograph (X-ray)—an instrument for recording photographically at predetermined angles the results of diffraction experiments. E 7, E04

spectrometer—an instrument for measuring some function of power, or other physical quantity, with respect to spectral position within a spectral range. E 131, E13

spectrometer, *n*—an instrument for measuring a specified property as a function of a spectral variable. In *optical radiation measurements*, the spectral variable is wavelength or wavenumber and the measured property is (or is related to) absorbed, emitted, reflected, or transmitted radiant power. See **spectrograph**, **spectrophotometer**, **spectroradiometer**. E 284, E12

spectrometer:electron energy analyzer

dispersion—AES, the change in electron image position at the exit of a spectrometer per unit change in electron energy.

energy resolution—AES, XPS, the ratio of the full width at half-maximum intensity of the response curve for monoenergetic electrons at a given energy to the energy of the electrons.

transmission—AES, XPS, the ratio of the number of electrons at a given energy transmitted through the spectrometer to the number entering the entrance aperture of the spectrometer at that energy. E 673, E42

spectrometer tube—the sensing element of a mass spectrometer leak detector. E 1316, E07

spectrometer (X-ray)—(1) an instrument similar to a spectrograph but employing a movable X-ray measuring device, such as a Geiger-Müller counter or ionization chamber, instead of a photographic film. The measuring device moves on a circle centered on the spectrometer axis.

(2) An instrument for recording, similar to the spectrograph, except that a Geiger-Müller counter, scintillation counter, proportional counter, or ionization chamber substitutes for the photographic recording. E 7, E04

spectrometry, *n*—an analytical technique for the quantitative or qualitative characterization of a sample, based on a comparison of the sample's spectrum with the spectrum of a known compound or with a standard(s) of known composition. D 1356, D22

spectrometry, *n*—The branch of physical science treating the theory and practice of the measurement of spectra. E 131, E13

spectrophotometer—a spectrometer with associated equipment, so designed that it furnishes the ratio, or a function of the ratio, of the radiant power of two beams as a function of spectral position. The two beams may be separated in time, space, or both. E 131, E13

spectrophotometer, *n*—a spectrometer for optical radiation measurements in which the receiver system is a photometer. See **photometric**. E 284, E12

spectrophotometer, *n*—instrument for measuring the ratio of two spectral radiometric quantities. E 349, E21

spectrophotometry, *n*—a method for identification of substances and determination of their concentration by measuring light transmittance in different parts of the spectrum. D 1356, D22

spectrophotometry, *n*—quantitative measurement of reflection or transmission properties as a function of wavelength. (See also **abridged spectrophotometry**.) E 284, E12

spectrophotometry—an analytical technique in which a spectrum of analyte species is obtained and used to determine the analyte

concentration in the following manner. Light is directed onto or through analyte species, and the absorption of this light across a range of wavelengths is measured by a detector. The amount of absorbed light is a function of the concentration of analyte species. *spectrum analyzer XRF*—see **XRF spectrum analyzer**. E 631, E06

spectroradiometer, *n*—a spectrometer for measuring emitted optical radiant power. E 284, E12

spectroradiometer, *n*—instrument for measuring the spectral concentration of radiant energy or radiant power. E 349, E21

spectroscopy, *n*—the branch of physical science treating the theory and interpretation of spectra (see Terminology E 135). E 131, E13

spectrum, *n*—an actual or notational arrangement of the component parts of any phenomenon, as electromagnetic waves or particles, ordered in accordance with the magnitude of a common physical property, as wavelength, frequency, or mass. E 131, E13

spectrum, *n*—the spatial arrangement of components of radiant power in order of wavelength. E 284, E12

spectrum:

aligned incidence—EIA, a backscattering spectrum recorded with the analyzing beam aligned with crystallographic axes or planes of the specimen that produce channeling.

random (incidence)—EIA, a backscattering spectrum recorded with the analyzing beam incident on the specimen in a direction such as to produce no channeling. E 673, E42

spectrum averaged cross section, $\bar{\sigma}$ —the cross section averaged over the energy distribution of the neutron fluence, where the energy limits of integration are chosen according to the neutron spectrum and reaction cross section considered. It is defined as:

$$\bar{\sigma} = \int \sigma(E) \Phi(E) dE / \int \Phi(E) dE$$

E 170, E10

spectrum, internal reflection—the spectrum obtained by the technique of internal reflection spectroscopy. E 131, E13

spectrum loading—*in fatigueloading*, a force-time program consisting of some (or all) unequal peak and valley forces. (Also known as *variable amplitude loading* or *irregular loading*.) E 1823, E08

spectrum locus, *n*—the locus of points on a chromaticity diagram representing chromaticities of monochromatic lights of various wavelengths. E 284, E12

spectrum of radiation, *n*—(1) spatial display of a complex radiation produced by separation of its monochromatic components.

(2) composition of a complex radiation. E 349, E21

specular, *adj*—same as regular when applied to reflection. D 2946, C17

specular, *adj*—pertaining to flux reflected from the surface of an object, without diffusion, at the specular angle. E 284, E12

specular angle, *n*—the angle of reflection equal and opposite to the angle of incidence. E 284, E12

specular gloss, *n*—the relative luminous fractional reflectance of a specimen in the specular direction. (See **gloss**.) D 123, D13

specular gloss, *n*—ratio of flux reflected in a specular direction to incident flux for specific source and receptor apertures (usually measured relative to a standard of specified index of refraction). D 2946, C17

specular gloss, *n*—*in waxed paper and paperboard technology*, the degree to which a surface simulates a mirror in its capacity to reflect incident light. D 4175, D02

specular gloss, *n*—the degree to which a surface simulates a mirror in its capacity to reflect incident light. D 4175, D02

specular gloss, *n*—the relative luminous fractional reflectance of a specimen in the specular direction. D 4849, D13

specular gloss, *n*—(1) ratio of flux reflected in specular direction to incident flux for a specified angle of incidence and source and receptor angular apertures.

(2) perceived surface brightness associated with the luminous specular (regular) reflection of a surface. E 284, E12

specular reflection—reflection without diffusion, in accordance with the laws of optical reflection, as in a mirror, (see Terminology E 284). **E 131, E13**

specular reflection, *n*—reflection without diffusion, in accordance with the laws of optical reflection, as in a mirror. **E 284, E12**

specular reflection, *n*—the mirror-like reflection of light from a surface. Also, reflection of light from a surface at an angle equal, but opposite to, the angle of incidence. **F 1294, F05**

specular transmittance, *n*—See **regular transmittance** (the preferred terminology). **D 883, D20**

speed—commonly used term to describe the relative light sensitivity of photoconductive papers. **F 335, F05**

speed effect—the phenomenon in electromagnetic testing of which the evidence is a change in the signal voltage resulting from a change in the relative motion between the specimen and a test coil assembly. **E 1316, E07**

speed (photographic or film) (see sensitivity)—a measure of the response of sensitivity of the material to light, often expressed numerically according to one of several systems, for example, H. and D., D.I.N., Scheiner, and American Standard speed. **E 7, E04**

speed relating to rotary disc floor machines—low speed: up to 800 r/min, high speed: more than 800 but less than 1500 r/min, and ultra high speed: 1500 r/min or more.

NOTE—Effectiveness of the floor machine depends upon machine weight and pad diameter as well as r/min. **D 2825, D21**

spelk—rod-like close packed assemblage, of asbestiform structure, and of generally uniform diameter, that can be fiberized readily. **D 2946, C17**

spew line, *n*—line on the surface of a molded product at the junction of the mold parts. **D 1566, D11**

spew, spue—any constituent of leather that comes to the surface in the form of a white crystallized or dark gummy deposit. **D 1517, D31**

spherical aberration—a lens defect in which image-forming rays passing through the outer zones of the lens focus at a distance from the principal plane different from that of the rays passing through the center of the lens. **E 7, E04**

spherical powder, *n*—globular-shaped particles. **B 243, B09**

spherical projection—a projection in which the orientation of a crystal plane is represented by the point where the plane normal intersects a sphere drawn with the crystal as the center. **E 7, E04**

spherical washers or seats—washers comprised of two mating washer components: one component is a washer having one flat side and a convex spherical surface on the other side. The other component is a washer having one flat side and a concave spherical depression machined into the other side. The two convex and concave spherical portions are mated and fit together to make up one spherical washer unit. **F 1789, F16**

spherical wave—wave in which wave fronts are concentric spheres. **D 653, D18**

sphericity—the ratio of the surface area of a hypothetical sphere of the same volume as the particle to the actual surface area of the particle. (A more convenient expression is the ratio of the diameter of a circle with an area equal to that of the projection of a grain when it rests on its larger face to the diameter of the smallest circle circumscribing this projection). (Shape factor). **D 4410, D19**

spheroidite—a coarse aggregate of carbide and ferrite usually produced by tempering martensite at temperatures slightly below the eutectoid temperature. Generally, any aggregate of ferrite and large spheroidal carbide particles no matter how produced. **E 7, E04**

spheroidize—see **annealing, spheroidize annealing**. **F 1789, F16**

spheroidize annealing—type of subcritical annealing used to soften steel and improve machinability. Heat treating fine pearlite for a long time just below the lower critical temperature of the steel, followed by a very slow cooling, produces a spheroidal or globular form of the pearlite. **F 1789, F16**

spheroidizing, *n*—heating and cooling a steel object to produce a spheroidal or globular form of carbide in its microstructure. **A 941, A01**

spicule (in asbestos)—acicular particle of nonfibrous minerals, superficially resembling a spelk, but which shatters rather than fiberize when subjected to mechanical force. **D 2946, C17**

spider—(1) a wheel-like casting consisting of a rim and radial spokes on which are mounted felt polishing pads.
(2) assembly of radiating tie rods on the top of a furnace. **C 162, C14**

spider—a defect characterized by a starshaped fracture in the porcelain enamel. **C 286, B08**

spigot—see **male end of pipe**. **C 822, C13**

spigot—that portion of a vitrified clay pipe that fits into the bell or socket of the preceding pipe. **C 896, C04**

spiked sample, *n*—a sample portion into which a known amount of analyte has been added. **D 1129, D19**

spiked sample and spiked duplicate sample—a sample portion (split from an original sample) that is spiked with a known amount of analyte. Two portions of a homogenized sample that were targeted for addition of analyte and are fortified with all the target analytes before preparation. Analysis results for these samples are used to provide information on the precision and bias of the overall analysis process. **E 631, E06**

spiked sample and spiked duplicate sample—a spiked sample (or spiked duplicate sample) is a blank wipe that is spiked with a known amount of analyte before preparation. **E 631, E06**

spiked sample and spiked duplicate sample—each is a portion of a single homogenized sample to which the same known amount of analyte is added (spiked) before sample digestion. Analysis results for these samples are used to provide information on accuracy and precision of the overall analysis process.

spindle—See **railing systems**. **E 631, E06**

spiked sample or spiked duplicate sample—a blank medium that contains no purposely added analyte to which a known amount of analyte is added before preparation. **E 631, E06**

spiked sediment—a sediment to which a material has been added for experimental purposes. **E 943, E47**

spill—see **flare**. **F 335, F05**

spillback nozzle—see **by-pass nozzle**. **E 1620, E29**

spill decay—see **flare decay**. **F 335, F05**

spill nozzle—see **by-pass nozzle**. **E 1620, E29**

spill return nozzle—see **by-pass nozzle**. **E 1620, E29**

spin axis, *n*—*of a wheel*, the axis of rotation of a wheel. **F 538, F09**

spindle, *n*—a tapered picket of circular cross-section(s), having a center diameter larger or smaller than the diameter at its ends. **E 631, E06**

spindle, *n*—a tapered baluster of circular cross-section(s), having a center diameter larger or smaller than the diameter at its ends. **E 1481, E06**

spindle—a component or part that connects the dial and drive cam. **F 471, F12**

spinel, *n*—(1) a group of natural or synthetic minerals with the general formula $R''R'''_2O_4$ (or the general oxide formula $R'' \cdot R'''_2O_3$) in which the R'' is one or more bivalent cations such as magnesium or ferrous iron and R''' is one or more trivalent cations such as aluminum, chromium, or ferric iron. *Spinel* in this usage refers mainly to the crystalline structure of the material rather than the specific cations included. (2) specifically the magnesium aluminate spinel, $MgAl_2O_4$ (or $MgO \cdot Al_2O_3$), which is 28.3 % MgO and 71.7 % Al_2O_3 by weight. **C 71, C08**

spinning cup atomizer—see **rotary cup atomizer**. **E 1620, E29**

spinning disk atomizer—see **rotary disk atomizer**. **E 1620, E29**

spinodal curve—a graphical representation of the realizable limit of the super-saturation of a solution. **E 7, E04**

spinodal heat treatment—a thermal treatment of a solution-heat-treated product to produce property changes such as hardening,

spinodal heat treatment

strengthening, and conductivity increase by spinodal decomposition of a solid solution. This treatment has also been called "age hardened," "spinodal hardened," or "spinodally decomposed."

B 846, B05

spin orbit splitting—the splitting of p-, d-, or f-levels arising from coupling of the spin and orbital angular momentum. **E 673, E42**

spinout, *n*—*in tiretesting*, a type of uncontrollability defined by a loss of steering control due to rapid or substantial yaw, or both.

F 538, F09

spin-spin coupling constant (NMR) *J*—a measure, expressed in hertz (Hz), of the indirect spin-spin interaction of different magnetic nuclei in a given molecule. **E 131, E13**

spin velocity, *n*—the angular velocity of the wheel about its spin axis.

F 538, F09

spin welding (machine)—a joining technique used for bonding thermoplastic parts by frictional heat caused by differential rotation of one or both pieces. Rotation is then stopped and pressure held until heat is dissipated. Also known as frictional welding.

C 904, C03

spiral grain—See **grain**.

D 9, D07

spiral thread—misnomer for helical thread. **F 547, F16**

spiral wound cartridge—a crossflow membrane element design consisting of a product tube, flat membrane leaves, feed channel spacers, anti-telescoping devices, and brine (concentrate) seal.

D 6161, D19

spiral wound membrane—a flat sheet membrane with one or more feed channel spacers and barrier layers, all of which are rolled into a spiral configuration. **D 6161, D19**

spirits of turpentine, *n*—the volatile oil consisting primarily of a number of terpene hydrocarbons of the general formula $C_{10}H_{16}$.

D 804, D01

spirit varnish—under **varnish**, see *spirit varnish*. **D 16, D01**

spirometer, *n*—a displacement gasometer consisting of an inverted bell resting upon or sealed by liquid (or other means) and capable of showing the amount of gas added to or withdrawn from the bell by the displacement (rise or fall) of the bell. **D 1356, D22**

spit mark, *n*—*forcoated inflatable restraint fabrics*, an essentially round spot of coating material on the surface of the coated layer.

D 6799, D13

spitout—a glaze defect of the pinhole type developed in the decorating kiln, as a result of the evolution of minute gas bubbles from body or glaze. **C 242, C21**

spitting, *v*—dispensing of a low dose of product when both product and air are dispensed resulting in the pump generating a distinctive spitting noise. **D 6655, D10**

splash cup atomizer—an impact atomizer in which one or more liquid jets are directed against the internal surface of a cup. **E 1620, E29**

splashover—oil splashing over a boom's freeboard. **F 818, F20**

splash plate atomizer—an impact atomizer in which one or more liquid jets are directed against a flat plate. **E 1620, E29**

splay—deposits of flood debris, usually of sand, scattered on the flood plain. **D 4410, D19**

splice—see **joint**. **B 354, B01**

splice, *n*—the connection or junction within the length of a joint system. **E 176, E05**

splice—the joint between two lengths of base film, fabric, or paper. **F 221, F05**

splice, *n*—the joint formed either by overlapping or butting the ends of a given tire component in the course of assembling the tire. **F 538, F09**

splice connections, *n*—joining of consecutive coils. **F 1379, F14**

splice crack, *n*—a crack originating at a splice. **F 538, F09**

splice opening, *n*—a parting of a splice along the interface of the assembled ends of a given component. **F 538, F09**

splice plate—a plate used for fastening and joining members. See also **gusset**.

split-level house—See **building**. **E 631, E06**

splice (reinforcement)—junction of two sections of parallel reinforcement intended to provide continuity and to transfer forces between the two sections. **C 822, C13**

splicing tail, *n*—the barb clusters extending beyond the last attachment at both ends of the coil. **F 1379, F14**

spine key—a part that secures the position of drive cam on a spindle in relation to correct dial calibrations. **F 471, F12**

spine or tongue—that part of a reglet-type lock-strip gasket which is designed to be installed in a reglet in supporting material. **C 717, C24**

split—an imperfection; a crack or check going from surface to surface of a glass article. **C 162, C14**

split—a separation of the wood parallel to the fiber direction, due to the tearing apart of the wood cells. **D 9, D07**

split—a membrane tear resulting from tensile stress. **D 1079, D08**

split—a term used to describe the portion of hide or skin, split into two or more thicknesses, other than the grain or hair side. Splits are usually named according to their sequence of production, such as "main," "second," or "slab" split (in case of upholstery leather), or for the use to which they are to be put, such as "flexible" (for innersoles); "glove," "waxed" (for cheap shoe-uppers); "bag and case" (finished with pyroxylin or pigment finish), sole, etc. **D 1517, D31**

split die, *n*—a die made of parts that can be separated for ready removal of the compact. **B 243, B09**

split ends—See **broken filament**. **D 3990, D13**

split face—a slightly convex or concave surface, produced by hydraulic stone splitters with straight or toothed blades or by driving wedges into a stone without natural cleavage surfaces. **C 119, C18**

split feed—a liquid-phase adsorption process in which a powdered adsorbent is added to the solution to be treated in two or more steps, with or without intermediate separation of the adsorbent. **D 2652, D28**

split filaments—See **broken filament**. **D 3990, D13**

split sample—a single sample separated into two or more individual parts in a manner that each part is representative of the original sample. **D 4410, D19**

split sheet—See **nineteen-inch selvage**. **D 1079, D08**

split spacing grouting—a grouting sequence in which initial (primary) grout holes are relatively widely spaced and subsequent grout holes are placed midway between previous grout holes to "split the spacing."; this process is continued until a specified hole spacing is achieved or a reduction in grout take to a specified value occurs, or both. **D 653, D18**

split-stitch, *n*—*in knitted fabrics*, a stitch in which one part of the yarn is knit and the other part is dropped. **D 123, D13**

split-stitch, *n*—*in knitted fabrics*, a stitch in which one part of the yarn is knit and the other part is dropped. **D 3990, D13**

split- μ test, *n*—a wet traction or stopping distance test conducted on a test course with substantially different wet friction levels for the left and right tire test lanes. **F 538, F09**

split thickness skin autograft, *n*—a skin [auto]graft consisting of the epidermis and a portion of dermis. **F 2312, F04**

splitting—(1) cutting leather into two or more layers. (2) cutting a hide into two sides preparatory to tanning. **D 1517, D31**

splitting failure—a failure mode in which the base material fractures along a plane passing through the axis of the anchor or anchors. **E 2265, E06**

splitting resistance, *n*—*of felt*, the force required to overcome the interfacial strength of a material and specifically to separate a felt into two layers (of approximately equal thickness). **D 123, D13**

splitting resistance, *n*—*of felt*, the force required to overcome the interfacial strength of a material and specifically to separate a felt into two layers (of approximately equal thickness). **D 4845, D13**

spodumene (alpha spodumene)—a lithium mineral of the theoretical composition $Li_2O \cdot Al_2O_3 \cdot 4SiO_2$ (monoclinic crystallization)

- which on heating inverts to beta spodumene, a form having very low or nil thermal expansion. **C 242, C21**
- sponge**, *n*—a form of metal characterized by a porous condition that is the result of decomposition or reduction of a compound without fusion. **B 899, B02**
- sponge iron**, *n*—a coherent, porous mass of substantially pure iron produced by solid-state reduction of iron oxide (for example, iron ore or mill scale). **B 243, B09**
- sponge iron powder**, *n*—ground and sized sponge iron, which may have been purified or annealed or both. **B 243, B09**
- sponge rubber**, *n*—*in building construction*, an elastomeric open-cell material made by incorporating a gas-producing ingredient into a rubber compound, which expands the rubber compound during vulcanization into a material containing cells that are predominately interconnecting. **C 717, C24**
- sponge rubber**, *n*—a porous elastic material with interconnecting cells, generated by gas release in the material prior to vulcanization. **D 1566, D11**
- spongy**, *n*—a porous condition in metal powder particles usually observed in reduced oxides. **B 243, B09**
- spongy enamel**—a defect characterized by masses of bubbles occurring in local areas giving rise to a spongy appearance. **C 286, B08**
- sponsor**, *n*—*of an ASTM test method*, an organization that is responsible for ensuring supply of the apparatus used in the test procedure portion of the test method. **D 4175, D02**
- spontaneous chipping**—see **spall, spalling, or spontaneous spalling**. **C 286, B08**
- spontaneous heating or self heating**, *n*—an exothermic reaction of a material due to slow or incomplete reaction that results in a temperature rise above that of its surroundings. **E 1445, E27**
- spontaneous heating temperature or self-heating temperature**, *n*—the lowest temperature at which spontaneous or self heating occurs under the specified test conditions. This temperature refers to a much earlier stage of reaction than that associated with the autoignition temperature of the material. **E 1445, E27**
- spontaneous ignition**, *n*—unpiloted ignition caused by an internal exothermic reaction (compare **piloted ignition**). **E 176, E05**
- spool**—a cylindrical device that has a rim at each end and an axial hole for a shaft or spindle, and on which the product is wound to facilitate handling and shipping. (Also called a “reel.”) **B 846, B05**
- spoon proof**—test ladle specimen taken during various stages of melting and fining. **C 162, C14**
- sporadic permafrost**—a subzone of the zone of discontinuous permafrost: (1) in North American usage: permafrost underlying <30 % of the exposed land surface; (2) in Russian usage: permafrost underlying from 3 to 20 % of the exposed land surface. **D 7099, D18**
- sporinite**—See **sporinite** under **maceral**. **D 121, D05**
- sport shirt**, *n*—*for boys*, a shirt made in numerical sizes, designed for informal wear and may be worn with or without a jacket. **D 123, D13**
- sport shirt**, *n*—*for men*, a shirt designed for informal wear and made with body sizes such as small, medium, or large; they may be worn with or without a jacket. **D 123, D13**
- sport shirt**, *n*—*for boys*, a shirt made in numerical sizes, designed for informal wear and may be worn with or without a jacket. **D 7022, D13**
- sport shirt**, *n*—*for men*, a shirt designed for informal wear and made with body sizes such as small, medium, or large; they may be worn with or without a jacket. **D 7022, D13**
- spot**, *n*—a small discolored area on, or in, a fabric. **D 123, D13**
- spot**, *n*—a small discolored area on, or in, a fabric. **D 3990, D13**
- spot and stain removal**, *n*—a cleaning procedure for localized areas with cleaning agents and mechanical action specific to the removal of the foreign substances present. **D 123, D13**
- spot and stain removal**, *n*—a cleaning procedure for localized areas with cleaning agents and mechanical action specific to the removal of the foreign substances present. **D 3136, D13**
- spot clean**, *n*—to remove spots and stains by treating them with cleaning agents and mechanical actions specific to the fiber, fabric, product type, and the foreign material present. **D 123, D13**
- spot clean**, *v*—*in the cleaning of textile floor coverings and upholstered furniture*, remove localized spots and stains by treating them with cleaning agents and mechanical actions specific to the fiber, fabric, and product type and the foreign material present. **D 5253, D13**
- spot mopping**—See **mopping**. **D 1079, D08**
- spots**—areas outside the maximum COL, which are contrasting with the background. **F 149, F05**
- spots**, *n*—*in referenceto bar code*, unwanted dark areas in the spaces, quiet zones and intercharacter gaps (if applicable) of a symbol that may be caused by presence of extraneous ink, printing errors, or dirt. **F 1294, F05**
- spot score rule**, *n*—a decision rule in which the sum of scores for an individual relevant question is considered in the formation of the final decision in a polygraph case. **E 2035, E52**
- spot size**, *n*—the diameter of the focused image of the emitter in scanners that use apertured optical systems. **F 1294, F05**
- spot test**—the application of reagent solution to a prepared dry paint film sample, paint chip, paint powder, or painted surface and the subsequent observation for the presence or absence of the characteristic color change. **E 631, E06**
- spot test**, *n*—the application of reagent solution to a dry paint film sample, paint chip, paint powder, or painted surface and the subsequent observation for the presence or absence of the characteristic color change. **E 1605, E06**
- spot test kit**, *n*—equipment (for example, a cutting tool, adsorbent applicators, if necessary) and chemicals (for example, sulfide or rhodizonate spot test reagents and any extraction solutions needed) assembled for use during spot testing for lead. **E 1605, E06**
- spotting out**—the delayed appearance of spots and blemishes on plated or finished surfaces. **B 374, B08**
- spot treatment**—application of a chemical to a small restricted area, usually to control the spread of a pest. **E 1102, E35**
- spot welds**, *n*—means of permanently joining two adjacent coil loops by fusing them through a heat or electrical process. **F 1379, F14**
- spout**—the part of a feeder that carries the orifice, revolving tube, needle, etc. **C 162, C14**
- spray**—the dispersed discharge from an aerosol-type dispenser in the form of small droplets or particles. (This does not include foam-type dispensers.) **D 3064, D10**
- spray**, *n*—a dynamic collection of particles, usually generated by the process of atomization. **E 1620, E29**
- spray**, *v*—to disperse or apply as a spray. **E 1620, E29**
- spray**, *n*—a type of extraneous or undesirable ink dot near the printed zones which originate from the printhead. **F 1857, F05**
- spray angle**, *n*—the plane angle formed by the profile of a spray pattern. **E 1620, E29**
- spray buffing**—the restorative maintenance of a previously polished floor, by the action of a suitable floor polishing machine immediately following the mist-spraying of an appropriate product onto the surface whereby the wet application is buffed to dryness. **D 2825, D21**
- spray characterization**, *n*—the process of describing a spray, based on theory or measurement, in terms of parameters such as liquid flow or flux, patterning, particle size, and velocity. **E 1620, E29**
- spray classification**—classification of sprays by droplet size. **E 1102, E35**
- spray coating**—an aerosol spray product for surface application, that leaves a residual clear or pigmented finish for protective or decorative purposes. **D 3064, D10**
- spray deposit rate**—the amount of spray liquid deposited per unit area. Mean deposit rate is the average amount of deposit over the

entire spray swath. Effective spray deposit rate is the mean deposit from center to center of adjoining swaths. **E 1102, E35**

spray drift—the movement of airborne spray particles from the intended application (target) area. **E 609, E35**

sprayed width per nozzle—the effective width sprayed by a single nozzle. (For broadcast spraying it is the nozzle spacing; for band spraying it is the band width, for row crop spraying it is the number of nozzles per row divided by the row width). **E 1102, E35**

sprayer attachment—an apparatus consisting of the individual components of a sprayer (tank, pressure source, pressure controls, spray liquid lines, pressure nozzles, etc.) in an arrangement to permit its mounting on another implement to permit application of spray at the same time another field operation is performed. **E 1102, E35**

spraying, n—when large ink particles (diameter roughly greater than 80 μm) are thrown off the rollers in the inking unit or the printing plate, particularly with presses that run at high speeds. **D 6488, D01**

spray lime—a hydrated lime of such fineness that at least 95 % of the particles will pass a No. 325 (45-μm) sieve. **C 51, C07**

spray particles/droplets, n—the spherically-shaped liquid objects that are the result of the atomization process created by a dispensing system with the size of these particles or droplets usually expressed in microns. **D 6655, D10**

spray pattern, n—pattern, preferably round, dispensed onto a flat surface when this surface is positioned so that it will intercept a spray at a 90 degree angle at a specific distance. **D 6655, D10**

spray pattern, n—the flux distribution of liquid discharge by an atomizer. **E 1620, E29**

spray probe—in leak testing, a device for directing a small jet of tracer gas on an object under vacuum testing. **E 1316, E07**

spray quenching, n—**quenching** in a spray of liquid. **A 941, A01**

spray rate—the amount of spray liquid emitted by an application unit during treatment, expressed in volume per unit treated. (For area treatment, L/ha, or gal/A; for space treatment, mL/m³, or oz/1000 ft³; for individual units, L/plant, mL/animal, or gal/tree). **E 1102, E35**

spray sagging—a process defect characterized by a wavy line or lines appearing on vertical surfaces of sprayed ware prior to drying. **C 286, B08**

spread, n—the quantity of adhesive per unit of area applied to an adherend.

double spread, n—application of adhesive to both adherends of a joint.

single spread, n—application of adhesive to only one adherend of a joint. **D 907, D14**

spread, n—*in knockmeasurement*, the sensitivity of the detonation meter expressed in knockmeter divisions per octane number. **D 4175, D02**

spread—extent of image expansion in comparison to dimension of imaging device. **F 549, F05**

spreader—See **loading**. **D 996, D10**

spreader—a material which increases the area that a droplet of a given volume of spray mixture will cover on a target. **E 1519, E35**

spreader/sticker—a material that has the properties of both a spreader and a sticker. **E 1519, E35**

spreading—the action of flowing out over a surface during application. **D 2825, D21**

spreading rate, n—the area covered by a unit volume of coating material frequently expressed as square feet per gallon. **D 16, D01**

spread stitches—See **pin hole**. **D 3990, D13**

spready hide—a hide of large area in proportion to the mass. **D 1517, D31**

spring, n—used primarily to return the piston mechanism for filling the body; however, the spring may also control the opening pressure of the upper valve. **D 6655, D10**

springback, n—see **green expansion**. **B 243, B09**

spring characteristics, c (FL⁻¹)—ratio of increase in load to increase in deflection:

$$c = l/C$$

where:

C = compliance.

D 653, D18

spring-clip staple—staple for fastening flat metal clip holding undulated upholstery spring. Also, staple used to attach coiled springs to frame in bedding manufacture where staple serves as clip. **F 592, F16**

spring crown—hip crown; designed to flatten during driving in order to provide optimum lateral guidance in driving channel of stapler. (See **high crown**; “**V**” crown.) **F 592, F16**

spring head—See **cupped oval head, umbrella head**. **F 547, F16**

springline—the points on the internal surface of the transverse cross section of a pipe intersected by the line of maximum horizontal dimension; or in box sections, the mid-height of the internal vertical wall. **C 822, C13**

spring line—the line of maximum horizontal dimension of the transverse cross section. **C 896, C04**

spring line—a line along the length of the pipe at its maximum width along a horizontal plane. **F 412, F17**

spring wire, n—round wire intended especially for the manufacture of springs. **B 899, B02**

springwood—See **earlywood**. **D 9, D07**

spring zone—that location within a melting furnace having the highest temperatures and an up-welling convective flow of molten glass due to density differences. See **hot spot**. **C 162, C14**

sprinkle mopping—See **mopping**. **D 1079, D08**

sprue, n—(1) the primary feed channel that runs from the outer face of an injection or transfer mold to the mold gate in a single cavity mold.

(2) the piece formed in a primary feed channel or sprue.

D 883, D20

sprue, n—material remaining in the sprue hole after molding.

D 1566, D11

sprue, n—(1) the primary feed channel that runs from the outer face of an injection or transfer mold, to the mold gate in a single cavity mold or a runner in multiple-cavity mold; (2) the piece of material formed in the primary feed channel opening. **F 412, F17**

sprue hole, n—the passageway through which a rubber is forced into a mold. **D 1566, D11**

sprung mass—the total mass minus the unsprung mass. **E 867, E17**

spud—to remove the roofing aggregate and most of the bituminous top coating by scraping and chipping. **D 1079, D08**

spun glass—See **fiber**. **C 162, C14**

spun yarn, n—*in a staple system*, a continuous strand of fibers held together by some binding mechanism. **D 123, D13**

spun yarn, n—*in a staple system*, a continuous strand of fibers held together by some binding mechanism. **D 4849, D13**

sputter depth profile—**AES**, the compositional depth profile obtained when material is removed by sputtering as a result of ion bombardment. **E 673, E42**

sputter depth profile—**SIMS**, the compositional depth profile obtained when material is removed by sputtering as a result of primary bombardment. **E 673, E42**

sputtered neutral mass spectrometry—**SNMS** a method in which a mass spectrometer is used to measure the mass-to-charge quotient and abundance of secondary ionised neutral species emitted from a sample as a result of particle bombardment

NOTE—The neutral species may be detected by using plasma, electron, or photon ionization methods. **E 673, E42**

sputtering—the production of specimens in the form of thin films by deposition from a cathode subjected to positive ion bombardment.

E 7, E04

sputtering—the phenomenon which occurs when atoms and ions are ejected from the specimen as a result of particle bombardment.

equilibrium surface composition—the steady-state surface composition produced by sputter-etching a homogeneous specimen under nonvarying conditions for the ambient vacuum and the primary beam.

fractional yield—SIMS, the ratio of the number of atoms and ions of a particular element to the total number of atoms and ions ejected from the specimen.

preferential—the phenomenon which may occur when the sputtering of multicomponent specimens causes a change in the equilibrium surface composition of the specimen.

rate—the amount of specimen material removed per unit time as a result of particle bombardment.

yield—the number of atoms and ions ejected from the specimen per incident ion. **E 673, E42**

spynkle number, *n*—*in jute*, a direct yarn-numbering system for jute rove and jute yarns in which the number of pounds per spynkle, or 14 400-yd (13 167-m) length, is expressed as pounds per spynkle. (See also **direct yarnnumbering system**.) **D 123, D13**

square—a roof area of 9.29 m² (100 ft²), or enough material to cover 9.29 m² of deck. **D 1079, D08**

square, *n*—an equal-sided rectangular **bar** or **tube** having sharp or slightly rounded edges. **E 631, E06**

square-cut glass—optical glass cut in small squares, separated and designated by weight. **C 162, C14**

squareness, *n*—*of paper dimensions*, the variation of the angle of the corner of a sheet of paper from 90°. **D 1968, D06**

square point—sheared square point; also known as no point or square-cut point. **F 547, F16**

square point—point sheared perpendicular to staple-leg axis to form a pointless staple-leg end; known as blunt point. **F 592, F16**

square root normal distribution—drop size distribution described by the following equation in derivative form:

$$df_n/dD = \{1/[2\sqrt{(2 \times \pi \times \sigma_s \times D)}]\} \times \exp\{-[(\sqrt{D}) - (D)_{\text{med}}]^2/[2 \times \sigma^2]\}$$

where:

f_n = the number fraction of drops of diameter less than D , and
 σ_s = the "standard deviation" from $(\sqrt{D})_{\text{med}}$.

E 1620, E29

square shank—term applied to nails with shank of essentially square cross section with or without longitudinal flutes or diagonal barbs; usually found on nails made from square wire. Shank-diameter of nails measured across diagonal (see **diameter**). **F 547, F16**

square spray nozzle—a pressure atomizer with a special orifice outlet configuration designed to create a spray whose cross section approaches a square. **E 1620, E29**

square-wire nail—bright, diagonally barbed, square-wire, regular-stock-steel, 2 by 0.113 to 4 by 0.192-in. common nails with 1/4 to 3/8-in. flat head and medium diamond point; also, 2 by 0.099 and 2 1/2 by 0.113-in. box nails with 1/4 and 1 1/4-in. flat head and medium diamond point; also, 2 by 0.091 and 2 1/2 by 0.099-in. finish nails with 0.124 and 0.131-in. flat head and medium diamond point; also, 1 1/2 by 0.131-in. truss nail with 3/32-in. flat head and medium diamond point. **F 547, F16**

squealer—Same as audible leak indicator. **E 1316, E07**

squeegee oil—a liquid mixture of organic materials used as the vehicle in squeegee paste. **C 286, B08**

squeegee paste, screening ink, screening paste—a mixture of squeegee oil and finely divided inorganic materials such as color oxides and fluxes. **C 286, B08**

squeeze-out, *n*—adhesive pressed out of the joint during the bonding process. **D 907, D14**

squeezing ground, *n*—*in tunneling*, soil or rock that contains a large

amount of clay and that advances slowly into the excavation with no perceptible increase in volume and without fracturing.

D 653, D18

squirrel foot, *n*—exposed, rough pieces of belt or bead wire. (See also *fishhooks*.) **D 5681, D34**

SRV, *n*—Schwingung, Reibung, Verschleiss, (German); oscillating, friction, wear, (English translation). **D 4175, D02**

S₁₀–S₁₈—an estimate of the portion of degraded cellulose in a pulp obtained by subtracting S₁₈ from S₁₀. **D 1695, D01**

stability—(1) resistance to devitrification.

(2) chemical durability, resistance to weathering. **C 162, C14**

stability—the condition of a structure or a mass of material when it is able to support the applied stress for a long time without suffering any significant deformation or movement that is not reversed by the release of stress. (ISRM) **D 653, D18**

stability—resistance to overturning moment. **F 818, F20**

stability factor (stability number), *N_s* (D)—a pure number used in the analysis of the stability of a soil embankment, defined by the following equation:

$$N_s = H_c \gamma_e / c$$

where:

H_c = critical height of the sloped bank,
 γ_e = effective unit of weight of the soil, and
 c = cohesion of the soil

NOTE—Taylor's "stability number" is the reciprocal of Terzaghi's "stability factor." **D 653, D18**

stability testing, *n*—tests required to demonstrate the chemical stability of the ampulized reference material (RM) for the purpose of determining the shelf life of the RM. **D 4175, D02**

stability to thermal oxidation, *n*—*for polyolefin monofilaments*, the time-to-failure, when polyolefin monofilaments exposed to circulating air, at 125°C. **D 123, D13**

stability to thermal oxidation, *n*—*for polyolefin monofilaments*, the time-to-failure, when polyolefin monofilaments are exposed to circulating air, at 125°C. **D 4849, D13**

stabilization—a treatment of magnetic material designed to increase the permanency of its magnetic properties or conditions. **A 340, A06**

stabilization—see **soil stabilization**. **D 653, D18**

stabilization—a treatment process that involves both a physical and chemical reaction for treating heavy metal waste. Heavy metal wastes are considered stabilized when they meet current applicable regulatory requirements. **D 5681, D34**

stabilization, *n*—a process for treating a waste to minimize an undesirable attribute of that waste; the treating of solids from wet scrubbing or other air pollution control processes; fly ash is often used as a reagent or filler. **E 2201, E50**

stabilization annealing—heating an austenitic stainless steel used in severe aqueous corrosion environments by first solution annealing and then reheating to about 1600°F, and holding at that temperature. The treatment causes grain boundary precipitation of carbides, but also the hold time permits the chromium remaining in the austenite solution to redistribute within the grains, restoring corrosion resistance, even adjacent to the grain boundaries. **F 1789, F16**

stabilized borehole liquid level—the borehole liquid level which remains essentially constant with time, that is, liquid does not flow into or out of the borehole. **D 653, D18**

stabilized CCPs, *n*—see **fixated CCPs**. **E 2201, E50**

stabilized stainless steel, *n*—a stainless steel that conforms to a specification that prescribes limits (minimum or range) for niobium (columbium), tantalum, titanium, or a combination thereof. **A 941, A01**

stabilized steel, *n*—a steel which has been treated with one or more carbide- or nitride-forming elements such as titanium, vanadium,

stabilized steel, n

or columbium, to control the level of interstitial solute elements (carbon or nitrogen) in the steel. **A 902, A05**

stabilizer—an ingredient added to a plastic to retard possible degradation. **F 412, F17**

stabilizer, n—materials added to the coating mixture or used in a topcoat to reduce the reversibility and degradation of the color reaction and unreacted background. **F 1623, F05**

stabilizer, dry rubber, n—a substance present in or added to raw rubber to maintain properties at or near their initial values during its production, processing, and storage. **D 1566, D11**

stabilizer, (latex), n—a substance occurring naturally in or added to latex that prevents agglomeration or coagulation of the rubber particles during processing and/or compounding. **D 1566, D11**

stabilizer (rubber), n—a substance present in or added to raw rubber to maintain the properties at or near their initial values during drying, processing, and storage. **D 1566, D11**

stabilizing treatment, n—any treatment intended to stabilize the microstructure or dimensions of a steel object. **A 941, A01**

stable crack extension [L], n—a displacement-controlled crack extension beyond the stretch-zone width. The extension stops when the applied displacement is held constant. **E 1823, E08**

stable engine conditions, n—for *octane rating*, cylinder head temperatures change less than 5°C (9°F) during a 1 min period. Any changes or minor adjustments to throttle, mixture, or engine conditions mandate restarting the clock for determining stable conditions. **D 4175, D02**

stable fabric, n—a fabric, the dimensions of which do not change significantly during processing or use. **D 123, D13**

stable fabric, n—a fabric, the dimensions of which do not change significantly during processing or use. **D 4850, D13**

stable process, n—process in a state of statistical control; process condition when all special causes of variation have been removed. **E 456, E11**

stacker—See **lehr loader**. **C 162, C14**

stacker—a device for accumulating processed documents in optical scanners and card readers. **F 149, F05**

stacking chair, n—chair that is intended to be stacked when not in use. **E 176, E05**

stacking sequence—the arrangement of ply orientations and material components in a laminate specified with respect to some reference direction. **D 3878, D30**

stacking sequence—the order in which each individual ply is layed up, or stacked, on the tool. **E 631, E06**

stacking sequence—the order in which each individual ply is layed up, or stacked, on the tool. **E 1749, E06**

stack vent—a vertical outlet in a built-up roofing system to relieve the pressure exerted by water vapor between the roofing membrane and the vapor retarder or deck. **D 1079, D08**

stage—in *grouting*, the length of hole grouted at one time. See also **stage grouting**. **D 653, D18**

stage—a sequential arrangement of pressure vessels, usually reject staged such as 2:1 array, sometimes permeate staged as in double pass RO. **D 6161, D19**

stage—a device for holding a sample in the desired position in the optical path. **E 7, E04**

stage grouting—sequential grouting of a hole in separate steps or stages in lieu of grouting the entire length at once; holes may be grouted in ascending stages by using packers or in descending stages downward from the collar of the hole. **D 653, D18**

stage micrometer—a graduated scale used on the stage of a microscope for calibration. **E 7, E04**

staggered nested experiment, n—a nested experiment in which the nested factors are run within only a subset of the versions of the first or succeeding factors. **E 456, E11**

staggered nested experiment, n—a nested experiment in which the nested factors are run within only a subset of the versions of the first or succeeding factors. **E 1325, E11**

staging—see **brine staging** and **product staging**. **D 6161, D19**

stagnation conditions—in solar energy systems, the conditions (that is, temperature and pressure) existing when energy system has attained a quasi-steady state after the flow of heat-transfer fluid has stopped, but the absorber continues to receive significant solar irradiance. **E 772, E44**

stain—(1) an imperfection; chemical corrosion on the surface of glass.

(2) transparent coloration achieved by application of metallic ions on glass at an elevated temperature. **C 162, C14**

stain—a discoloration in wood that may be caused by such diverse agencies as microorganisms, metal, or chemicals. The term also applies to materials used to impart color to wood.

blue stain—a bluish or grayish discoloration of the sapwood caused by the growth of certain dark-colored fungi on the surface and in the interior of the wood which is not accompanied by deterioration of the wood. While not caused by a wood-destroying fungi, the presence of blue stain indicates conditions possibly conducive to growth of destructive fungi.

brown stain—a rich brown to deep chocolate-brown discoloration of the sapwood of some pines caused by a fungus that acts much like the blue-stain fungus. See comments on conditions conducive to staining.

chemical brown stain—a brown discoloration of chemical origin that sometimes develops on wood in the course of air seasoning or kiln drying, probably from the oxidation of extractives in the wood. **D 9, D07**

sapstain—See **blue stain**.

stain, n—a discoloration, arising from foreign materials, that penetrates into the coating. **D 16, D01**

stain, n—a penetrating composition that changes the color of a surface, usually transparent and leaving practically no surface film. **D 16, D01**

stain, n—an area of discoloration that penetrates the fabric surface. **D 123, D13**

stain—a local deposit of soil or visible discoloration on a substrate. **D 459, D12**

stain—discoloration by foreign matter. **D 2825, D21**

stain, n—an area of discoloration that penetrates the fabric surface. **D 3990, D13**

stain, n—an area of discoloration that penetrates the fabric surface. **D 4850, D13**

stainability—the relative ease with which a material is penetrated and discolored by a foreign material. **C 286, B08**

stain, contact, n—discoloration of a product by another material or product in the area of direct contact. **D 1566, D11**

stain, diffusion, n—discoloration of a light-colored veneer or coating, caused by the diffusion of staining materials from the rubber through the veneer or coating. **D 1566, D11**

staining—marking the surface of glass by diffusing the colorant into the glass surface. **E 344, E20**

staining—the discoloration of image receptor sheet during contact with a carbon sheet. **F 221, F05**

staining power—the ability of the polish to impart color to leather during normal polishing without hiding the leather grain. **D 2825, D21**

stainless steel, n—a steel that conforms to a specification that requires, by mass percent, a minimum chromium content of 10.5 or more, and a maximum carbon content of less than 1.20. **A 941, A01**

stainless steel—the raw material on the instrument that is in accordance with Specification F 899. **F 921, F04**

stainless steel—the raw material of the instrument that is in accordance with Specification F 899. **F 1078, F04**

stainless steel—steel which has been alloyed with chromium ranging from 10% to less than 30%. Other alloying elements may also be added. **F 1789, F16**

stain, migration, *n*—discoloration, caused by volatile constituents of a rubber, that occurs on any portion of the surface of any object in the proximity of or adjacent to but not in direct contact with the rubber causing the stain. **D 1566, D11**

stains—see **inclusions**. **D 1711, D09**

stair, *n*—an uninterrupted series of level steps, or connecting flights of steps, extending between two or more **floors** or landings.

stair-rail system—See **railing systems**.

*stairway, *n*—See **stair**. **E 631, E06***

stair-rail system—a railing system located along the open sides of a stair or landing. (Compare **guardrail/railing/stair-railsystem**.)

E 631, E06

stair-rail system—a railing system located along the open sides of a stair or landing. (Compare **guardrail/railing/stair-railsystem**.)

E 1481, E06

stakeholder, *n*—a person, party, or private or public agency or organization that is interested in one or more aspects of how ITS-generated data is collected, archived, analyzed, or retrieved from an existing or proposed ADMS. **E 867, E17**

stakeholders, *n*—anyone who affects the project or is affected by the project; other than the owner/user. **E 833, E06**

stalagmometer—an apparatus for determining surface tension. The mass of a drop of a liquid is measured by weighing a known number of drops or by counting the number of drops obtained from a given volume of the liquid. **B 374, B08**

standard—uniform lengths recommended in a simplified practice recommendation or established as a commercial standard.

B 846, B05

standard, *n*—an accepted reference sample or device used for establishing measurement of a physical quantity.

*primary flow-rate standard, *n*—a device or means of measuring flow rate based on direct primary observations, such as time and physical dimensions.*

*primary standard, *n*—a standard directly defined and established by some authority, against which all secondary standards are compared.*

*secondary flow-rate standard, *n*—a flow-rate-measuring device, such as an orifice meter, that has been calibrated against a primary standard.*

*secondary standard, *n*—a standard used as a means of comparison, but checked against a primary standard.*

*transfer standard, *n*—a type of secondary standard.*

*working flow-rate standard, *n*—a flow rate measuring device, such as an orifice meter, that has been calibrated against a secondary flow-rate standard.*

*working standard, *n*—a standard used in the laboratory or field for periodic standardization of a measurement instrument. **D 1356, D22***

standard—1) a physical reference used as a basis for comparison or calibration;

2) a concept that has been established by authority, custom, or agreement to serve as a model or rule in the measurement of quality or establishment of a practice or procedure. **E 7, E04**

*standard, *n**—see **documentary standard, physical standard, primary standard, product standard, reference standard, transfer standard, verification standard, working standard**. **E 284, E12**

standard—(1) a physical reference used as a basis for comparison or calibration; (2) a concept that has been established by authority, custom, or agreement to serve as a model or rule in the measurement of quality or the establishment of a practice or procedure. **E 1316, E07**

standard, *n*—material of established origin with certified properties. **E 1732, E30**

standard addition or known addition—a procedure for the determination of the concentration of a particular species in a sample by adding known amounts of that species to the sample solution and recording the change in potential of an ion-selective electrode versus a suitable reference electrode. **D 4127, D19**

standard air—See **air at normal conditions**. **D 1356, D22**

standard air density, *n*—atmospheric air density of 0.075 lb/ft³ (1.201 kg/m³). **F 395, F11**

standardant, *n*—a material used for standardization. **E 135, E01**

standard atmosphere for preconditioning, *n*—*in textiles*, an atmosphere having a relative humidity of 5 to 25 %, ± 2 % tolerance for the selected relative humidity, and a temperature of not over 50°C (122°F), with ± 1 °C (± 2 °F) tolerance for the selected temperature and used to partially dry the material before further treatment or conditioning. **D 123, D13**

standard atmosphere for preconditioning, *n*—a set of controlled conditions having a temperature not over 50°C (122°F), with respective tolerances of ± 1 °C (± 2 °F), and a relative humidity of 5–25 % ± 2 % for the selected humidity that drying can be achieved prior to conditioning in the standard atmosphere for testing textiles. **D 4920, D13**

standard atmosphere for testing, *n*—an atmosphere for testing in which the conditions for relative humidity and temperature are specified and controlled. (Compare **atmosphere for testing**.) **D 123, D13**

standard atmosphere for testing, *n*—*in textiles*, an atmosphere for testing in which the air is maintained at a relative humidity of 65 ± 2 % and at a temperature of 21 ± 1 °C (70 ± 2 °F). (See **atmosphere for testing**.) **D 123, D13**

standard atmosphere for testing, *n*—an atmosphere for testing in which the conditions for relative humidity and temperature are specified and controlled. (Compare **atmosphere for testing**.) **D 4920, D13**

standard atmosphere for testing, *n*—*in glass textiles*, an atmosphere for testing in which the air is maintained at a relative humidity of at least 45 % and no greater than 67 %, tolerance of ± 2 % for the selected relative humidity, and a temperature of at least 20°C (68°F) and no greater than 25°C (77°F), with a tolerance of ± 1 °C (± 2 °F) at the selected temperature. (Compare **atmosphere for testing**.) **D 4920, D13**

standard atmosphere for testing, *n*—*in textiles*, an atmosphere for testing in which the air is maintained at a relative humidity of 65 ± 2 % and at a temperature of 21 ± 1 °C (70 ± 2 °F). (See **atmosphere for testing**.) **D 4920, D13**

standard atmosphere for testing, *n*—*in tire cord and industrial yarn textiles*, an atmosphere for testing in which the air is maintained at a relative humidity of 55 ± 2 % and at a temperature of 24 ± 1 °C (75 ± 2 °F). (Compare **atmosphere for testing**.) (See **standard atmosphere for testing**.) **D 4920, D13**

standard atmosphere for testing textiles, *n*—laboratory conditions for testing fibers, yarns, and fabrics in which air and relative humidity are maintained at specific levels within established tolerances. **D 123, D13**

standard atmosphere for testing textiles, *n*—laboratory conditions for testing fibers, yarns, and fabrics in which air and relative humidity are maintained at specific levels with established tolerances. **D 6477, D13**

standard atmospheric conditions, *n*—29.92 in. Hg (101 325 Pa), 68°F (20°C), and 30 % relative humidity. **F 395, F11**

standard compaction—see **compaction test**. **D 653, D18**

standard conditions, *n*—*in building construction*, laboratory test conditions consisting of a relative humidity of 50 ± 5 % at an air temperature of 23 of ± 1 °C [73.4 ± 2 °F] at ambient atmospheric pressure. **C 717, C24**

standard depth of penetration—see **depth of penetration**. **E 1316, E07**

standard depth of penetration (SDP)—the depth at which the eddy current density is reduced to approximately 37 % of the density at the surface. Eddy-current testing is most effective when the wall thickness does not exceed the SDP or in heavier tube walls when discontinuities of interest are within one SDP. (E 215) **E 1316, E07**

standard design—a published and proven concrete pipe design. **C 822, C13**

standard deviation, *n*—the most usual measure of the dispersion of

standard deviation, n

observed values or results expressed as the positive square root of the variance. **D 121, D05**

standard deviation, n —the most usual measure of the dispersion of observed values or results expressed as the positive square root of the variance. **D 4175, D02**

standard deviation—a measure of the dispersion of a series of results around their mean, computed as the positive square root of the variance. The standard deviation is the basis for most statements of precision and may be obtained from an analysis of variance of results of an interlaboratory test program. **D 4790, D16**

standard deviation, n —the most usual measure of the dispersion of observed values or results, expressed as the positive square root of the sum of the squared deviations from the sample average, divided by the degrees of freedom, usually $n - 1$, where n is the number of observed values. **E 284, E12**

standard deviation, n —the most usual measure of the dispersion of observed values or results expressed as the positive square root of the variance. **E 456, E11**

standard deviation—the square root of the variance. **E 856, D34**

standard deviation—a measure of the dispersion of a series of results around their average, expressed as the square root of the quantity obtained by summing the squares of the deviations from the average of the results and dividing by the number of observations minus one. It is also the square root of the variance and can be calculated as follows:

$$s = \sqrt{\frac{\sum(X_i - \bar{X})^2}{n - 1}}$$

where:

s = estimated standard deviation of the series of results,

X_i = each individual value,

\bar{X} = average (arithmetic mean) of all values, and

n = number of values. **E 1547, E15**

standard deviation—a measure of variation or scatter around the arithmetic average or mean. **E 2161, E37**

standard deviation, between-laboratory, n —see **between-laboratory standard deviation**. **E 135, E01**

standard deviation (in statistics)—a measure of the precision of the readings, the average deviation of the deviations from the mean value.

standard pipe size—See **iron pipe size**. **E 631, E06**

standard deviation (in statistics)—a measure of the precision of the readings, the average deviation of the deviations from the mean value. **E 1605, E06**

standard deviation, minimum, n —see **minimum standard deviation**. **E 135, E01**

standard deviation (s), n —a measure of the dispersion of a series of results around their average, expressed as the square root of the quantity obtained by summing the squares of the deviations from the average of the results and dividing by the number of observations minus one; it is also the square root of the variance and is calculated as follows:

$$s = \sqrt{\frac{\sum(x_i - \bar{x})^2}{(n - 1)}}$$

where:

s = estimated standard deviation of the series of results,

x_i = each individual value,

\bar{x} = mean (average) of all values, and

n = number of values. **A 644, A04**

standard deviation, s , n —of a sample, a measure of the dispersion of variates observed in a sample expressed as the positive square root of the sample variance. **D 123, D13**

standard deviation, within-laboratory, n —see **within-laboratory standard deviation**. **E 135, E01**

standard dimension ratios (SDR)—a specific ratio of the average specified outside diameter to the minimum specified wall thickness (D_o/t) for outside diameter-controlled plastic pipe, the value of which is derived by adding one to the pertinent number selected from the ANSI Preferred Number Series 10. Some of the values are as follows:

ANSI Preferred Number Series 10	SDR
5.0	6.0
6.3	7.3
8.0	9.0
10.0	11.0
12.5	13.5
16.0	17.0
20.0	21.0
25.0	26.0
31.5	32.5
40.0	41.0
50.0	51.0
63.0	64.0

(See reference: ANSI Preferred Numbers, Z17.1 (Designated as R 10 in ISO 3 and ISO 497).) **F 412, F17**

standard error of calibration, (SEC)—a measure of calibration accuracy determined by the following equation:

$$SEC = \left(\frac{1}{n - p - 1} \sum_{i=1}^n e_i^2 \right)^{1/2}$$

where:

n = the number of observations in the calibration data set,

p = the number of independent variables in the calibration, and

e_i = the difference between a measured value of a property and its accepted value. **E 131, E13**

standard error of performance, (SEP)—a measure of accuracy determined by the following equation:

$$SEP = \left[\frac{1}{n - 1} \sum_{i=1}^n (e_i - \bar{e})^2 \right]^{1/2}$$

where:

n = the number of observations for which the accuracy is determined,

e_i = the difference between a measured value of a property and its accepted reference value, and

\bar{e} = is the mean of all the e_i . **E 131, E13**

standard-fall diameter—the diameter of a sphere with a specific gravity of 2.65 and the same standard-fall velocity as the particle. **D 4410, D19**

standard-fall velocity—the rate of fall that a particle would finally attain if falling alone in quiescent distilled water of infinite extent and a temperature of 24°C. **D 4410, D19**

standard grain-size micrograph—a micrograph taken of a known grain size at a known magnification, which is used to determine grain size by direct comparison with another micrograph or with the image of a specimen. **E 7, E04**

standard gravity, n —as adopted by the International Committee on Weights and Measures, an acceleration of 9.80665 m/s². **D 1356, D22**

standard hardboard—hardboard substantially as manufactured at the end of hot pressing, except for humidification to adjust moisture content, trimming to size, and other subsequent machining, and having the properties associated with hardboard meeting specifications for that quality product. **D 1554, D07**

standard (hardness) block—a carefully prepared metal block used to calibrate hardness test machines. **E 7, E04**

standard hide powder—any lot of hide powder officially approved by the American Leather Chemists Association. **D 1517, D31**

standard illuminant, n —a luminous flux, specified by its spectral

distribution, meeting specifications adopted by a standardizing organization. (See, for example, **CIE standard illuminant A**, **CIE standard illuminant B**, **CIE standard illuminant C**, **CIE standard illuminant D_{65}** .) E 284, E12

standard impinger—See **impinger**. D 1356, D22

standard inside diameter dimension ratio (SIDR)—a specific ratio of the average specified inside diameter to the minimum specified wall thickness (D/t) for inside diameter-controlled plastic pipe, the value of which is derived by subtracting one from the pertinent-number selected from the ANSI Preferred Number Series 10. Some of the values are as follows:

ANSI Preferred Number Series 10	SIDR
5.0	4.0
6.3	5.3
8.0	7.0
10.0	9.0
12.5	11.5
16.0	15.0
20.0	19.0
25.0	24.0
31.5	30.5
40.0	39.0
50.0	49.0
63.0	62.0

(See reference: ANSI Preferred Numbers, Z17.1 (Designated as R 10 in ISO 3 and ISO 497).) F 412, F17

standard instrument—a measuring instrument intended to define, represent physically, maintain, or reproduce the unit of measurement of a quantity (or a multiple or submultiple of that unit) in order that other measuring instruments may be calibrated against it by comparison (see **calibrated instrument**). E 170, E10

standardization, n —(1) the process of adjusting instrument output to a previously established calibration; (2) the experimental establishment of the concentration of a reagent solution. E 135, E01

standardization—correlation of an instrument response to a standard of known accuracy. E 1187, E36

standardization, instrument, n —the adjustment of an NDT instrument using an appropriate reference standard, to obtain or establish a known and reproducible response. (This is usually done prior to an examination, but can be carried out anytime there is concern about the examination or instrument response. (See also **calibration, instrument**.) E 1316, E07

standardize, v —to adjust instrument output to correspond to a previously established calibration using one or more homogeneous specimens or reference materials. (See **calibrate, verify**.) E 284, E12

standard kaolin—kaolin from any lot officially approved by the American Leather Chemists Association. D 1517, D31

standard knock intensity, n —for **knock testing**, that level of knock established when a primary reference fuel blend of specific octane number is used in the knock testing unit at maximum knock intensity fuel-air ratio, with the cylinder height (dial indicator or digital counter reading) set to the prescribed guide table value. The detonation meter is adjusted to produce a knockmeter reading of 50 for these conditions. D 4175, D02

standard laboratory atmosphere—an atmosphere, the temperature and relative humidity of which is specified, with tolerances on each. E 41, G03

standard leak—a device that permits a tracer gas to be introduced into a leak detector or leak testing system at a known rate to facilitate calibration of the leak detector. E 1316, E07

standard leakage rate—the rate of flow of atmospheric air under conditions in which: inlet pressure is 0.1 MPa \pm 5%; outlet pressure is less than 1 kPa; temperature is 25°C \pm 5°C; and dew point is less than -25°C. E 1316, E07

standard match—with a tongue and groove on opposite edges but not centered. D 9, D07

standard moisture regain, n —the moisture regain of a material at

equilibrium with the standard atmosphere for testing textiles. (See **moisture regain**.) D 123, D13

standard moisture regain—see **moisture regain, standard**. D 1695, D01

standard moisture regain, n —the moisture regain of a material at equilibrium with the standard atmosphere for testing textiles. (See **moisture regain**.) D4920, D13

standard neutron field—see **benchmark neutron field**. E 170, E10

standard observer, n —for **color determination**—see **standard observer, CIE 1931**. D 2946, C17

standard observer, n —an ideal observer having visual response described by the CIE color-matching functions. (See also **CIE 1931 standard observer, CIE 1964 supplementary standard observer**.) E 284, E12

standard observer, CIE 1931, n —in **color determination**, hypothetical observer based on color mixture data obtained for a 2° field of view for 17 real observers, adopted by the CIE in 1931. D 2946, C17

standard operating procedure (SOP), n —Written procedures that describe how to perform certain laboratory activities. E 1732, E30

standard penetration resistance—see **penetration resistance**. D 653, D18

standard polyolefin monofilament, n —as used in this specification, a flat polyolefin strand, approximately 0.05 mm (2 mil) thick by 2.5 mm (100 mil) wide and oriented with a draw ratio between 5:1 and 7:1. D 123, D13

standard polyolefin monofilament, n —as used in specification D 3218, a flat polyolefin strand, approximately 0.05 mm (2 mil) thick by 2.5 mm (100 mil) wide and oriented with a draw ratio between 5:1 and 7:1. D 4849, D13

standard, primary, n —one whose calibration is determined by measurement according to specified parameters. C 1154, C17

standard reference material (SRM), n —see **certified reference material**. E 135, E01

standard reference test tire, (SRTT), n —a tire that meets the requirements of Specification E 1136, commonly used as a control tire or surface monitoring tire. F 538, F09

standard reporting conditions, n —for **photovoltaic performance measurements**, a fixed set of conditions that constitute the device temperature, the total irradiance, and the reference spectral irradiance distribution to which electrical performance data are translated. E 1328, E44

standards—rules or bases of comparison used in judging capacity, quantity, content, extent, value, or quality; levels of excellence or attainment regarded as a measure of adequacy. E 2135, E53

standard, secondary, n —standard calibrated by reference to another standard such as a primary, reference, laboratory, or working standard. C 1154, C17

standard-sedimentation diameter—the diameter of a sphere with the same specific gravity and fall velocity as the given particle. D 4410, D19

standard source, n —for **color determination**, light source whose spectral energy distribution is known or defined. D 2946, C17

standard source, n —a source of radiant flux meeting specifications adopted by a standardizing organization. (See also **CIE standard source A**, **CIE standard source B**, **CIE standard source C**.) E 284, E12

standard sprayer, n —generally, a finger-actuated, higher-output (greater than 500 mcl) pump that delivers a coarser spray than a fine mist sprayer. D 6655, D10

standard staple—staple with nominal ½ in. (13 mm)-wide crown, ¼ in. (6 mm)-long legs, made of 0.019 in. (0.48 mm) wire, commonly used in desk-type staplers. F 592, F16

standard subtraction or known subtraction—a variation of the standard addition method. In this procedure, changes in the potential resulting from the addition of a known amount of a

standard subtraction or known subtraction

- species (for example, a complexing agent) that reacts stoichiometrically with the ion of interest are employed to determine the original activity or concentration of the ion. **D 4127, D19**
- standard temperature/time curve (standard time/temperature curve), *n***—in fire testing, a graphical representation derived from prescribed time-temperature relationships and used to control furnace temperature with progressing time. **E 176, E05**
- standard test, *n***—a test on a calibrated test stand, using the prescribed equipment that is assembled according to the requirements in the test method, and conducted according to the specified operating conditions. **D 4175, D02**
- standard test conditions**—the parameters under which a membrane manufacturer tests devices for flow and salt rejection. **D 6161, D19**
- standard thermoelement, *n***—a thermoelement that has been calibrated with reference to platinum 67 (Pt-67). **E 344, E20**
- standard volumetric solution**—a solution of accurately determined concentration used in the quantitative analysis of chemicals and other products. The concentration of such solutions is usually expressed in terms of normality or molarity. **E 1547, E15**
- standard weathering reference material (SWRM), *n***—a Weathering Reference Material (WRM) whose well documented weathering degradation properties have been certified by a recognized standards agency or group and which are identical when exposed to identical test conditions. **G 113, G03**
- standby diver, *n***—a diver at the dive location available to assist a diver in the water. **F 1549, F32**
- standing orders**—a type of medical protocol which provides specific written orders for actions, techniques, or drug administration when communication has not been established for direct medical direction. **F 1177, F30**
- standing wave**—a wave produced by simultaneous transmission in opposite directions of two similar waves resulting in fixed points of zero amplitudes called nodes. **D 653, D18**
- standoff—in abrasiveblasting**, distance from blast nozzle to part when abrasive blasting. **B 374, B08**
- standoff installation**—anchorage assembly in which the attachment is secured at a distance from the surface of the base material. **E 2265, E06**
- staple, *n***—natural fibers or cut lengths from filaments. **D 123, D13**
- staple, *n***—in greasewool, a tuft or lock of fibers which naturally cling together, as found in a fleece. **D 123, D13**
- staple, *n***—a U-shaped round or flat wire fastener that is: (1) used to secure parts together. (It may or may not be clinched); (2) driven over wires and bands to hold parts in position; (3) used to fasten together the flaps of fiberboard boxes. (Compare stitch.) **D 996, D10**
- staple, *v***—to fasten with staples. **D 996, D10**
- staple, *n***—a collection of discontinuous filaments of spinnable length that are natural, manufactured directly in a short length, or cut from continuous filaments. **D 3878, D30**
- staple, *n***—in greasewool, a tuft or lock of fibers which naturally cling together, as found in a fleece. **D 4845, D13**
- staple, *n***—natural fibers or cut lengths from filaments. **D 4849, D13**
- staple, *n***—in buttons, a looped metal shank securely positioned perpendicular to and at center back of the button flange for use in attaching the button to one part of a flexible substrate by means of a needle and thread, a ring, or a toggle. **D 5497, D13**
- staple**—“U”-shaped wire fastener usually with two same-size pointed or pointless legs connected by crown located opposite staple-point ends; designed to be driven by strike, pneumatic, electric, manual or spring tools through or through and into layers of penetrable material and to hold two or more pieces together. **F 592, F16**
- staple, *n***—an anchor component that connects the bony elements of the spine, pelvis, or ribs to each other or to other implant components by using at least two interconnected posts. **F 1582, F04**
- stapled seam, *n***—a seam formed by shaped metal devices such as U-shaped staples. (Compare glued seam, sewn seam.) **D 123, D13**
- stapled seam, *n***—in home sewing, a seam formed by shaped metal devices such as U-shaped staples. (Compare glued seam, sewn seam, thermally bondedseam.) **D 4965, D13**
- staple fiber**—fibers produced in short, random lengths as distinguished from chopped fiber. **C 162, C14**
- staple glass yarn, *n***—yarn made from filaments that are nominally 200 to 380 mm (8 to 15 in.) in length. **D 123, D13**
- staple glass yarn, *n***—yarn made from filaments that are nominally 200 to 300 mm (8 to 15 in.) in length. **D 7018, D13**
- staple length, *n***—in grease wool, the length of a staple obtained by measuring the natural staple without stretching or disturbing the crimp of the fibers. **D 123, D13**
- staple length, *n***—in grease wool, the length of a staple obtained by measuring the natural staple without stretching or disturbing the crimp of the fibers. **D 4845, D13**
- staple length**—distance from top of staple crown to tip of staple point. Also referred to as leg length. In contrast, length of bulk staple, driven by hand-hammer, is measured from bottom of staple crown to tip of staple point. **F 592, F16**
- staple point**—See bevel point, chisel point, clinch point, cross-cut chisel point, divergent point, inside bevel point, outside bevel point, outside bevel divergent point, right-angle chisel point, spear point, step point. **F 592, F16**
- staple spacing**—dimension used to describe the relative location of staple or staples in workpiece; often, the dimension to center or center-to-center of staple. **F 592, F16**
- starch lump**—See hard size. **D 3990, D13**
- stardusting**—an extremely fine form of roughness on the surface of a metal deposit. **B 374, B08**
- star head**—slightly raised pyramidal head with multiple triangular faces meeting at common vertex, having a polygonal or circularized flat bearing surface. **F 547, F16**
- star marks**—a defect sometimes occurring in sheet steel iron cover coats where the dried ware is set down too hard on the firing fixture points and the enamel coating is fractured. **C 286, B08**
- starring**—see back emission and self-limiting. **C 286, B08**
- stars**—a defect similar to star marks appearing in the surface as a series of small hairlines radiating from a common center. They are typical of porcelain enamel powder systems. **C 286, B08**
- start bi, *n***—the first element in a character in asynchronous serial transmission. **F 1457, F05**
- starters, *n***—in shingles, lateral sections of roofing shingles applied beneath the first course of shingles with slight overhang at the eaves. **C 1154, C17**
- starters**—lateral sections of roofing shingles, usually 75 mm (3 in.) wide, and applied beneath the first course of shingles with slight overhang at the eaves. **D 2946, C17**
- starting material, *n***—a raw material, intermediate, or an API that is used in the production of an API or product and that is incorporated as a significant structural fragment into the structure of the API or dosage form. **E 2363, E55**
- starting threshold (U_0 , m/s), *n***—the lowest wind speed at which a rotating anemometer starts and continues to turn and produce a measurable signal when mounted in its normal position. **D 1356, D22**
- start of blue (SB), *n***—that temperature at which the liquid crystal first begins to reflect blue light, which is defined as light having a wavelength of 491 nm. **E 344, E20**
- start of green (SG), *n***—that temperature at which the liquid crystal first begins to reflect green light, which is defined as light having a wavelength of 575 nm. **E 344, E20**
- start of red (SR), *n***—that temperature at which the liquid crystal first begins to reflect red light, which is defined as light having a wavelength of 675 nm. **E 344, E20**
- start of scan, *n***—an electronic signal in a transmission which

indicates to the receiver that the next series of signals are from an image and not text code. **F 1457, F05**

start of text, *n*—an electronic signal in a transmission which indicates to the receiver that the next series of signals are from text and not image code. **F 1457, F05**

start/stop characters or patterns, *n*—distinct characters or patterns used at the beginning and end of bar code symbols that provide timing references and direction-of-read information to the decoding logic. **F 1294, F05**

starved joint, *n*—see *starved joint* under **joint**. **D 907, D14**

starwheel, *n* (also called pick off)—when the feed mechanism of a printer digs into the inked surface. **F 1857, F05**

state of statistical control, *n*—a condition in which a process, including a measurement process, is subject only to random variation. **D 123, D13**

State registered USTs—State lists of underground storage tanks required to be registered under Subtitle I, Section 9002 of RCRA. **D 5681, D34**

static—exhibiting little or no change or movement. **C 717, C24**

static, adj (1)—*in testing*, descriptive of a test in which force or deflection is caused to change at a slow constant rate, within or in imitation of tests performed in screw-operated universal test machines. **D 1566, D11**

static, adj (2)—*in testing*, descriptive of a test in which force or deflection is applied and then is truly unchanging over the duration of the test, often as the mean value of a dynamic test condition. **D 1566, D11**

static, adj (3)—*as a modifier of stiffness or modulus*, descriptive of the property measured in a test performed at a slow constant rate. **D 1566, D11**

static calorimeter, *n*—a calorimeter without a thermostated jacket. **D 5681, D34**

static coefficient of friction—the ratio of the parallel component of force applied to a stationary body that just overcomes the friction or resistance to relative motion of two surfaces in physical contact one with another, but otherwise unconstrained, to the normal component of the force—usually the force caused by gravity—applied to the body under clean, dry conditions. **C 242, C21**

static coefficient of friction—the ratio of the tangential force that is needed to start uniform relative motion between two contacting surfaces to the perpendicular force holding them in contact. **F 141, F06**

static coefficient of friction, *n*—the coefficient of friction corresponding to the maximum friction force that must be overcome to initiate macroscopic motion between two bodies. **G 40, G02**

static cryosol—a mineral soil showing little or no evidence of cryoturbation, with permafrost within 1 m below the surface. **D 7099, D18**

static force, *n*—*in textile testing*, a mass which exerts a force by means of the mass alone without motion. (Syn. dead load) **D 123, D13**

static force, *n*—*in textile testing*, a mass which exerts a force by means of the mass alone without motion. (Syn. dead load.) **D 4850, D13**

static friction, *n*—friction developed between two touching bodies at the time one body starts to move relative to another. (Compare **kinetic friction**.) **D 123, D13**

static friction, *n*—friction developed between two touching bodies at the time one body starts to move relative to another. (Compare **kinetic friction**.) **D 4849, D13**

static hold-up or wettage, *n*—the quantity of liquid retained in the column after draining at the end of a distillation. **D 4175, D02**

static layer—a mechanically supported layer which carries one or both poles of the switch or is used to short both poles together. The static layer is a required component of a membrane switch. **F 2112, F01**

static load—See **load**. **D 996, D10**

static load—a load or series of loads that are supported by or are applied to a structure so gradually that forces caused by change in momentum of the load and structural elements can be neglected and all parts of the system at any instant are essentially in equilibrium. **E 631, E06**

static load, *n*—an imposed stationary force that is constant in magnitude, direction, and sense. **E 631, E06**

static load—load condition not involving significant inertial force. **E 2265, E06**

static pressure—See **pressure**. **D 1356, D22**

static rope (rope systems), *n*—a class of ropes that is used for rescue work and rappelling that has a maximum elongation of 6 % at 10 % of its minimum breaking strength. **F 1490, F32**

static test—a test involving only static loads. **E 2265, E06**

static test, *n*—single cycle loading tests designed to evaluate the mechanical properties of materials, components, interconnections, subconstructs, constructs, subassemblies, or assemblies. **F 1582, F04**

static thermal response curve, *n*—the relationship of the response characteristic of a thermal printing system over a given range of print energies; optical (reflectance) density (*y*-axis) versus temperature (*x*-axis). **F 1623, F05**

static water level—the elevation of the top of a column of water in a monitoring well or piezometer that is not influenced by pumping or conditions related to well installation, hydrologic testing, or nearby pumping. **D 653, D18**

stationary belt method—a method of gross sample collection in which the conveyor belt is stopped and the sample of material is removed manually. **D 5681, D34**

stationary extractor—a series of horizontal baffles that run the full length of the exhaust hood and are not removable for cleaning. It includes one or more water manifolds with spray nozzles that, upon activation, wash the grease extractor with hot, detergent-injected water, removing the accumulation of grease from the extractor. See **grease extractors**. **F 1827, F26**

stationary repeatability precision—the precision of the measurement of a characteristic determined under repeatability condition with the instrumented equipment stationary. **E 867, E17**

station rack type, water-driven rotary spray type—See **pot, pan, and utensils washing machine**. **F 1827, F26**

station/work uniform, *n*—a nonprimary protective clothing ensemble consisting of a shirt and pants that is intended to be worn by members of the fire and rescue services while on duty. **F 1494, F23**

statistic, *n*—a quantity that is calculated from observations on a sample and that estimates a parameter of a population. **D 123, D13**

statistic, *n*—a quantity calculated from a sample of observations, most often to form an estimate of some population parameter. **D 5681, D34**

statistic, *n*—a quantity calculated from a sample of observations, most often to form an estimate of some population parameter. **E 456, E11**

statistic—a summary value calculated from the observed values in a sample. **E 1823, E08**

statistical control—exists when all special causes of variation have been eliminated from a process and only common causes remain. **F 1789, F16**

statistical measure, *n*—statistic or mathematical function of a statistic. **E 456, E11**

statistical noise—XPS, the noise in the spectrum due solely to the statistics of randomly detected single events; the root mean square of the deviations in neighboring channels is equal to the square root of the average counts per channel. **E 673, E42**

statistical procedures, *n*—the organized techniques and methods used to collect, analyze, and interpret data. **E 456, E11**

statistical process control—use of statistical techniques, such as control charts, to analyze a process or its outputs so as to take

statistical process control

appropriate actions to achieve and maintain a state of statistical control and to improve the process capability. **F 1789, F16**

statistical sampling—the process by which a number of items are selected from the population for analysis so that the sample is representative of the entire population from which it was selected.

E 2135, E53

statistical thickness surface area (STSA), *n*—the external surface area of carbon black that is calculated from nitrogen adsorption data using the de Boer theory and a carbon black model.

D 3053, D24

status, *n*—a message sent by a device to the host describing its condition, the condition can be any of several things, such as ready, able to execute the command, etc.

F 1457, F05

status switches, *n*—switches located on the mainframe electronic chassis in the console used to set the number of specimens tested on each laboratory sample and turn off instruments not being used in operating the system.

D 123, D13

status switches, *n*—switches located on the mainframe electronic chassis in the console used to set the number of specimens tested on each laboratory sample and turn off instruments not being used in operating the system.

D 7139, D13

stave, *n*—(1) one of the shaped vertical units of a coopered wooden container which, when placed edge-to-edge and bound with hoops around a circular bottom (sometimes top and bottom), forms a barrel or other staved container; (2) one of the thin, wood or veneer slats forming the body, sides, or cover of a basket or hamper.

D 996, D10

stay—paper or metal material used to join parts of a box together at a corner, or to reinforce a cut-score on solid fiberboard. It is most commonly used for set-up boxes.

D 996, D10

stay log—a device used on a veneer lathe to which is fastened a flitch or segment of a bolt to secure desired grain effects in the veneer.

D 1038, D07

steadite—(1) ternary eutectic found in alloys of iron, carbon and phosphorus. In cast irons it consists of austenite, cementite and iron phosphide or austenite and iron-phosphide. If conditions are such that carbon is deposited as cementite, the three constituents of the eutectic are present. If, however, the carbon is deposited as graphite, that precipitated from the ternary eutectic crystallizes on existing flakes and the eutectic consists of two constituents only, namely, austenite and iron-phosphide.

(2) Binary eutectic found in alloys of iron and phosphorus consisting of ferrite and iron-phosphide.

E 7, E04

steady state, *n*—in heat transfer, condition in which the temperature at any given point in a material or system is independent of time, to a given precision for a specified time period. It follows that the temperature gradient and heat flux at any given point are independent of time.

C 168, C16

steady-state crack—a crack that has advanced slowly until the crack-tip plastic zone size and crack-tip sharpness remain constant with further crack extension. Although crack-tip conditions can be a function of crack velocity, the steady-state crack-tip conditions for metals have appeared to be independent of the crack velocity within the range attained by the loading rates specified in Test Method E 1304.

E 1823, E08

steady-state permeation, *n*—the constant rate of permeation that occurs after breakthrough when the chemical contact is continuous and all forces affecting permeation have reached equilibrium.

F 1494, F23

steady state simulator—simulator whose irradiance output at the test plane area is continuous for periods of a second or greater.

E 772, E44

steady state (thermal), *n*—a condition for which all relevant parameters in a region do not vary over two consecutive steady-state time periods by more than the steady-state tolerance, and no long-term monotonic drifts are present.

Where, the steady-state time period is the time constant of the apparatus-specimen system with additional time necessary if physical phenomena are present, such as moisture transport, which

could cause a long-term monotonic drift.

Steady-state tolerance consists of (possibilities in order of increasing magnitude):

(1) The imprecision of the mean of a set of data points. This can be defined as twice the standard deviation of a set of N independent data points divided by the square root of N , $2\sigma/\sqrt{N}$,

(2) The scatter of the data. This would be 2σ , or,

(3) Some larger value may be chosen resulting in less precision.

C 168, C16

steady-state vibration—vibration in a system where the velocity of each particle is a continuing periodic quantity.

D 653, D18

steam blackening, *n*—the superheated steam treatment of a ferrous P/M component to form a thin, dark, oxide layer, primarily Fe_2O_4 , on the outside surfaces of the component, and extending into the surfaces of the interconnecting porosity.

B 243, B09

steam cleaning, *n*—a deprecated term since no steam is used. Use the preferred term, hot water extraction cleaning.

D 5253, D13

steam cooker—cooking equipment wherein heat is imparted to food in a closed compartment. The compartment can be at or above atmospheric pressure and the steam can be static or circulated. The pressure occurring in the food compartment of these steamers during cooking ranges from zero gage psi pressure to 15 psig.

F 1827, F26

steam extraction cleaning, *n*—a deprecated term since no steam is used. Use the preferred term, hot water extraction cleaning.

D 5253, D13

steam jacketed kettle—cooking equipment comprised of two hemispherical metal shells of different sizes, the smaller shell inserted into the larger shell and fastened in a way that provides a space around its bottom and up its sides to form a pressure vessel with one-half, two-thirds, or full jacketing, wherein heat is imparted to food by steam circulating through the jacket.

F 1827, F26

steam purity, *n*—the proportion by mass of pure vapor-and liquid-phase water in a fluid mixture that consists primarily of steam.

E 957, E44

steam quality, *n*—the percentage by mass of vapor-phase water in a two phase mixture of vapor- and liquid-phase water.

Example — A two-phase geothermal fluid consists of the following mass percentages: 90% vapor-phase water, 6% liquid-phase water, 3% noncondensable gas, 1% total dissolved solids.

The steam quality of this mixture is $[90/(90+6)] \times 100 = 93.75\%$.

E 957, E44

steam treatment, *n*—see steam blackening.

B 243, B09

steatite porcelain—See *steatite porcelain* under porcelain.

C 242, C21

steatite talc—massive talc or the pulverized product thereof having the general formula $3\text{MgO} \cdot 4\text{SiO}_2 \cdot \text{H}_2\text{O}$.

C 242, C21

steatite whiteware—See *steatite whiteware* under ceramic whiteware.

C 242, C21

steel, *n*—a material that conforms to a specification that requires, by mass percent, more iron than any other element and a maximum carbon content of generally less than 2.

A 941, A01

steel belt, *n*—rubber coated steel cords that run diagonally under the tread of steel radial tires and extend across the tire approximately the width of the tread.

D 5681, D34

steel belt, *n*—rubber coated steel cords that run diagonally under the tread of steel radial tires and extend across the tire approximately the width of the tread. The stiffness of the belts provides good handling, tread wear and penetration resistance.

D 5681, D34

steel, cold-rolled—see cold-rolled steel.

C 286, B08

steel cord, *n*—a formed structure made by twisting together two or more steel filaments when used as an end product or a combination of strands or filaments and strands.

D 123, D13

steel cord, *n*—a formed structure made of two or more steel filaments when used as an end product or a combination of strands or filaments and strands.

D 6477, D13

steel cord wrap, *n*—a filament wound helically around a steel cord.

D 123, D13

steel cord wrap, n—a steel filament wound helically around a steel cord. **D 6477, D13**

steel failure—failure mode characterized by fracture of the anchor steel. **E 2265, E06**

steel filament, n—the individual element in a steel strand or cord. **D 123, D13**

steel filament, n—the individual element in a steel strand or cord. **D 6477, D13**

steel grades—steel classified by carbon content. The following grades are generally used for wire or raw material purchase; but do not restrict nails to specific analysis. When the steel grade is referred to in the definition of a nail type, it is intended only as a general indication of the likely material used. Any steel of suitable analysis may be used in nail manufacture unless specified otherwise in the product standard.

low-carbon steel—a grade of steel (see Specification A 510 for General Requirements for Wire Rods and Coarse Round Wire, Carbon Steel) wherein the maximum of the carbon range is up to and including 0.15 %.

medium low-carbon steel—a grade of steel (Specification A 510) wherein the maximum of the carbon range exceeds 0.15 % up to and including 0.23 %.

medium high-carbon steel—a grade of steel (Specification A 510) wherein the maximum of the carbon range exceeds 0.23 % up to and including 0.44 %.

high-carbon steel—a grade of steel (Specification A 510) wherein the maximum of the carbon range exceeds 0.44 %.

F 547, F16

steel scrap, n—discarded steel or steel products, generally segregated by composition and size or "grade," suitable for melting. **A 644, A04**

steel sheet designation, n—a title given to a steel sheet product, associated with unique requirements for chemical composition and with mandatory or nonmandatory (typical) mechanical properties; the specific titles include *commercial steel, drawing steel, deep drawing steel, extra deep drawing steel, forming steel, high strength-lowalloy steel, high temperature steel, structural steel, bake hardenable steel, and solution hardened steel*. **A 902, A05**

steel slag, n—the nonmetallic product consisting essentially of calcium silicates and ferrites combined with fused oxides of iron, aluminum, manganese, calcium and magnesium, that is developed simultaneously with steel in basic oxygen, electric, or open hearth furnaces. **D 8, D04**

steel strand, n—a group of steel filaments combined together to form a unit product. **D 123, D13**

steel strand, n—a group of steel filaments combined to form a unit product to be processed further. **D 6477, D13**

steep asphalt—a roofing asphalt conforming to the requirements of Specification D 312, Type III. **D 1079, D08**

steeple head—See **cone head**. **F 547, F16**

steep slope, adj—in roofing, that which commonly describes an incline of a roof which is greater than 14° (25 % or 3 in./ft). **D 1079, D08**

steer hide—see **hide grades**. **D 1517, D31**

steering wheel angle, (rad or degree), n—in a vehicle, the angular displacement of the steering wheel, measured from its orientation in the vehicle's straight-ahead position. **F 538, F09**

stem—the bole or trunk of a tree. **D 9, D07**

stem, n—for some pump designs, a means to connect the actuator to the piston. **D 6655, D10**

stem, n—of a liquid-in-glass thermometer, capillary tube through which the meniscus of the thermometric liquid moves with change of temperature. **E 344, E20**

stem cells, n—progenitor cells capable of self-replication, proliferation, and differentiation. **F 2312, F04**

stemming—(1) the material (chippings, or sand and clay) used to fill a blasthole after the explosive charge has been inserted. Its purpose

is to prevent the rapid escape of the explosion gases. (2) the act of pushing and tamping the material in the hole. (ISRM) **D 653, D18**

stepdown test—a test involving the preparation of a series of machined steps progressing inward from the surface of a bar for the purpose of detecting by visual inspection internal laminations caused by inclusion segregates. See Practice E 45. **E 7, E04**

step-drawdown test—a test in which a control well is pumped at constant rates in "steps" of increasing discharge. Each step is approximately equal in duration, although the last step may be prolonged. **D 653, D18**

step fracture—See **striation**. **C 162, C14**

stepladder code, n—see **vertical bar code**. **F 1294, F05**

step point—notched point with step faces perpendicular to staple crown; designed to facilitate self-clinching of staple legs when driven against clinching plate. **F 592, F16**

step wear, n—a synonym for *row/rib wear*. **F 538, F09**

step wedge—a device with discrete step thickness increments used to obtain an image with discrete density step values. **E 1316, E07**

step-wedge calibration film—a step-wedge comparison film the densities of which are traceable to a nationally recognized standardizing body. **E 1316, E07**

step-wedge comparison film—a strip of processed film carrying a stepwise array of increasing photographic density. **E 1316, E07**

step wedge comparison film—a radiograph with discrete density steps that have been verified by comparison with a calibrated step wedge film. **E 1316, E07**

stereo angle—one half of the angle through which the specimen is tilted when taking a pair of stereomicrographs. The axis of rotation lies in the plane of the specimen. **E 7, E04**

stereographic projection—the projection to a plane from a spherical projection, customarily using the South Pole as the eye point. **E 7, E04**

stereology—the study of mathematical procedures used to derive three-dimensional parameters describing a structure from two-dimensional measurements. **E 7, E04**

stereomicroscope—a light optical microscope that permits each eye to examine the specimen at a slightly different angle, thereby retaining its three-dimensional relationship. **E 7, E04**

stereoscopic micrographs—a pair of micrographs of the same area but taken from different angles so that the two micrographs when properly mounted and viewed reveal the structures of the objects in their three-dimensional relationships. **E 7, E04**

stereoscopic specimen holder—a specimen holder designed for the purpose of making stereomicrographs. It makes possible the tilting of the specimen through the stereo angle. **E 7, E04**

sterilant—an agent used to achieve commercial sterility. **F 17, F02**

sterilant—See Terminology F 17. **F 1327, F02**

sterile, adj—free from any viable organism, either active or dormant. **D 1129, D19**

sterile—free of any living organism. **E 1705, E48**

sterile—free of any viable microorganisms, either active or dormant (D 1129, D19). **F 17, F02**

sterile—See Terminology F 17. **F 1327, F02**

sterile, adj—free from viable microorganisms. **F 1494, F23**

sterilization—destruction or removal of all viable organisms. **D 6161, D19**

sterilization, n—the destruction or removal of all microorganisms in or about an object, as by, chemical agents, electron beam, gamma irradiation, ultraviolet (UV) exposure, or filtration. **F 2312, F04**

stick, n—extruded form substantially uniform in cross section cut to desired length or weight. **B 881, B07**

stick—See **strip**. **F 592, F16**

sticker—a material that assists the spray deposit to adhere to the target in terms of resistance to wind, water, mechanical action. **E 1519, E35**

stick-fed tool—See **strip-fed tool**.

F 592, F16

stickies, *n*—particulate, generally non-fibrous, contaminants suspended in pulps of the type used in papermaking which adhere to themselves, other components of the paper structure, components of the papermaking machinery, and in the case where the contaminants are incorporated into the finished paper or paper products, cause the unexpected and generally undesirable adherence one to another of units of the finished paper or paper product.

D 1968, D06

sticking—a method of repairing the butt edge of a broken piece of stone, generally done with dowels, cements, or epoxies. The pieces are “stuck” together, thus “sticking”.

C 119, C18

sticking—a response evidenced by softening and adherence of the material to the hot surface or other material.

F 1494, F23

stick-slip, *n*—a phenomenon occurring when boundary lubrication is deficient, manifested by alternate periods of sticking and slipping of the surfaces in contact.

D 123, D13

stick-slip—rapid fluctuations in shear force as one rock mass slides past another, characterized by a sudden slip between the rock masses, a period of no relative displacement between the two masses, a sudden slip, etc. The oscillations may be regular as in a direct shear test, or irregular as in a triaxial test.

D 653, D18

stick-slip, *n*—a phenomenon occurring when boundary lubrication is deficient, manifested by alternate periods of sticking and slipping of the surfaces in contact.

D 4849, D13

stick-slip, *n*—*in tribology*, a cyclic fluctuation in the magnitudes of friction force and relative velocity between two elements in sliding contact, usually associated with a relaxation oscillation dependent on elasticity in the tribosystem and on a decrease of the coefficient of friction with onset of sliding or with increase of sliding velocity.

G 40, G02

stick vacuum cleaner, *n*—a non-self-standing, hand-held, floor-supported, portable vacuum cleaner which has the floor nozzle directly connected to the cleaner. The cleaner is generally designed for light-duty cleaning of household dirt. In use, the cleaner is guided over the floor by means of a handle attached to the cleaner housing. The cleaner may contain a driven agitator to assist in dirt removal on floor surfaces. The cleaner may have attachments or provisions, or both, for both floor and above-the-floor cleaning.

F 395, F11

sticky limit, T_w (D)—the lowest water content at which a soil will stick to a metal blade drawn across the surface of the soil mass.

D 653, D18

stiction—adhesion between the portion of a structural layer that is intended to be freestanding and its underlying layer.

E 2444, E08

stiction, *n*—*in tribology*, a force between two solid bodies in nominal contact, acting without the need for an external normal force pressing them together, which can manifest itself by resistance to tangential motion as well as resistance to being pulled apart.

G 40, G02

Stiff & Davis stability index, S&DSI—an index calculated from total dissolved solids, calcium concentration, total alkalinity, pH and solution temperature that shows the tendency of a water solution to precipitate or dissolve calcium carbonate. S&DSI is used primarily for seawater RO applications. See Practice D 4582, and LSI.

D 6161, D19

stiffener, *n*—a compounding material used to increase the viscosity of an unvulcanized rubber mix.

D 1566, D11

stiffener, *n*—a reinforcing member designed to limit or prevent the deformation of an attaching member.

stile—See **windows and doors**.

storage—see **hazardous-waste storage**.

E 631, E06

stiffener—component that provides support to the membrane.

F 818, F20

stiffness, *n*—resistance to bending.

D 123, D13

stiffness, *n*—*with regard to circular bending of textiles*, resistance to multidirectional bending.

D 123, D13

stiffness—the ratio of change of force (or torque) to the corresponding

change in translational (or rotational) deflection of an elastic element.

D 653, D18

stiffness, *n*—that property of a specimen that determines the force with which it resists deflection, or the deflection with which it responds to an applied force; may be static or dynamic (See also **complex, elastic, damping**.) (Synonym—*spring rate*).

D 1566, D11

stiffness, *n*—resistance to bending.

D 4439, D35

stiffness, *n*—resistance to bending.

D 4850, D13

stiffness, *n*—*with regard to circular bending of textiles*, resistance to multidirectional bending.

D 4850, D13

stiffness (as applied to copper)—the property of a conductor that causes it to resist permanent deformation by bending.

B 354, B01

stiffness, bending, *n*—the force required to produce a bent configuration under specified conditions.

D 1566, D11

stiffness-force—displacement ratio. (ISRM)

D 653, D18

stiffness (or bending stiffness), *n*—*of paper or paperboard*, the degree to which paper or board resists bending when subjected to a bending force in its intended use, or when using a defined testing procedure.

D 1968, D06

stillage—the liquid products or waste remaining after distillation of a beer. The soluble residue are water, proteins, etc.

E 1705, E48

stimulation—the application of a stimulus such as force, pressure, heat, and so forth, to a test article to cause activation of acoustic emission sources.

E 1316, E07

stimulus, *n*—something used to elicit a sensory response.

E 253, E18

stimulus, *n*—any action or condition that has the potential for evoking a response.

E 284, E12

sting-out—the stream of hot air or flame, or both, driven by positive internal pressure, exhausted through openings in melting furnaces.

C 162, C14

stippled area—{archaic} See **hackle**.

C 162, C14

stippled finish—a pebbly textured porcelain enamel, often multicolored.

C 286, B08

stippling—see synonomous term **knurling**.

C 162, C14

stitch, *n*—*in sewing*, the configuration of the interlacing of sewing thread in a specific repeated unit. (See **stitching, stitch type**)

D 123, D13

stitch, *v*—*in making rubberized articles*, to press uncured rubber compound into or around yarns or cords to form a composite of the materials and to remove entrapped air.

D 123, D13

stitch, *n*—*in packaging*, a metal fastener. Stitches are machine-formed using wire drawn from a spool. (Compare **staple**. **Staples** are preformed.)

D 996, D10

stitch, *v*—(1) to unite, by means of **staples** or stitching wire, the joints or parts of containers, or the flaps for **closure**; (2) to unite by sewing with thread, as a **sack**.

D 996, D10

stitch, *n*—the repeated unit formed by the sewing thread in the production of seams in a sewn fabric (see Federal Standard 751a).

D 4439, D35

stitch, *n*—the repeated unit formed by a sewing thread(s) through a material or materials such as a textile fabric.

D 5646, D13

stitch, *v*—*in making rubberized articles*, to press uncured rubber compound into or around yarns or cords to form a composite of the materials and to remove entrapped air.

D 6477, D13

stitch—staple cut and formed from wire immediately prior to driving by same machine.

F 592, F16

stitch, *n*—the image laid down in a single traverse of a printhead across the printer.

F 1857, F05

stitch density, *n*—*in sewn seams*, the number of stitches per unit length in one row of stitching in the seam.

D 123, D13

stitched and pinked seam-finish, *n*—a finish for the raw edges of the seam allowances of a plain seam, in which each raw seam allowance edge is machine stitched and then cut to a zigzag raw edge. (Compare **pinked seam-finish**.)

D 123, D13

stitched and pinked seam finished, *n*—*in home sewing*, a seam finish in which a zigzagged or scalloped cut edge is reinforced by a line of stitching. (Compare **pinked seam finish**.)

D 4965, D13

- stitched seam, *n***—See **seam seam**. **D 4965, D13**
- stitcher**—machine that cuts, forms, and drives wire stitches. **F 592, F16**
- stitches, *n***—in **tuftedpile floor covering**, the number of pile tufts per inch in the lengthwise direction. **D 123, D13**
- stitches, *n***—in **tuftedpile yarn floor covering**, the number of pile tufts per unit length in the lengthwise direction. **D 5684, D13**
- stitch gage, *n***—in **sewn seams**, the perpendicular distance between adjacent parallel rows of stitching. **D 123, D13**
- stitching, *n***—a series of stitches embodied in a material or materials of planar structure such as woven textile fabrics, usually for ornamental purposes or finishing an edge, or both. **D 123, D13**
- stitching, *n***—a series of stitches embodied in a material or materials such as a woven, knitted or textile fabric for ornamental purposes, forming a seam, attaching functional items, or finishing an edge. **D 5646, D13**
- stitching wire**—See **box stay wire**. **F 592, F16**
- stitch lines, *n***—the relationship between consecutive passes of printhead when printing a solid image area. **F 1857, F05**
- stitch type, *n***—a numerical designation relating to the essential characteristics of the interlacing of sewing thread(s) in a specified seam in sewn fabric. **D 123, D13**
- stitch type, *n***—in **sewn seams**, a numerical designation relating to the essential characteristics of the interlacing of sewing thread(s) in a specified stitch. **D 123, D13**
- S titration**—a titration in which the sensing electrode responds to the ion being removed from the sample by the titrant. **D 4127, D19**
- stock, *n***—See **compound**, the preferred term. **D 1566, D11**
- stock in process, *n***—in **textiles**, staple fibers at any stage of manufacture between the opening of the bale and the completion of the spinning process. **D 123, D13**
- stock in process, *n***—in **textiles**, staple fibers at any stage of manufacture between the opening of the bale and the completion of the spinning process. **D 7139, D13**
- stock steel**—standard steel of regular or stiff stock.
- regular**—bright, non-hardened, usually low or medium low-carbon steel.
- stiff**—bright, non-hardened, usually medium low or medium high-carbon steel, having higher hardness, toughness, and stiffness than regular steel. **F 547, F16**
- stoichiometric, *adj***—characterized by or being a proportion of substances or energy in a specific chemical reaction in which there is no excess of any reactant or product. **D 1356, D22**
- Stokes' diameter**—the diameter of a hypothetical sphere having the same density as the actual particle, as computed from the following Stokes' drag force formula:
- $$\text{Drag force} = 3\pi\mu v_p (\text{Stokes' diameter})$$
- where:
- μ = viscosity of fluid medium creating drag on the particle, and
- v_p = velocity of the particle relative to the medium. **E 1620, E29**
- Stokes line (band)**—a Raman line (band) that has a frequency lower than that of the incident monochromatic beam. **E 131, E13**
- stoking, *v***—see **continuous sintering**. **B 243, B09**
- stone**—a naturally-consolidated substance formed from minerals, geologically synonymous with rock (see **rock**, see **dimension stone** if selected or fabricated). **C 119, C18**
- stone**—an imperfection; a crystalline inclusion in glass. **C 162, C14**
- stone**—crushed or naturally angular particles of rock. **D 653, D18**
- stone-banked (solifluction) lobe**—a solifluction lobe with a stony front. **D 7099, D18**
- stone-banked (solifluction) terrace**—a solifluction terrace with a stony front. **D 7099, D18**
- stone chips, *n***—small angular fragments of stone containing no dust. **D 8, D04**
- stone garland**—the downslope border of stones along a sorted step, embanking an area of relatively fine-grained bare ground upslope. **D 7099, D18**
- stoneware**—a vitreous or semivitreous ceramic ware of fine texture, made primarily from nonrefractory fire clay. **C 242, C21**
- stoning**—the operation of removing by abrasion the undesirable portions of porcelain enamel. **C 286, B08**
- stony earth circle**—a type of nonsorted circle developed in gravelly materials. **D 7099, D18**
- stop, *n***—in building construction, in sealants and glazing, a strip of metal, plastic, or wood used around the periphery of a lite of glass or a panel to secure it in place (also referred to improperly as a bead). **C 717, C24**
- stop, *n***—in a zipper, the device at the top and bottom of chain or stringer that prevents the slider from leaving the chain. **D 123, D13**
- stop**—in **grouting**, a packer setting at depth. **D 653, D18**
- stop, *n***—the device at the top and bottom of the chain or stringer that prevents the slider from leaving the chain. **D 2050, D13**
- stop, *n***—any window or diaphragm that restricts the passage of light rays in an optical device. (See also **aperture stop**, **field stop**.) **E 284, E12**
- stop bit, *n***—in asynchronous serial transmission, the last element(s) in a character. **F 1457, F05**
- stop, bottom**—See **bottom stop**. **D 2050, D13**
- stop, bridge top**—See **bridge top stop**. **D 2050, D13**
- stop-drill**—drill bit equipped with a drill stop that ensures attaining a predetermined hole depth. **E 2265, E06**
- stop grouting**—the grouting of a hole beginning at the lowest packer setting (stop) after the hole is drilled to total depth. **D 653, D18**
- stop-leak additives, *n***—a compound containing particulates that is added to the cooling system for the purpose of stopping or minimizing leaks. **D 4725, D15**
- stopless glazing**—See **structural sealant glazing**, the preferred term. **C 717, C24**
- stop mark, *n***—a visible change in the density of the weave across the width of the fabric caused by the tension on the warp not being adjusted properly after the loom has been stopped. (See **set mark**) **D 123, D13**
- stop mark**—a band, either dull or glossy, on the surface, approximately 1/2 to 3 in. (12 to 76 mm) wide and extending around the periphery of a pultruded shape.
- NOTE—This condition is the result of an interruption in the normal continuous pulling operation. **D 3918, D20**
- stop mark, *n***—a visible change in the density of the weave across the width of the fabric caused by the tension on the warp not being adjusted properly after the loom has been stopped. (See **set mark**) **D 3990, D13**
- stop-off**—See **resist**. **B 374, B08**
- stopper head, *n***—a rounded refractory shape, usually made from clay and graphite, providing a valve head seating into a nozzle brick, this assembly forming a metal flow control for bottom-pouring ladles. **C 71, C08**
- stop pin**—a pin of preset length affixed to the inside of one of the tweezer halves designed to limit teeth contact upon closure and prevent their damage. **F 1638, F04**
- stopping:**
- cross section**—EIA, see **cross section**, **stopping**.
- cross section factor**—EIA, the stopping factor expressed per unit volume density of the constituent molecular entity of the specimen at the appropriate depth.
- factor**—EIA, the ratio between a (differential) energy interval in a backscattering spectrum and the corresponding (differential) depth interval in the specimen.
- power**—EIA, same as **stopping**, **cross section**. **E 673, E42**
- stopping distance, *n***—the path distance (rectilinear or curved) needed

stopping distance, *n*

to bring a vehicle to a stop from some selected initial brake application speed. **F 538, F09**

stopping off—the application of a resist to any part of an electrode—cathode, anode, or rack. **B 374, B08**

stop, releasing—See **releasing stop**. **D 2050, D13**

stop, removable—a removable molding or bead used around the periphery of a light of glass or a panel to secure it in place. **C 717, C24**

stop, top—See **top stop**. **D 2050, D13**

storage, adj—as a modifier of energy, descriptive of that component of energy absorbed by a strained elastomer that is not converted to heat and is available for return to the overall mechanical system; by extension, descriptive of that component of modulus or stiffness that is elastic. **D 1566, D11**

storage and warehousing—the activities related to receiving, storing, and shipping materials to and from production or distribution locations. **E 2135, E53**

storage coefficient—the volume of water an aquifer releases from or takes into storage per unit surface area of the aquifer per unit change in head. For a confined aquifer, the storage coefficient is equal to the product of the specific storage and aquifer thickness. For an unconfined aquifer, the storage coefficient is approximately equal to the specific yield. **D 653, D18**

storage component, thermal—a component of a building used for storing thermal energy. Includes all identifiable elements that serve an architectural as well as thermal function. **E 772, E44**

storage device, thermal—the container(s) plus all contents of the container(s) used for storing thermal energy. The transfer fluid and accessories such as heat exchangers, flow switching devices, valves, and baffles which are integral with the thermal storage container(s) are considered a part of the storage device. **E 772, E44**

storage factor—see **quality factor, *Q***. **D 1711, D09**

storage factor—a name formerly used at times for the *quality factor*. **D 2864, D27**

storage factor, magnetic, *Q_m*—the cotangent of the hysteretic angle that is equal to the ratio of the magnetizing current, *I_m*, to the core loss current *I_c*.

$$Q_m = \cot \beta = \tan \gamma = 1/D_m = I_m/I_c = R_l/\omega L_1$$

NOTE—The storage factor is also given by the ratio of 2π times the maximum energy stored in the core to the energy dissipated in the core (hysteresis and eddy current heat loss) per cycle of a periodic *SCM* excitation. **A 340, A06**

storage hardening, *n*—the increase in the viscosity of raw or unvulcanized rubber during storage. **D 1566, D11**

storage life, *n*—the period of time during which a packaged adhesive can be stored under specified temperature conditions and remain suitable for use. (Synonym **shelf life**.) (Compare **working life**.) **D 907, D14**

storage life—the length of time that a packaged adhesive, sealant, or other product can be stored under specified temperature conditions and remain suitable for use (Syn. **shelf-life**.)

story—See **building space**. **E 631, E06**

storage life—the length of time that a packaged adhesive, sealant, or other product can be stored under specified temperature conditions and remain suitable for use (Syn. **shelf-life**.) **E 1749, E06**

storage life, shelf, *n*—the period of time after production during which a material or product, that is stored under specified conditions, retains its intended performance capabilities. **D 1566, D11**

storage media, *n*—the systems upon which the archive or data set, summaries, or displays extracted from it are kept for use by the ADMS or for distribution to various users or stakeholders. **E 867, E17**

storage medium, thermal—the material in the storage device, independent of the containing structure, in which the major portion of the thermal energy is stored. **E 772, E44**

storage modulus—*M'* (Pa), [storage compliance *C* (Pa⁻¹)]—the real part of the complex modulus (complex compliance). **D 4092, D20**

storage modulus—quantitative measure of elastic properties defined as the ratio of the stress, in-phase with strain, to the magnitude of the strain. **E 1142, E37**

storage package—the smallest package intended by the manufacturer for long-term storage at the user's facility. **E 344, E20**

storage phosphor imaging plate—a flexible or rigid reusable detector that stores a radiological image as a result of exposure to penetrating radiation. **E 1316, E07**

storage point, *n*—an indication of the minimum temperature to which an oil should be heated in any part of an oil-handling installation when starting up after a shutdown. It is also an indication of the minimum temperature at which the oil should be stored in a tank fitted with an outflow heater. **D 4175, D02**

storage stability—the ability of a product to maintain its original characteristics over extended storage periods, under normal variations in temperature conditions. **D 3064, D10**

storm anchor (clip), *n*—in shingles, a corrosion-resistant metal fastener with a flat base and a shank that fastens the concealed lower corner of each shingle to the exposed edge of the adjacent shingle. **C 1154, C17**

storm anchor (clip), *n*—for shingles, a corrosion-resistant metal fastener with a flat base and a shank that fastens the concealed lower corner of each shingle to the exposed edge of the adjacent shingle. **D 2946, C17**

storm drain—a pipeline intended to convey storm water. **C 822, C13**

storm sewer—a pipeline intended to convey storm water. **C 822, C13**

storm water—precipitation run-off. **C 822, C13**

story, *n*—a space excluding attics, basements, and cellars, between successive floor levels or between floor and roof. **E 631, E06**

stout nail—nails with shank diameter usually at least one gage larger than common nails of same length. **F 547, F16**

stover—the dried stalks and leaves of a crop remaining after the grain has been harvested. **E 1705, E48**

STP—sodium triphosphate - Na₅P₃O₁₀, a cleaning agent. **D 6161, D19**

STPP—sodium tripolyphosphate. See **STP**. **D 6161, D19**

straight air, adj—the description of a vacuum cleaning system that does not have a mechanically driven agitator (sometimes referred to in the industry as *straight suction*). **F 395, F11**

straight beam—a vibrating pulse wave train traveling normal to the test surface. **E 1316, E07**

straight line drag forces—load on a boom that results from towing it from one end. **F 818, F20**

straight nail—nail not bent or bowed. **F 547, F16**

straightness, *n*—in steel cord, the property of a cord characterized by a lack of deviation from its central axis over short lengths of a cord. **D 123, D13**

straightness, *n*—in steel cord, the property of a cord characterized by a lack of deviation from its central axis over short lengths of cord. **D 6477, D13**

straight-run gases, *n*—hydrocarbon gases that do not contain unsaturates. **D 4175, D02**

straight-run pitch, *n*—a pitch run to the consistency desired in the initial process of distillation and without subsequent fluxing. **D 8, D04**

straight soap—under soap, see *straight soap*. **D 459, D12**

straight stitch, *n*—in home sewing, a simple machine stitch pattern of straight, single stitch segments of equal length. The simple machine stitch pattern is formed by the down and up movement of the needle while the fabric moves through the feed mechanisms in either the forward or reverse direction. **D 123, D13**

straight stitch, *n*—in home sewing, a simple machine stitch pattern of straight, single stitch segments of equal length. The simple machine stitch pattern is formed by the down and up movement of the needle while the fabric moves through the feed mechanisms in either the forward or reverse direction. **D 5646, D13**

straight stream nozzle—see **plain jet atomizer**. E 1620, E29

straight throat—a throat whose floor is at the same level as the floor of the melter. C 162, C14

strain—jargon for optical retardation. C 162, C14

strain, *n*—deformation of a material caused by the application of an external force. (See also **tensile strain**.) D 123, D13

strain, *n*—the unit change due to stress, in the size or shape of a body referred to its original size or shape. D 907, D14

strain, *n*—the unit change, due to force, in the size or shape of a body referred to its original size or shape. D 1566, D11

strain, ϵ —the unit change, due to force, in the size or shape of a body referred to its original size or shape. D 4092, D20

strain, *n*—the change in length per unit of length in a given direction. D 4439, D35

strain, *n*—deformation of a material caused by the application of an external force. D 4848, D13

strain—the change per unit of length in a linear dimension of a body, that accompanies a stress. F 412, F17

strain—deformation produced on a fastener by an outside force. F 1789, F16

strain aging, *n*—aging induced by cold working. A 941, A01

strain amplitude—the ratio of the maximum deformation, measured from the mean deformation, to the free length of the unstrained test specimen. (ISO) D 4092, D20

strain, ϵ (D)—the change in length per unit of length in a given direction. D 653, D18

strain disk—a disk of glass having a calibrated amount of birefringence at a specified location, and used as a comparative measure of the degree of retardation. C 162, C14

strain, *e, n*—the per unit change, due to force, in the size or shape of a body referred to its original size or shape. Strain is a nondimensional quantity, but it is frequently expressed in inches per inch, metres per metre, or percent. E 6, E28

strain ellipsoid—the representation of the strain in the form of an ellipsoid into which a sphere of unit radius deforms and whose axes are the principal axes of strain. (ISRM) D 653, D18

strainer, *n*—a machine designed to force a rubber or rubber mix through a sieve or sieves to remove extraneous material. D 1566, D11

strain gage accelerometer, *n*—an accelerometer using strain gages to sense the motion of the seismic element. F 538, F09

strain gage fatigue life, *n*—the number of fully reversed strain cycles corresponding to the onset of degraded gage performance, whether due to excessive zero shift or other detectable failure mode. E 6, E28

strain hardening, *n*—an increase in hardness and strength of a metal caused by plastic deformation at temperatures below its **recrystallization temperature**. (Syn. *work hardening*) A 941, A01

strain hardening—an increase in hardness and strength caused by plastic deformation at temperatures lower than the recrystallization range. B 354, B01

strain hardening—the increase in strength and hardness and decrease in ductility due to permanent deformation of the structure by cold working. B 846, B05

strain hardening—increase in hardness and strength resulting from plastic deformation by cold working. F 1789, F16

straining block, *n*—a rigid aluminum test block with a rubber surface on one side capable of simulating an anomaly in a tire. F 538, F09

straining block holding fixture, *n*—a device for holding one or more straining blocks in the S/H system during the calibration process. F 538, F09

strain, linear—the change in length of a specimen due to an applied stress relative to the original length of the specimen before the stress was applied. Linear strain is often shown as:

$$\frac{L_2 - L_1}{L_1}$$

where:

L_1 = original length of specimen, and

L_2 = length of the specimen when subjected to an applied stress.

C 904, C03

strain (linear or normal), ϵ (D)—the change in length per unit of length in a given direction. D 653, D18

strainline or strainlining—see **hairline or hairlining**. C 286, B08

strain point (St.P.)—that temperature corresponding to a specific rate of elongation of a glass fiber when measured by Test Method C 336 or a specific rate of midpoint deflection of a glass beam when measured by Test Method C 598. C 162, C14

strain, *r*—the change in length, due to an applied force, per unit length of a specimen. E 1142, E37

strain rate—the rate of relative length deformation with time due to an applied stress. Strain rate is often shown as:

$$\frac{L_2 - L_1}{L_1(T_2 - T_1)}$$

where:

L_1 = original length of specimen,

L_2 = length of the specimen when subjected to an applied stress,

T_1 = time when stress is applied, and

T_2 = time when L_2 is measured.

C 904, C03

strain resolution (strain sensitivity), R_s (D)—the smallest subdivision of the indicating scale of a deformation-measuring device divided by the product of the sensitivity of the device and the gage length. The deformation resolution, R_d , divided by the gage length. D 653, D18

strain (stress) rate—rate of change of strain (stress) with time. (ISRM) D 653, D18

strain (stress) tensor—the second order tensor whose diagonal elements consist of the normal strain (stress) components with respect to a given set of coordinate axes and whose off-diagonal elements consist of the corresponding shear strain (stress) components. (ISRM) D 653, D18

strand—See **wire strand**. A 902, A05

strand, *n*—one of the wires of any stranded conductor. B 354, B01

strand—a multiplicity of continuous glass filaments combined in a single compact unit, without twist. C 162, C14

strand, *n*—(1) a single fiber, filament, or monofilament, (2) an ordered assemblage of textile fibers having a high ratio of length to diameter and normally used as a unit, including slivers, rovings, single yarns, plied yarns, cords, braids, ropes, etc. D 123, D13

strand, *n*—in *fiberope*, an ordered assemblage of textile yarns used to make fiber rope. D 123, D13

strand, *n*—in *braided rope*, one of a number of similar units which are intertwined to produce a braided rope, each unit consisting of one or more yarns which are not twisted together and which follow a prescribed path through the braided rope. D 123, D13

strand—a wood flake having a minimum predetermined length-to-width ratio of 2:1. D 1554, D07

strand—in *fibrous composites*, Synonym for tow. D 3878, D30

strand, *n*—(1) a single fiber, filament, or monofilament. (2) an ordered assemblage of textile fibers having a high ratio of length to diameter and normally used as a unit, including slivers, rovings, single yarns, plied yarns, cords, braids, ropes, etc. D 4849, D13

stranded conductor—a conductor composed of a group of wires, usually twisted, or of any combination of such groups of wires. B 354, B01

stranding factor—the ratio of the mass or electrical resistance of a unit length of stranded conductor to that of a solid conductor of the same cross-sectional area. The stranding factor m for the completed stranded conductor is the numerical average of the stranding factors for each of the individual wires in the conductor, including the straight core wire, if any (for which the stranding factor is

stranding factor

unity). The stranding factor (m_{ind}) for any given wire in a concentric-lay-stranded conductor is:

$$m_{ind} = \sqrt{1 + (9.8696/n^2)}$$

where:

n = length of lay/diameter of helical path of the wire

- B 354**, B01
- strand irregularity**, n —*in textiles*, variation in a property along a strand. **D 123**, D13
- strand irregularity**, n —*in textiles*, variation in a property along a strand. **D 4849**, D13
- strap bellies**—thin, lightweight, vegetable-tanned cattlehide bellies, rather flexible and with a low load, processed for the strap trade. **D 1517**, D31
- strap nail**—bright, regular-stock-steel, 1 ¼ by 0.092 to 2 by 0.113-in. nails with oval 1³/₆₄ to 1⁷/₆₄-in. head and short diamond point. **F 547**, F16
- strapping**, n —a flexible strip material, generally of flat or round cross section, used to: (1) fasten merchandise within a container, (2) hold together a bundle or bale, (3) reinforce a shipping container, (4) secure a shipping container or an article to a pallet. (Compare **bracing**.) **D 996**, D10
- stratified random sample**, n —a sample that is selected independently within each stratum of a universe or population. **E 1402**, E11
- stratum**, n —a subgroup of the population separated in space or time, or both, from the remainder of the population, being internally similar with respect to a target characteristic of interest, and different from adjacent strata of the population. **D 5681**, D34
- straw**, n —*in flax*, refers to dried stems and plant parts such as roots, leaves, and seed holding structures. **D 123**, D13
- straw**, n —*in flax*, refers to dried stems and plant parts such as roots, leaves, and seed holding structures. **D 6798**, D13
- straw**—See **purlin nail**. **F 547**, F16
- strawberry**—a small bubble or blister in the flood coating of a gravel-surfaced membrane. **D 1079**, D08
- stray current**—current through paths other than the intended circuit, such as through heating coils or the tank. **B 374**, B08
- stray current corrosion**—the corrosion caused by electric current from a source external to the intended electrical circuit, for example, extraneous current in the earth. **G 15**, G01
- stray radiant energy**—all radiant energy that reaches the detector at wavelengths that do not correspond to the spectral position under consideration. **E 131**, E13
- stray radiant power**, P_s —the total detected radiant power outside a specified wavelength (wave number) interval each side of the center of the spectral band passed by the monochromator under stated conditions for wavelength (wave number), slit dimensions, light source, and detector. **E 131**, E13
- stray radiant power ratio**, P_s/P_t —the ratio of stray radiant power to the total detected radiant power. **E 131**, E13
- streak**, n —an extended unintentional stripe of narrow width, often a single yarn. **D 123**, D13
- streak**, n —an extended unintentional stripe of narrow width, often a single yarn. **D 3990**, D13
- streaking**—nonuniform deposition of a polish film. **D 2825**, D21
- streaking**, n —undesirable lines in a print caused by damaged rollers, cylinder bounce or bottoming gears. **D 6488**, D01
- streaking**, n —linear deposits of ink that run across both image and non-image areas. **D 6488**, D01
- streaks**, n —a print defect which appears as light bands in the printed area in the direction of the printhead travel. **F 1857**, F05
- streambank erosion**—the removal of bank material by flowing water. **D 4410**, D19
- stream counter**—an instrument in which the particles to be characterized are presented to an interrogation zone as a one-dimensional stream, the size of the particle being deduced from the physical

changes it causes in the interrogation zone. (See also **resistazone** and **photozone**.) **C 242**, C21

stream discharge—the quantity of flow passing through a cross section in a unit of time. **D 4410**, D19

streaming, v —dispensing of a product in the form of a jet or a stream. **D 6655**, D10

streaming potential—a potential that is generated in dilute solutions moving at high velocity through small channels. [Liquid junction potential problems are often wrongly confused with streaming potentials.] **D 4127**, D19

streamline flow—see **laminar flow**. **D 653**, D18

strength—a term to indicate relative thickness in sheet glass. **C 162**, C14

strength—(1) the ability of a member to sustain stress without failure. (2) in a specific mode of test, the maximum stress sustained by a member loaded to failure. **D 9**, D07

strength, n —the property of a material that resists deformation induced by external forces. (Compare **force**.) **D 123**, D13

strength—maximum stress which a material can resist without failing for any given type of loading. (ISRM) **D 653**, D18

strength, n —see **bond strength**. **D 907**, D14

strength, n —*of paper*, the force at which paper ruptures. **D 1968**, D06

strength, n —the property of a material that resists deformation induced by external forces. (Compare **force**.) **D 4848**, D13

strength, n —*dyer's*, the color quality that increases with an increase in the amount of dye present, other conditions remaining constant. (See also **tinting strength**.) **E 284**, E12

strength, n —resistance to external force or load or generation of internal strain, expressed in terms of units of force, lbf, pounds force (N, newtons).

ultimate strength, n —maximum resistance to applied force, load, or stress that a material, member, component, or assembly of a structure can withstand without failure.

strength:

compressive strength—the maximum compressive strength that a material is capable of sustaining. Compressive strength is calculated from the maximum load during a compressive test and the original cross-sectional area of the specimen.

dry strength—the strength of an adhesive joint or composite structure determined immediately after drying under specified conditions or after a period of conditioning in a standard laboratory atmosphere.

wet strength—the strength of an adhesive bond or composite measured after exposing the test specimen to moisture/water vapor until saturated. **E 631**, E06

strength:

compressive strength—the maximum compressive strength that a material is capable of sustaining. Compressive strength is calculated from the maximum load during a compressive test and the original cross-sectional area of the specimen.

dry strength—the strength of an adhesive joint or composite structure determined immediately after drying under specified conditions or after a period of conditioning in a standard laboratory atmosphere.

wet strength—the strength of an adhesive bond or composite measured after exposing the test specimen to moisture/water vapor until saturated. **E 1749**, E06

strength—the stress required to break, rupture, or cause a failure. **F 412**, F17

strength, adfreeze—see **adfreeze strength**. **D 7099**, D18

strength analyzer, n —an instrument which determines tensile strength and elongation at breaking load for a test beard of cotton. **D 123**, D13

strength analyzer, n —an instrument which determines tensile strength and elongation at breaking load for a test beard of cotton. **D 7139**, D13

strength at break, n—See **breaking strength**. D 4848, D13

strength at rupture, n—strength expressed in terms of the force at rupture. (Compare **breaking strength**.) D 123, D13

strength at rupture, n—strength expressed in terms of the force at rupture. (Compare **breaking strength**.) D 4848, D13

strength design basis—one of a series of established stress values (specified in Test Method D 2837) for a plastic molding compound obtained by categorizing the long-term strength determined in accordance with Test Method F2018. F 412, F17

strength, double—sheet glass between 0.115 and 0.134 in. (2.92 and 3.40 mm) thick. C 162, C14

strength grade—system of strength classifications used for bolts, nuts, and screws made to inch standards. F 1789, F16

strength ratio—the hypothetical ratio of the strength of a member to the strength it would have if no weakening defects were present. D 9, D07

strength-reducing defects—imperfections affecting strength, such as checks, compression wood, cross grain, decay, knots, shakes, splits, etc. D 9, D07

strength, single—sheet glass between 0.085 and 0.101 in. (2.16 and 2.57 mm) thick. C 162, C14

strength, transverse (or flexural), n—the breaking load applied normal to the neutral axis of a beam. C 168, C16

strength unit, n—for asbestos, unit of reinforcing potential of asbestos fiber in asbestos-cement products. D 2946, C17

stress—force per unit of area. D 9, D07

stress, n—the resistance to deformation developed within a material subjected to an external force. D 123, D13

stress, n—force exerted per unit area at a point within a plane. D 907, D14

stress, n—the intensity, at a point in a body, of the internal forces (or components of force) that act on a given plane through the point. D 1566, D11

stress, σ —the intensity at a point in a body of the internal forces or components of force that act on a given plane through the point. (E28) D 4092, D20

stress, n—the resistance to deformation developed within a material subjected to an external force. D 4848, D13

stress, n—internal force developed by application of external force or load or generation of internal strain expressed in terms of unit of force per unit of area, megapascals (pound-force per square inch). When the forces are parallel to the plane on which it acts, the stress is called shear stress; when the forces are normal to the plane on which it acts, the stress is called normal stress; when the normal stress is directed toward the plane on which it acts, it is called compressive stress; when the normal stress is directed away from the plane on which it acts, it is called tensile stress. Sometimes referred to as unit stress. E 631, E06

stress—force expressed in units per unit of area, which represents resistance that a fastener offers to deformation. F 1789, F16

stress amplitude—the ratio of the maximum applied force, measured from the mean force, to the cross-sectional area of the unstressed test specimen. (ISO) D 4092, D20

stress concentration factor—See **theoretical stress concentration factor (or stress concentration factor) k_t** . E 1823, E08

stress corrosion, n—environmentally induced degradation that results in the formation and growth of cracks and/or damage in glasses and many ceramics when subjected to the combine action of a corroding agent and stress. C 1145, C28

stress corrosion crack—spontaneous failure of metals by cracking under combined action of corrosion and stress, residual or applied. B 846, B05

stress-corrosion crack—a crack which may be intergranular or transgranular depending on the material, resulting from the combined action of corrosion and stress, either external (applied) or internal (residual). E 7, E04

stress corrosion cracking—cracking phenomena that occurs when an

installed fastener under stress is exposed to a corrosive service environment. F 1789, F16

stress-corrosion cracking—a cracking process that requires the simultaneous action of a corrodent and sustained tensile stress. (This excludes corrosion-reduced sections which fail by fast fracture. It also excludes intercrystalline or transcrystalline corrosion which can disintegrate an alloy without either applied or residual stress.) G 15, G01

stress-corrosion cracking, SCC—a cracking process that requires the simultaneous action of a corrodent and sustained tensile stress. E 1823, E08

stress corrosion cracking (SCC)—a cracking process that requires the simultaneous action of a corrodent and sustained tensile stress. F 2078, F07

stress-crack, n—an external or internal crack in a plastic caused by tensile stresses less than its short-time mechanical strength. D 883, D20

stress crack, n—an external or internal crack in a plastic caused by tensile stresses less than its short-time mechanical strength. D 4439, D35

stress-crack, n—an external or internal crack in a plastic caused by tensile stresses less than its short-time mechanical strength. F 1251, F04

stress crack, environmental, n—a stress crack, the development of which has been accelerated by the environment to which the plastic is exposed. (See **stress-crack**.) F 412, F17

stress cycle—See **cycle**. E 1823, E08

stress decay, n—in *mechanics*, the reduction in force to hold a material at a fixed deformation over a period of time. D 4848, D13

stress ellipsoid—the representation of the state of stress in the form of an ellipsoid whose semi-axes are proportional to the magnitudes of the principal stresses and lie in the principal directions. The coordinates of a point P on this ellipse are proportional to the magnitudes of the respective components of the stress across the plane normal to the direction OP , where O is the center of the ellipsoid. (ISRM) D 653, D18

stress [FL^{-2}], n—the intensity at a point in a body of the forces or components of force that act on a given plane through the point. Stress is expressed in force per unit of area (pounds-force per square inch, megapascals, and so forth). E 6, E28

stress, [FL^{-2}]—force acting over a unit area. Traditionally, the symbol for stress is either S or σ , as a matter of choice. E 1823, E08

stress-intensity factor at crack initiation, K_0 [$FL^{-3/2}$]—the value of K at the onset of rapid fracturing. E 1823, E08

stress-intensity-factor calibration, K calibration—See **applied- K curve** in 1.1.562. E 1823, E08

stress-intensity factor coefficient, Y^* —a dimensionless parameter that relates the applied force and specimen geometry to the resulting crack-tip stress-intensity factor in a chevron-notch specimen test. E 1823, E08

stress-intensity factor, K, K_I, K_{II}, K_{III} —the magnitude of the ideal crack-tip stress field (stress field singularity) for a particular mode in a homogeneous linear-elastic body. F 2078, F07

stress-intensity factor, $K, K_I, K_2, K_3, K_I, K_{II}, K_{III}$ [$FL^{-3/2}$]—the magnitude of the mathematically ideal, crack-tip stress field (stress-field singularity) for a particular mode in a homogeneous, linear-elastic body. E 1823, E08

stress-intensity factor range, ΔK [$FL^{-3/2}$]—in *fatigue*, the variation in the stress-intensity factor in a cycle, that is

$$\Delta K = K_{\max} - K_{\min}$$

E 1823, E08

stress intensity factor threshold for environment assisted cracking, K_{EAC} [$FL^{-3/2}$]—the highest value of the stress intensity factor (K) at which crack growth is not observed for a specified combination of material and environment and where the measured value may depend on specimen thickness. E 1823, E08

stress intensity factor threshold for plane strain environment-assisted cracking, K_{IEAC} [FL^{-3/2}]**—**the highest value of the stress intensity factor (K) at which crack growth is not observed for a specified combination of material and environment and where the specimen size is sufficient to meet requirements for plane strain as described in Test Method E 399. **E 1823, E08**

stress, σ, p, f (FL⁻²)**—**the force per unit area acting within the soil mass.

effective stress (effective pressure) (intergranular pressure), $\bar{\sigma}, f$ (FL⁻²)**—**the average normal force per unit area transmitted from grain to grain of a soil mass. It is the stress that is effective in mobilizing internal friction. **E 1823, E08**

neutral stress (pore pressure) (pore water pressure), u, u_w (FL⁻²)**—**stress transmitted through the pore water (water filling the voids of the soil).

normal stress, σ, p (FL⁻²)**—**the stress component normal to a given plane.

principal stress, $\sigma_1, \sigma_2, \sigma_3$ (FL⁻²)**—**stresses acting normal to three mutually perpendicular planes intersecting at a point in a body, on which the shearing stress is zero.

major principal stress, σ_1 (FL⁻²)**—**the largest (with regard to sign) principal stress.

minor principal stress, σ_3 (FL⁻²)**—**the smallest (with regard to sign) principal stress.

intermediate principal stress, σ_2 (FL⁻²)**—**the principal stress whose value is neither the largest nor the smallest (with regard to sign) of the three.

shear stress (shearing stress) (tangential stress), τ, s (FL⁻²)**—**the stress component tangential to a given plane.

total stress, σ, f (FL⁻²)**—**the total force per unit area acting within a mass of soil. It is the sum of the neutral and effective stresses. **D 653, D18**

stress ratio**—**ratio of ultimate stress of metal connector plate to ultimate stress of matched solid metal-coupon control specimen. Also called *effectiveness ratio* and *efficiency ratio*. **E 631, E06**

stress relaxation**—**stress release due to creep. (ISRM) **D 653, D18**

stress relaxation, n **—**the decrease in stress after a given time at constant strain. **D 1566, D11**

stress relaxation, n **—**the time-dependent decrease in stress in a solid under given constraint conditions. **E 6, E28**

stress relaxation**—**the decrease in stress, at constant strain, with time. **F 412, F17**

stress relief**—**a treatment of a product to reduce residual stresses.

*by mechanical treatment***—**without causing a significant change in size.

*by thermal treatment***—**without causing recrystallization. **B 846, B05**

stress relief annealing**—**heating process applied to fasteners having a geometry with a high degree of upset (round head square neck, for example) to relieve mechanical stresses generated during forming. **F 1789, F16**

stress relieving, n **—**heating a steel object to a suitable temperature, holding it long enough to reduce residual stresses, and then cooling it slowly enough to minimize the development of new residual stresses. **A 941, A01**

stress retention**—**the residual load expressed as a percentage of the original load on a material after the test specimen has been maintained at a constant elongation for a specified time. **D 996, D10**

stress, s **—**force per unit area. **E 1142, E37**

stress, S, n **—**the intensity at a point in a body of the forces or components of force that act on a given plane through the point. **F 1582, F04**

stress-strain curve, n **—**a graphical representation of the stress and strain relationship of a material under conditions of compression, shear, tension, or torsion. (Compare *force-deformation curve*, *force-elongation curve*, and *force-extension curve*.) **D 123, D13**

stress-strain curve, n **—**a graphical representation of the stress and

strain relationship of a material under conditions of compression, shear, tension, or torsion. (Compare *force-deformation curve*, *force-elongation curve*, and *force-extension curve*.) **D 4848, D13**

stress-strain diagram, n **—**a diagram in which corresponding values of stress and strain are plotted against each other. **D 907, D14**

stress-strain diagram, n **—**a diagram in which corresponding values of stress and strain are plotted against each other. Values of stress are usually plotted as ordinates (vertically) and values of strain as abscissas (horizontally). **E 6, E28**

stress (strain) field**—**the ensemble of stress (strain) states defined at all points of an elastic solid. (ISRM) **D 653, D18**

stretch, n **—**of paper, the maximum tensile strain (elongation) developed in a paper test specimen prior to rupture in a tensile test that has been carried to rupture under the conditions specified. **D 1968, D06**

stretch**—**1) an increase or elongation in dimension; 2) mechanically enforcing an elongation of belting during the vulcanization to render it less extensible in service. **F 869, F08**

*stretched filling***—**See *tight pick*. **D 3990, D13**

stretching**—**the process of putting tension on the fabric to make it hang uniformly along the line of fence between terminal posts. **F 552, F14**

stretch stitch, n **—**in home sewing, a complex machine stitch pattern or of various combinations of straight stitch, single stitch zigzag, or multiple stitch zigzag. It is produced by coordinated motions of needle and feed as the fabric moves through the feed mechanism in the forward or reverse direction. **D 123, D13**

stretch stitch, n **—**in home sewing, a complex machine stitch pattern or of various combinations of straight stitch, single stitch zigzag or multiple stitch zigzag. It is produced by coordinated motions of needle and feed as the fabric moves through the feed mechanism in the forward or reverse direction. **D 5646, D13**

stretch woven fabric, n **—**a woven fabric which is capable of at least 20 % stretch in either warp or filling direction, or both, under forces and conditions encountered in use, and of almost complete recovery after removal of the force. **D 123, D13**

stretch woven fabric, n **—**a woven fabric which is capable of at least 20 % stretch in either warp or filling direction, or both, under forces and conditions encountered in use, and almost complete recovery after removal of the force. **D 4850, D13**

stretch yarns, n **—**a generic term for a filament or spun yarn having a high degree of potential elastic stretch. **D 4849, D13**

stretch zone width (SZW) [L]**—**the length of crack extension that occurs during crack-tip blunting, for example, prior to the onset of unstable brittle crack extension, pop-in, or slow stable crack extension. The SZW is co-planar with the original (unloaded) fatigue precrack and refers to an extension of the original crack. **E 1823, E08**

stria**—**a cord of low intensity generally of interest only in optical glass. (See also *cord*.) **C 162, C14**

striated**—**a term used to describe plywood with a face veneer that has been grooved or scored parallel to the grain. **D 1038, D07**

striated head**—**head with parallel ridges and grooves to identify high-density fiberboard nail. **F 547, F16**

striations**—**ridges or steps on the fracture surface parallel to the local direction of the crack front propagation, generally having the appearance of feathers. **C 162, C14**

strike: (1) n **—**a thin film of metal to be followed by other coatings. (2) n **—**a solution used to deposit a strike.

(3) v **—**to plate for a short time, usually at a high initial current density. **B 374, B08**

strike**—**the direction or azimuth of a horizontal line in the plane of an inclined stratum, joint, fault, cleavage plane, or other planar feature within a rock mass. (ISRM) **D 653, D18**

strike tackler**—**stapler activated by striking it with hand or mallet. **F 592, F16**

strike-through, n **—**the penetration of the vehicle of a printing ink

- through the sheet, so that the ink is apparent on the reverse side under normal lighting conditions. **D 6488, D01**
- strike through, n**—ink vehicle penetrates the substrate and is visible on the opposite side. **F 1857, F05**
- striking**—development of color or opacity during cooling or reheating. **C 162, C14**
- striking surface, n**—the hardened, smooth, circular bottom surface of the intermediate tool that is in contact with the test sample. **E 1445, E27**
- string**—an imperfection; a straight or curled line, usually resulting from slow solution of a large grain of sand or foreign material. **C 162, C14**
- stringer, n**—*in zippers*, the tape, bead, and element assembly that constitutes one side of a chain. **D 123, D13**
- stringer**—See **pallet**. **D 996, D10**
- stringer, n**—the tape, bead, and element assembly that constitutes one side of a chain. **D 2050, D13**
- stringer**—a single, high-aspect ratio, elongated inclusion, two or more elongated inclusions, or a number of small non-deformable inclusions aligned in a linear pattern due to deformation. **E 7, E04**
- string fen**—a peatland with roughly parallel narrow ridges of peat dominated by fenlike vegetation interspersed with slight depressions, many of which containing shallow pools. **D 7099, D18**
- stringiness, n**—the property of an adhesive that results in the formation of filaments or threads when adhesive transfer surfaces are separated. (See also **legging** and **webbing**.) (Compare **teeth**.) **D 907, D14**
- stringy selvage**—See **slack selvage**. **D 3990, D13**
- strip, n**—a process or solution used for the removal of a coating from a basis metal or an undercoat. **B 374, B08**
- strip, v**—to remove a coating from the basis metal or undercoat. **B 374, B08**
- strip**—*as in inch-pound specifications*, a rolled flat product, other than flat wire, up to and including 0.188-in. thick, in straight lengths, coils (rolls), or traverse wound on reels or spools having either slit, sheared or slit and rolled edges in widths up to 24-in. inclusive, or having finished drawn or rolled edges, in widths over 1¼-in. to 12-in. inclusive. **B 846, B05**
- strip**—*as in SI specifications*, a rolled flat product other than flat wire up to and including 5-mm thick in straight lengths, coils (rolls), or traverse wound on reels or spools having either slit or sheared edges in widths up to 600-mm inclusive, or having finished drawn or rolled edges, in widths over 30-mm to 300-mm inclusive. **B 846, B05**
- strip, n**—a flat-rolled metal product of some maximum thickness and width arbitrarily dependent on the type of metal, it is narrower than sheet. **B 899, B02**
- strip**—a thin batten or narrow, thin board. Specific descriptions may vary between softwood and hardwood. **D 9, D07**
- strip, n**—a flat, thin member, much longer than wide, having width greater than thickness (if of steel, having dimensions of 0.229 in. (5.8 mm) or less thickness and 12.0 (305 mm) or less width). **E 631, E06**
- strip**—staples, nails, or pins collated and cohered to facilitate automatic driving with appropriate tool. **F 592, F16**
- stripe reference line, n**—line used for alignment of pattern pieces on stripe material during marker making. **D 6963, D13**
- strip-fed tool**—tool using staples or nails that are collated and cohered in strip form. **F 592, F16**
- striping, n**—a printing imperfection observed when the print becomes alternatively more and less intense across the web. **D 6488, D01**
- strip mopping**—See **mopping**. **D 1079, D08**
- strip nail**—steel, 1¼ to 2½-in. nails spot welded to disposable metal strip that feed nails into nailing machine provided with staple-type magazine. During punching of nail from strip, small washer is formed under head. Also, nail stored in special strip to serve as magazine for feeding nailing machine. **F 547, F16**
- stripper, n**—*in textiles*, a product, usually the reducing agent, that changes the coloring material dye, or soil stain to reduced color. (See also **bleach**) **D 123, D13**
- stripper, intextiles, n**—a product, usually a reducing agent, that changes the coloring material, dye, or soil stain to reduced color. **D 3136, D13**
- stripper punch, n**—a punch that, in addition to forming the top or bottom of the die cavity, later moves further into the die to eject the compact. **B 243, B09**
- stripping**—strip flashing:
- (1) the technique of sealing a joint between metal and built-up membrane with one or two plies of felt or fabric and hot- or cold-applied bitumen;
- (2) the technique of taping joints between insulation boards or deck panels. **D 1079, D08**
- stripping, n**—the process whereby volatile fractions are removed from a liquid material. **D 4175, D02**
- stripping yard**—{archaic} the place where glass plates are removed from tables after grinding and polishing. **C 162, C14**
- strip test, n**—*infabric testing*, a tensile test in which the full width of the specimen is gripped in the clamps. **D 123, D13**
- strip test, n**—*infabric testing*, a tensile test in which the full width of the specimen is gripped in the clamps. **D 4850, D13**
- stroke**—*in character recognition*, a straight line or arc used as a segment of a graphic character. Each character is made up of a variable number of the strokes. **F 149, F05**
- stroke, n**—a movement in a single direction, either forward or backwards. **F 395, F11**
- stroke**—*in character recognition*, a straight line or arc used as a segment of a graphic character. **F 909, F05**
- stroke average width**—the average of actual stroke widths taken at points along the length of a stroke. **F 149, F05**
- stroke centerline**—*in character recognition*, a line midway between the two stroke edges. **F 149, F05**
- stroke centerline**—*in character recognition*, a line midway between the two edges of a stroke. **F 909, F05**
- stroke device**—an input device providing a set of coordinates that record the path of the device. **F 909, F05**
- stroke edge**—*in character recognition*, the line of discontinuity between a side of a stroke and the background, obtained by averaging, over the length of the stroke, the irregularities resulting from the printing and detecting processes. **F 149, F05**
- stroke length, n**—the total distance of travel for the mechanical pump dispenser from where the mechanism of a pump sits at rest to where it is fully depressed. **D 6655, D10**
- strokes to prime (STP), n**—the total number of complete actuations needed to obtain a full discharge of product on the initial use of package. **D 6655, D10**
- stroke width**—*in character recognition*, the distance measured perpendicularly to the stroke centerline between the two stroke edges. **F 149, F05**
- strong probability did not**—this carries the same weight as strong probability on the identification side of the scale; that is, the examiner is virtually certain that the questioned and known writings were not written by the same individual.
- Examples*—There is strong probability that the John Doe of the known material did not write the questioned material, or in my opinion (or conclusion or determination) it is highly probable that the John Doe of the known material did not write the questioned material. **E 1658, E30**
- strong probability (highly probable, very probable)**—the evidence is very persuasive, yet some critical feature or quality is missing so that an *identification* is not in order; however, the examiner is virtually certain that the questioned and known writings were written by the same individual.
- Examples*—There is *strong probability* that the John Doe of the known material wrote the questioned material, or it is my opinion (or conclusion or determination) that the John Doe of the known material *very probably* wrote the questioned

strong probability (highly probable, very probable)

- material. **E 1658, E30**
- [strong] reason to believe**—there are too many definitions of *believe* and *belief* that lack certitude. It is more appropriate to testify to our conclusion (or determination or expert opinion) than to our belief, so why use that term in a report? **E 1658, E30**
- struck surface, n**—the surface of a molded brick that is not in contact with the mold and from which the excess clay/shale mixture is removed. **C 43, C15**
- structural adhesive, n**—a bonding agent used for transferring required loads between adherends exposed to service environments typical for the structure involved. **D 907, D14**
- structural boards**—boards graded for structural applications requiring stress grading for assignment of allowable properties. **D 9, D07**
- structural bolt**—heavy hex head bolt having a controlled thread length intended for use in structural connections and assembly of such structures as buildings and bridges. **F 1789, F16**
- structural clay facing tile, n**—tile designed for use in interior and exterior unplastered walls, partitions or columns. See Specification C 212. **C 43, C15**
- structural clay tile, n**—hollow burned-clay masonry building units with parallel cells or cores or both. **C 43, C15**
- structural fill**—man-made deposits of solid materials. Examples include backfills, landfills, embankments, earth dams, linings and blankets, foundations, canals, road base, footings, and trenches. **D 5681, D34**
- structural fill, n**—an engineered fill, typically constructed in layers of uniform thickness and compacted to a desired unit weight in a manner to control compressibility, strength, and hydraulic conductivity. **E 2201, E50**
- structural gasket**—See *lock-strip gasket*, the preferred term. **C 717, C24**
- structural-glued-laminated timber, n**—an engineered, stress-rated product of a timber laminating plant comprising assemblies of specially selected and prepared wood laminations securely bonded together with adhesives, with the following characteristics: (1) The grain of all laminations is approximately parallel longitudinally, and (2) The laminations may be comprised of pieces end-joined to form any length, of pieces placed or glued edge-to-edge to make wider ones, or of pieces bent to curved form during gluing. (Synonym **GLULAM**) ANSI/AITC A190.1—1992, American National Standard for Wood Products—Structural Glued Laminated Timber (Edited to conform with ASTM format.) **D 907, D14**
- structural integrity**—for the purpose of this specification, it is the ability of the AR to maintain air leakage performance after exposure to elevated positive and negative pressure (see 5.1.2 for performance). **E 631, E06**
- structural landfill**—man-made earth work meeting engineered practices and structural requirements. The fill must also be environmentally acceptable and meet EPA requirements. (See 40 CFR 268). **D 5681, D34**
- structural layer**—a layer present in the final MEMS device. **E 2444, E08**
- structural quality sheet coil**—coiled sheet metal used for production of metal connector plates meeting minimum specified grade properties for yield and ultimate stresses and elongation. If Specification A 653/A 653M Grade 40 is specified, the steel properties shall exceed 16 pct for elongation for a 50 mm (2.0 in.) gage length of the 275 MPa (40 ksi) yield point and 380 MPa (55 ksi) ultimate tensile stress, according to Specification A 653/A 653M. **E 631, E06**
- structural sandwich construction, n**—a laminar construction comprising a combination or alternating dissimilar simple or composite materials assembled and intimately fixed in relation to each other so as to use the properties of each to attain specific structural advantages for the whole assembly. **C 274, D30**
- structural sealant glazing, n**—in *building construction*, a glazing system wherein a structural sealant is used to transfer loads between a lite or panel and a supporting framework, without mechanical fasteners or other methods of attachment. **C 717, C24**
- structural slab**—a horizontal, supporting, cast-in-place, concrete building deck. **C 717, C24**
- structural system**—a combination of load supporting and transmitting construction elements or **components** of an assembly or **building** including connections. **E 631, E06**
- structural test, n**—determination of one or more values for load, stress, and deflection characteristics of a material or assembly. **E 631, E06**
- structure**—one of the larger features of a rock mass, like bedding, foliation, jointing, cleavage, or brecciation; also the sum total of such features as contrasted with texture. Also, in a broader sense, it refers to the structural features of an area such as anti-clines or synclines. (ISRM) **D 653, D18**
- structure*—see **soil structure**. **D 653, D18**
- structure**—as applied to a crystal, the shape and size of the unit cell and the location of all atoms within the unit cell. As applied to microstructure, the size, shape and arrangement of phases. **E 7, E04**
- structure, n**—the order of data elements in a message. **F 1294, F05**
- structureborne sound**—sound that arrives at the point of interest, such as the edge of a partition, by propagation through a solid structure. **C 634, E33**
- structure factor**—the ratio of the amplitude of the wave scattered by all the atoms of a unit cell to the amplitude of the wave scattered by a single electron. Symbol = *F*. **E 7, E04**
- strut, n**—a short member of a **crate** or **bracing** used as reinforcement and designed to resist compressive forces in the direction of its length. **D 996, D10**
- stubble, n**—in *shornfloor covering*, the portion of the pile that remains after shearing. **D 123, D13**
- stubble, n**—in *shornfloor covering*, the portion of the pile that remains after shearing. **D 5684, D13**
- stubble height, n**—the distance the stubble extends above the backing fabric. **D 123, D13**
- stubble height, n**—the distance the stubble extends above the backing fabric. **D 5684, D13**
- stucco, n**—a portland cement-aggregate plaster mix designed for use on exterior surfaces. See **portland cement plaster**. **C 11, C11**
- stucco**—an exterior cementitious-lime-finishing system applied to a suitable substrate on the surfaces of buildings and structures. **C 51, C07**
- stucco, n**—a hydraulic cement plaster containing fine aggregate, used for coating exterior surfaces. **C 219, C01**
- stuck lifter, n**—in *internal combustion engines*, a lifter plunger that does not return to its original position by its own force upon removal from the engine. **D 4175, D02**
- stud**—one of a series of slender wood structural members used as supporting elements in walls and partitions. In softwood grading, a stress grade to describe lumber suitable for stud use. **D 9, D07**
- study period**—the length of time over which an investment is analyzed. (Syn. *life cycle, time horizon*). **E 631, E06**
- sub-floor*—See **floor**.
- sub-flooring*—See **floor**.
- sub-grade*—See **grade**. **E 833, E06**
- study period, n**—the length of time over which an investment is analyzed (Syn. *lifecycle, time horizon*). **E 833, E06**
- stuffer yarn, n**—an extra backing yarn running in the warp direction through a woven pile floor covering. **D 123, D13**
- stuffing**—the process of incorporating grease in leather by drumming the wet leather with warm, molten grease and oils. **D 1517, D31**
- stump**—the part of a tree remaining above and below ground after the main stem is cut off. **D 9, D07**
- sturdy pretreatment procedure, n**—in *textile conservation*, the washing, rinsing, drying, and ironing actions followed when backing fabrics are medium to heavy weight. (Compare **delicate pre-treatment procedure**.) **D 123, D13**

- STX**—abbreviation for **start of text**. **F 1457, F05**
- style, *n***—a collection of pattern pieces and related information that defines a sewn product. **D 6963, D13**
- styrene monomer**—ethenylbenzene, vinylbenzene, phenylethylene, (C₆H₅CH = CH₂) mol weight 104.15; clear, colorless, flammable liquid; characteristic odor; solidification point -30.6°C; boiling point 145.2°C. Refer to Specification D 2827 for complete specifications. **D 4790, D16**
- styrene plastic, *n***—a plastic based on polymers of styrene or copolymers of styrene with other monomers, the styrene being greatest amount by mass. **F 1251, F04**
- styrene plastics, *n***—plastics based on polymers of styrene or copolymers of styrene with other monomers, the styrene being in greatest amount by mass. (ISO) **D 883, D20**
- styrene plastics, *n***—plastics based on polymers of styrene or copolymers of styrene with other monomers, the styrene being the greatest amount by mass. (ISO, D20) **F 412, F17**
- styrene resin**—under **resin, synthetic**, see **styrene resin**. **D 16, D01**
- styrene-rubber plastics, *n***—plastics based on styrene polymers and rubbers, the styrene polymers being in the greatest amount by mass. (ISO) **D 883, D20**
- styrene-rubber plastics, *n***—plastics based on styrene polymers and rubbers, the styrene polymers being in the greatest amount by mass. (ISO, D20) **F 412, F17**
- styrene-rubber (SR) pipe and fitting plastics**—plastics containing at least 50% styrene plastics combined with rubbers and other compounding materials, but not more than 15 % acrylonitrile. **F 412, F17**
- styrenic thermoplastic elastomer (TES), *n***—a copolymer material comprising styrenic end-block segments bound to a rubbery segment that may be saturated or unsaturated. **D 883, D20**
- S_u**—ultimate shear strength of the diaphragm, lbf/ft (or N/m) **E 631, E06**
- subassemblies, *n***—any component or structure that is used in the assembly of textile product. **D 2050, D13**
- subassembly, *n***—any portion of an implant assembly that is composed of two or more components. **F 1582, F04**
- subbase**—a layer used in a pavement system between the subgrade and base course, or between the subgrade and portland cement concrete pavement. **D 653, D18**
- subbituminous A coal**—See **subbituminous A coal** under **rank**. **D 121, D05**
- subbituminous B coal**—See **subbituminous B coal** under **rank**. **D 121, D05**
- subbituminous C coal**—See **subbituminous C coal** under **rank**. **D 121, D05**
- subbituminous class**—See **subbituminous class** under **rank**. **D 121, D05**
- subconstruct, *n***—any portion of an implant construct that is composed of two or more components including the spine, pelvis, ribs, or substitute structure. **F 1582, F04**
- subcritical annealing, *n***—annealing at a temperature slightly below A_{c1}. **A 941, A01**
- subcritical flow**—open channel flow that is deeper and at lower velocity than critical flow for the same flow rate; sometimes called tranquil flow. A Froude number less than one exists. **D 4410, D19**
- sub-element, *n***—in **construction planning, design, specification, estimating, and cost analysis**, a sub-element is a component part of an **element** that performs a specific function, of functions, regardless of design, specification, or construction. **E 833, E06**
- sub-face (sub-back)**—the ply adjacent to the exposed face (or back) of a parallel laminated outer layer. **D 1038, D07**
- sub-floor, *n***—a part of a **floor** over which one or more components may be added to complete the **floor**. **E 631, E06**
- subfloor, *n***—that structural layer intended to provide support for design loadings which may receive resilient floor coverings directly if the surface is appropriate or indirectly via an underlayment if its surface is not suitable. **F 141, F06**
- sub-flooring, *n***—the material used in constructing a **sub-floor**. **E 631, E06**
- subflooring nail**—See **threaded sinker (annularly threaded), diaphragm nail**. **F 547, F16**
- subglacial permafrost**—permafrost beneath a glacier. **D 7099, D18**
- subglacial talik**—a layer or body of unfrozen ground beneath a glacier in an area with permafrost. **D 7099, D18**
- subgrade**—the soil prepared and compacted to support a structure or a pavement system. **D 653, D18**
- sub-grade**—the ground elevation established to receive an additional surfacing. **E 631, E06**
- subgrade surface**—the surface of the earth or rock prepared to support a structure or a pavement system. **D 653, D18**
- subgroup, *n***—(1) **object sense, *n***—a set of units or quantity of material obtained by subdividing a larger group of units or quantity of material, and (2) **measurement sense, *n***—a set of groups of observations obtained by subdividing a larger group of observations. See **rational subgroup**. **E 456, E11**
- subgroup**—one or more events or measurements used to analyze the performance of a process. **F 1789, F16**
- subject, *n***—see **assessor**. **E 253, E18**
- subject, *n***—a human whose temperature is measured. **E 344, E20**
- subject contrast**—the ratio (or the logarithm of the ratio) of the radiation intensities transmitted by selected portions of the specimen. **E 1316, E07**
- sublimation, *n***—the volatilization of a solid directly to the vapor state, without passing through the liquid state. **C 1145, C28**
- sublimation**—the process of converting ice in the solid state directly into water vapor (as through the action of wind). **D 7099, D18**
- sublimation ice**—ice formed by reverse sublimation of water vapor onto cold surfaces. **D 7099, D18**
- sublimation pressure**—at a stated temperature, that pressure at which congruent equilibrium between a solid substance and its vapor occurs. **E 7, E04**
- sublimation pressure**—in a binary system, at a stated temperature, that pressure at which congruent equilibrium between a solid substance and its vapor occurs. **E 1142, E37**
- sublimation temperature**—at a stated pressure, that temperature at which congruent equilibrium between a solid substance and its vapor occurs. **E 7, E04**
- sublimation temperature**—in a binary system, at a stated pressure, that temperature at which congruent equilibrium between a solid substance and its vapor occurs. **E 1142, E37**
- submarine (subsea) permafrost**—permafrost occurring beneath the sea or ocean bottom. **D 7099, D18**
- submerged throat**—a throat with its floor below the floor of the melter and its top below the metal line. **C 162, C14**
- submerged unit weight**—see **unit weight**. **D 653, D18**
- submersible boom**—boom that normally resides on the seabed and is positioned by inflating with air, causing it to rise to the water surface. **F 818, F20**
- submicroscopic**—See **ultramicroscopic**. **E 7, E04**
- subnormal thermometer**—a thermometer specifically designed for obtaining body temperatures below the “regular scale” range. **E 344, E20**
- subpermafrost water**—free water in the ground below the permafrost base. **D 7099, D18**
- subsample**—See **subsample** under **sample**. **D 121, D05**
- subsample, *n***—a portion of a material that is collected by subdividing or trimming of a sample. **D 5681, D34**
- subsample, *n***—a portion of the original sample that is taken for testing or for record purposes. **D 5681, D34**
- subsample, *n***—a portion of a sample taken for the purpose of estimating properties or composition of the whole sample. **D 5681, D34**
- subsample, *n***—sample taken from a sample of a population.

subsample, n

NOTE—It may be selected by the same method as was used in selecting the original sample, but need not be so.

NOTE—In sampling from bulk material, subsamples are often prepared by sample division. The subsample thus obtained is also called a “divided sample.” See **sample division**. E 1402, E11

subsealing—*in grouting*, grouting under concrete slabs for the purpose of filling voids without raising the slabs. D 653, D18

subsea talik—a layer or body of unfrozen ground beneath the seabottom and forming part of the subsea permafrost. D 7099, D18

subsidence—the downward displacement of the overburden (rock or soil, or both) lying above an underground excavation or adjoining a surface excavation. Also the sinking of a part of the earth’s crust. (ISRM) D 653, D18

subsieve fraction, n—the portion of powder passing through a 45- μ m (no. 325) sieve. B 243, B09

subsoil—(a) soil below a subgrade of fill. (b) that part of a soil profile occurring below the “A” horizon. D 653, D18

substandard dwelling—dwelling or residence that does not meet minimum local housing codes, or is unsafe because of violation of fire, safety, or health codes. E 631, E06

substandard dwelling—dwelling or residence that does not meet minimum local housing codes, or is unsafe because of violation of fire, safety, or health codes. E 1605, E06

substitution error, n—the replacement of a bar code marked character(s), by an erroneous character(s) usually traceable to poor quality printing, decoding logic error, human input error, or any combination thereof. F 1294, F05

substitution error rate, SER, n—the ratio of the number of invalid or incorrect characters entered into the data base to the number of valid characters entered. F 1294, F05

substrate—*in diffusion coatings*, material on which coating is deposited. B 374, B08

substrate—a body, board, or layer of material on which some other active or useful material or component may be deposited or laid, as for example, an electronic circuitry laid on an alumina ceramic board. C 242, C21

substrate, n—*in building construction*, (1) a material upon which films, treatments, adhesives, sealants, membranes, and coatings are applied; (2) materials that are bonded or sealed together by adhesives or sealants. C 717, C24

substrate, n—a body, board, or layer of material on which some other active or useful material or component may be deposited or laid, as for example, an electronic circuitry laid on an alumina ceramic board. In catalysts, the formed, porous, high-surface-area carrier on which the catalytic agent is widely and thinly distributed for reasons of performance and economy. C 1145, C28

substrate—the soiled surface that is being cleaned. D 459, D12

substrate, n—*as related to adhesives*, a material upon which an adhesive is applied. (Compare **adherend**.) D 907, D14

substrate—the surface upon which the roofing or waterproofing membrane is placed (structural deck or insulation). D 1079, D08

substrate—(substratum) that which lies under; foundation. E 7, E04

substrate, n—a material which is used or is representative of that used, immediately beneath a surface product in end-use, for example, skimmed plasterboard beneath a wall-covering. E 176, E05

substrate—unfinished building-material surface to which finishes are applied. Examples include wood, plaster, drywall, masonry, and metal. E 1605, E06

substrate, n—surface to which the EIFS is applied. E 2110, E06

substrate—the thick, starting material (often single crystal silicon or glass) in a fabrication process that can be used to build MEMS devices. E 2444, E08

substrate, n—the underlying support surface upon which the flooring is installed. F 141, F06

substrate, n—the material (usually paper, plastic or metal) upon which a bar code symbol is printed or reproduced. F 1294, F05

substrate base—unfinished building-material surface to which finishes are applied. Examples include wood, plaster, drywall, masonry, and metal.

substrate effect—see **XRF substrate effect**. E 631, E06

substrate equivalent lead concentration (SEL)—average of at least three XRF analyzer readings on a surface from which the coating has been removed.

subsystem—See **building subsystem**. E 631, E06

substrate equivalent lead concentration (SEL)—average of at least three XRF analyzer readings on a surface from which the coating has been removed. E 1605, E06

substrate failure, n—*in characterizing the locus of an adhesive-joint failure*, the fracture occurring within the substrate. (See **cohesion failure**.) D 907, D14

substrates, n—raw or virgin materials that will ultimately be used in tissue-engineered medical products for growth, support, or delivery of cells or biomolecules. F 2312, F04

subsurface corrosion—See **internal oxidation**. G 15, G01

subsurface discontinuity—any defect that does not open onto the surface of the part in which it exists. E 1316, E07

subsurface layers—layers of material that may exist on a base substrate and which are underneath the outermost layer, or surface, on a base substrate. E 631, E06

subthreshold, adj—pertaining to a stimulus below the specified threshold. E 253, E18

subtractive color mixture, n—mixture of absorbing media or superposition of filters so that the spectral composition of light passing through the combination is determined by simultaneous or successive absorption. E 284, E12

subtractive primaries, n—see **primary colorants**. E 284, E12

successive hurdles approach, n—used in multiple-issue testing, it is a process in which multiple broad areas are covered together in a single PDD test, followed by tests of only those who have positive results with successively focused PDD tests. The benefit of the successive hurdles process is the efficient use of testing resources to deliver accuracy that would normally only be obtainable with several independent single-issue tests. E 2035, E52

suction, n—the absolute difference between ambient and subatmospheric pressure expressed in inches or millimetres of water. F 395, F11

suction power—See **air power**. F 395, F11

suction process—any process in which glass is gathered by vacuum into the mold. C 162, C14

suds—a foam or lather generated on or in a detergent solution. D 459, D12

suede finish—a finish produced by running the surface of leather on a carborundum or emery wheel to separate the fibres in order to give the leather a nap. The grain side of the leather may be suede-finished, but the process is most often applied to the flesh surface. The term “suede” is applied to chrome or alum-tanned leather, while “ooze” is applied to vegetable-tanned suede. The term “suede” when used alone refers to leather only. *The term denotes a finish, not a type of leather.* D 1517, D31

sugars—molecules of carbohydrate, namely monosaccharides and disaccharides such as glucose, galactose, mannose, sucrose or fructose, etc. E 1705, E48

suitable materials—Suitable material is well-graded $\frac{3}{4}$ to $\frac{1}{4}$ in. (19 to 6mm) crushed stone, having a minimum of one fracture face, or other angular, non-consolidating bedding materials not subject to migration. C 896, C04

suitable packaging unit—the unit(s) of packaging to which a specific requirement of marking and labeling is logically applicable. It shall not be less than the smallest unit intended for sale by the manufacturer or distributor to the final user. E 344, E20

sulfate attack—*in grouting*, harmful or deleterious reactions between sulfates in soil or groundwater and the grout. D 653, D18

sulfated ash, n—the residue remaining after the sample has been

- carbonized, and the residue subsequently treated with sulfuric acid and heated to constant weight. **D 4175, D02**
- sulfated oil**—a newer term signifying the same type of material as sulfonated oil. **D 459, D12**
- sulfate pulp**—see **kraft pulp**. **D 1695, D01**
- sulfate reducing bacterial (SRB), pl., *n***—any bacteria with the capability of reducing sulfate to sulfide. **D 4175, D02**
- sulfation**—the introduction into an organic molecule of the sulfuric ester group (or its salts) —O—SO₃H, where the sulfur is linked through an oxygen atom to the parent molecule. **D 459, D12**
- sulfidation**—the reaction of a metal or alloy with a sulfur-containing species to produce a sulfur compound that forms on or beneath the surface of the metal or alloy. **G 15, G01**
- sulfide creep**—in electrical contacts, spontaneous migration of a sulfide based corrosion product that occurs at elevated humidity across a gold rich surface. **B 542, B02**
- sulfide spot test method**—for *lead detection*, the use of a dilute solution of sulfide ion to test a painted surface or paint chip for the qualitative presence of lead (2). A color change from clear to grey or black indicates the presence of lead above the level of detection of the spot test. **E 631, E06**
- sulfide-type inclusions**—in steels, nonmetallic inclusions composed essentially of manganese iron sulfide solid solutions (Fe, Mn) S. They are characterized by plasticity at hot-rolling and forging temperatures and, in the hot worked product, appear as dove gray elongated inclusions varying from a threadlike to oval outline. Selenide type inclusions may behave similarly. **E 7, E04**
- sulfite cellulose**—a by-product of paper mills, produced in sulfiting wood pulp, used as a tanning material; more correctly named lignosulfonate since it does not contain cellulose. **D 1517, D31**
- sulfite pulp**—wood pulp produced by cooking with a sulfite liquor made by dissolving sulfur dioxide in an aqueous base. **D 1695, D01**
- sulfochromate etch**—etchant used for preparing the surface of aluminum alloys for adhesive bonding (sulfuric acid/sodium dichromate). Also known as the *Forest Products Laboratory (FPL) etch*. **E 631, E06**
- sulfochromate etch**—etchant used for preparing the surface of aluminum alloys for adhesive bonding (sulfuric acid/sodium dichromate). Also known as the *Forest Products Laboratory (FPL) etch*. **E 1749, E06**
- sulfoferric etch**—etchant used for preparing the surface of aluminum alloys for adhesive bonding (sulfuric acid/ferric sulfate). Also known as the *P2 etch*. **E 631, E06**
- sulfoferric etch**—etchant used for preparing the surface of aluminum alloys for adhesive bonding (sulfuric acid/ferric sulfate). Also known as the *P2 etch*. **E 1749, E06**
- sulfonated oil**—a water dispersible or soluble surface active material obtained by treating an unsaturated or hydroxylated fatty oil, acid, or ester with an agent capable of sulfating or sulfonating it at least partially. **D 459, D12**
- sulfonation**—the introduction into an organic molecule of the sulfonic acid group (or its salts) —SO₃H where the sulfur atom is joined to a carbon atom of the parent molecule. **D 459, D12**
- sulfur, combined, *n***—the sulfur remaining in a vulcanizate after extraction by a prescribed method. **D 1566, D11**
- sulfur concrete**—see **sulfur polymer cement concrete**. **C 904, C03**
- sulfur dioxide (SO₂)**—mol weight 64.07; colorless, nonflammable gas with strong suffocating odor soluble in water and organic solvents. **D 4790, D16**
- sulfur donor vulcanizing system, *n***—a vulcanizing system in which there is no elemental sulfur present and all of the sulfur available for the crosslinking is provided by the partial decomposition of sulfur-containing materials. **D 1566, D11**
- sulfur, extractable, *n***—all the sulfur removed by a solvent from a rubber mix or vulcanizate. **D 1566, D11**
- sulfur, free, *n***—ideally, the uncombined sulfur in a rubber mix or vulcanizate. **D 1566, D11**
- sulfuric anhydride (organically combined)**—that portion of sulfur, calculated as sulfur trioxide, bound through oxygen to carbon in an organic sulfate, or bound directly to carbon in an organic sulfonate. **D 459, D12**
- sulfur modifier**—the concentrated product produced by reacting sulfur with a hydrocarbon material, used with additional elemental sulfur to produce a binder for sulfur polymer cement concrete. **C 904, C03**
- sulfur mortar**—a product consisting of fillers, such as carbon or silica flour, dispersed in sulfur. Small amounts of modifying additives may be included. **C 904, C03**
- sulfur polymer cement**—the product obtained by reacting sulfur with chemical modifiers to produce a binder for sulfur polymer cement concrete. **C 904, C03**
- sulfur polymer cement concrete**—a thermoplastic chemical-resistant construction material composed of sulfur polymer cement binder composed of elemental sulfur and sulfur modifier, hot-mixed with appropriate types and amounts of aggregate and mineral filler. Commonly referred to as sulfur concrete or sulfur polymer concrete.. **C 904, C03**
- sulfur polymer concrete**—see **sulfur polymer cement concrete**. **C 904, C03**
- sulfur, total, *n***—all the sulfur present in a material, irrespective of its chemical form or origin. **D 1566, D11**
- summerwood**—See **latewood**. **D 9, D07**
- sum of squares, *n***—in *analysis of variance*, a contraction of the expression "sum of the squared deviations from the appropriate average(s)" where the average(s) of interest may be the average(s) of a specific subset(s) of data or of the entire set of data. **D 123, D13**
- sum of squares, *n***—in *analysis of variance*, a contraction of the expression "sum of the squared deviations from the appropriate average(s)" where the average(s) of interest may be the average(s) of specific subset(s) of data or of the entire set of data. **D 4175, D02**
- sump**—a depression around a drain. **D 1079, D08**
- sump**—a pit, cistern, cesspool, or similar receptacle where liquids drain, collect, or are stored. **D 5681, D34**
- sump throat**—{archaic} See **submerged throat**. **C 162, C14**
- sunk cost**—a cost that has already been incurred and which should not be considered in making a new investment decision. **support space**—See **space categories**. **supported file adhesive**—See **adhesive, supported film**. **E 631, E06**
- sunk cost, *n***—a cost that has already been incurred and which should not be considered in making a new investment decision. **E 833, E06**
- sunlight, *n***—as used in weathering, the term equivalent to "daylight". It refers to the full spectrum of solar irradiance, that is, ultraviolet through infrared, and includes both diffuse sky and direct solar irradiance. **G 113, G03**
- supercooled state, *n***—the meta-stable state of reference material in which the temperature of the liquid phase is below the freezing point. **E 344, E20**
- supercooling, *n***—an unstable state in which an engine coolant exists as a liquid below its normal freezing point. **D 4725, D15**
- supercooling**—cooling of a liquid to a temperature below its freezing point, without causing solidification. **D 7099, D18**
- supercooling**—to cool a substance below a transition temperature without the transition occurring, especially to cool below the freezing point without solidification. **E 1142, E37**
- supercritical flow**—open channel flow that is shallower and at higher velocity than critical flow for the same flow rate. A Froude number greater than one exists. **D 4410, D19**
- superelasticity, *n***—nonlinear recoverable deformation behavior of Ni-Ti shape memory alloys at temperatures above the austenite finish temperature (A_f). **F 2005, F04**

superfatted soaps—under **soap**, see *superfatted soap*. **D 459, D12**

superfines, n—the portion of a powder composed of particles that are smaller than a specified size, currently less than 10 μm . **B 243, B09**

superimposed ac—a form of current in which an alternating current component is superimposed on the direct plating current. **B 374, B08**

superimposed load—load imposed by travel over, or by material brought and placed over the trench area, after pipe installation. **C 896, C04**

superimposed load, n—force applied to a specimen or structure other than that associated with its own mass. **E 176, E05**

superior—higher, denoting the upper of two parts, also means towards the head. **F 869, F08**

superlattice—See **ordered structure**. **E 7, E04**

supernatant, n—the liquid above settled solids. **D 4175, D02**

supernatant, n—the liquid above settled solids. **D 6384, D02**

supernatant—that liquid remaining after separation of a liquid/solid mixture. **E 1705, E48**

supernate or supernatant—the liquid above the surface of settled sediment. **D 4410, D19**

supersaturation—a state in which the inorganic salt (s) are in solution at a level higher than the respective solubility product. **D 6161, D19**

super-steep asphalt—a roofing asphalt conforming to the requirements of Specification D 312, Type IV. **D 1079, D08**

superstructure—those parts of a melter above the sidewall tank blocks. **C 162, C14**

supplemental coolant additive (SCA) maintenance dose, n—smaller periodic additions of SCA, subsequent to the precharge dose of SCA, required to maintain protection against general corrosion, cylinder liner pitting, and scaling in heavy-duty engines. **D 4725, D15**

supplemental coolant additive (SCA) precharge dose, n—initial concentration of SCA in engine coolant required to enable the coolant to provide adequate protection against cylinder liner pitting and scaling in heavy-duty engines plus general corrosion protection when water only is used as a coolant. **D 4725, D15**

supplemental fuel, n—a combustible material that displaces a portion of traditional fuel source. It refers to the product being used in conjunction with another conventional fuel but typically not as a sole fuel supply. **D 5681, D34**

supplementary observer, CIE 1964, n—*in color determination*, hypothetical observer based on color mixture data obtained for a 10° field of view for 76 real observers, adopted by the CIE in 1964. **D 2946, C17**

supplier, n—person, company, or organization that furnishes products as a jobber or distributor, as distinct from a producer. **B 881, B07**

supplier, n—*in pipe laying*, the party who supplies material or services. A supplier may or may not be the manufacturer. **C 1154, C17**

supplier, n—*for pipe laying*, the party who supplies material or services. **D 2946, C17**

supplier, n—any individual or organization responsible for the quality of a product just before it is taken over by the receiver. **D 4175, D02**

supplier—the party that is responsible for the product, process or service and is able to ensure that quality assurance is exercised. The definition may apply to manufacturers, distributors, importers, assembles, service organizations, etc. (EN 45020) **E 1187, E36**

supplier declaration—procedure by which a supplier gives written assurance that a product, process or service conforms to specified requirements, (ISO Guide 2). **E 1187, E36**

support—structure or structural feature built into an underground opening for maintaining its stability. (ISRM) **D 653, D18**

supported film adhesive—See **adhesive, supported film**. **E 1749, E06**

supported gasket member—a gasket member held in place by a supporting frame member. **C 717, C24**

supported needled felt, n—a needled felt that is composed entirely of fibers physically interlocked and reoriented in combination with interlay, scrim, or foundation of knitted, stitched, bonded, or extruded structure. **D 123, D13**

supported needled felt, n—a needled felt that is composed entirely of fibers physically interlocked and reoriented in combination with interlay, scrim, or foundation of knitted, stitched, bonded, or extruded structure. **D 4845, D13**

supporter—cam mechanism, especially spring-loaded; designed to provide crown and lateral guidance for staple in driving channel of stapler. **F 592, F16**

support (foot)—the degree to which the shoe upper provides sufficient containment of the motions of the foot. **F 869, F08**

supporting construction, n—the arrangement of building sections forming the fire-separating elements into which the joint systems are installed. **E 176, E05**

support region—in a bulk-micromachining process, the region that marks the end of the suspended structure. **E 2444, E08**

support space—See **space categories**. **E 1480, E06**

suppression—see **reject (suppression)**. **E 1316, E07**

suppressor device, n—an ion-exchange-based device placed between the analytical column and the conductivity detector of an ion chromatography system, that exchanges counter-ions with hydronium or hydroxyl ions. This process enhances the analyte signal by lowering eluant background conductivity, and, for strong acid and strong base ions, forms a more conductive species. **D 1129, D19**

suprapermafrost water—free water in the ground above the permafrost. **D 7099, D18**

supra-threshold, adj—pertaining to a stimulus above the specified threshold. **E 253, E18**

surface—the outermost layer of material on a base substrate facing the inspector or occupants. **E 631, E06**

surface—an interface between a condensed phase and a non-condensed phase (or free space). **E 673, E42**

surface active agent—a substance that affects markedly the interfacial or surface tension of solutions even when present in very low concentrations. **B 374, B08**

surface-active agent—(surfactant) an organic compound that reduces the surface tension of a liquid, or the interfacial tension between two liquids or between a liquid and a solid. It can also modify the properties of the liquid to which it is added, generally water. **D 459, D12**

surface-active agent—a material that when added to a liquid medium modifies the properties of the medium at a surface or interface.

NOTE—**surface-active agent** is the general term which includes soluble detergents in liquid medium, dispersing agents, emulsifying agents, foaming agents, penetrating agents, and wetting agents. **E 1519, E35**

surface area—the total area of the surface of a powder or solid including both external and accessible internal surfaces (from voids, cracks, open porosity, and fissures). **C 242, C21**

surface area—the total area of the surface. As usually used for reactive pulps, this applies not to external surface, but to the internal surface as well, the total surface available to gases or penetrating liquids. It is useful to express this as specific surface, area per gram. **D 1695, D01**

surface area—*in catalysis*, the measure of the total surface of a material per unit mass or volume. **D 3766, D32**

surface area (B.E.T.)—the total surface area of a solid calculated by the B.E.T. (Brunauer, Emmett, Teller) equation, from nitrogen adsorption or desorption data obtained under specified conditions. **D 2652, D28**

surface area distribution—the distribution of surface area according to some parameter such as pores of different size or diameter. **D 2652, D28**

surface area, specific, n—the area, per unit mass of a granular or

powdered or formed porous solid, of all external plus internal surfaces that are accessible to a penetrating gas or liquid.

C 1145, C28

surface bonding mortar—a product containing hydraulic cement, glass fiber reinforcement with or without inorganic fillers, or organic modifiers in a prepackaged form requiring only the addition of water prior to application.

C 1180, C12

surface characteristics—a set of terms considered to be the minimum needed to precisely describe the condition of a surface especially regarding slip resistance (material, contamination, slope, texture, hardness, coating, temperature).

F 1646, F13

surface clay, n—an unconsolidated, unstratified clay, occurring on the surface.

C 43, C15

surface clay—an unconsolidated, unstratified clay, occurring on the surface.

C 896, C04

surface coefficient, n—the ratio of the steady-state heat exchange rate (time rate of heat flow per unit area of a particular surface by the combined effects of radiation, conduction, and convection) between a surface and its external surroundings (air or other fluid and other visible surfaces) to the temperature difference between the surface and its surroundings. (See **conductance, film**.)

C 168, C16

surface color, n—color perceived as belonging to the surface of a specimen, without the specimen appearing to be self-luminous.

E 284, E12

surface conductance, h—(often called surface or film coefficient)—the time rate of heat flow from a unit area of a surface to its surroundings, induced by a unit temperature difference between the surface and the environment. Subscripts are used to differentiate between room-side (I or I) and weather-side (2 or II) surface conductances. Due to radiation effects, the room-side or weather-side temperatures (t_I and t_{II} , respectively), or both, can differ from the respective room-side or weather-side baffle temperatures (t_{bI} and t_{bII} , respectively). If there is a difference of more than ± 0.5 °C, (± 1.0 °F), either on the room side or the weather side, the radiation effects must be accounted for to maintain accuracy in the calculated surface conductances. The room-side and weather-side surface conductances are calculated as follows:

When

$$t_I = t_{bI} (\pm 0.5^\circ\text{C}),$$

$$h_I = q_s / (t_I - t_I)$$

where:

t_I = temperature of specimen room-side surface, K or °C (°F), and

q_s = heat flux through the specimen, W/m^2 [$\text{Btu}/(\text{h}\cdot\text{ft}^2)$].

When

$$t_I \neq t_{bI},$$

$$h_I = (q_{r1} + q_{c1}) / (t_I - t_I)$$

where:

q_{r1} = net radiative heat flux to the room side of the specimen, W/m^2 [$\text{Btu}/(\text{hr}\cdot\text{ft}^2)$], and

q_{c1} = convective heat flux to the room side of the specimen, W/m^2 [$\text{Btu}/(\text{h}\cdot\text{ft}^2)$].

When

$$t_{II} = t_{b2} (\pm 0.5^\circ\text{C}),$$

$$h_{II} = q_s / (t_2 - t_{II})$$

where:

t_2 = temperature of specimen weather-side surface, K or °C (°F).

When

$$t_{II} \neq t_{b2},$$

$$h_{II} = (q_{r2} + q_{c2}) / (t_2 - t_{II})$$

where:

q_{r2} = net radiative heat flux from the weather side of the specimen, W/m^2 [$\text{Btu}/(\text{h}\cdot\text{ft}^2)$], and

q_{c2} = convective heat flux from the weather side of the specimen, W/m^2 [$\text{Btu}/(\text{h}\cdot\text{ft}^2)$].

E 631, E06

surface contour, n—divergence of a surface from planeness rough (high) to smooth (low).

D 123, D13

surface contour, n—divergence of a surface from planeness rough (high) to smooth (low).

D 4850, D13

surface-crack length, 2c [L]—in part-through surface crack (PS) specimens, a distance measured on the specimen surface between the two points at which the crack front intersects the specimen surface. Crack length is less than the specimen width.

E 1823, E08

surface discontinuities—irregularities that occur prior to or during the manufacturing or processing of the fastener. These may include cracks, head bursts, shear bursts, seams, folds, thread laps, voids, tool marks, and nicks or gouges.

F 1789, F16

surfaced lumber—See **lumber**.

D 996, D10

surface dust—See **dust**.

D 1356, D22

surface dust, n—particulate matter on a surface.

E 1605, E06

surface energy approximation—EIA, a simplification of calculations involving the energy of an ion passing through a solid specimen. The energy of the ion at the surface is used in place of a properly averaged energy. This approximation is used to determine the energy at which scattering or stopping cross sections, or both, are evaluated.

E 673, E42

surface feature, n—a quality or condition of the face of a manufactured masonry unit.

C 1232, C15

surface finger oxide, n—the oxide that follows prior particle boundaries into a part from the surface and cannot be removed by physical means, such as rotary tumbling.

B 243, B09

surface finish, n—the geometric irregularities in the surface of a solid material. Measurement of surface finish shall not include inherent structural irregularities unless these are the characteristics being measured.

C 709, D02

surface finish, n—the geometric irregularities in the surface of a solid material. Measurement of surface finish shall not include inherent structural irregularities unless these are the characteristics being measured.

D 4175, D02

surface flame spread, n—the propagation of a flame away from the source of ignition across the surface of a liquid or a solid. Compare: **volumetric flamespread** and **burning velocity**.

E 176, E05

surface flame spread, n—the propagation of a flame away from the source of ignition across the surface of the specimen.

E 176, E05

surface force—any force that acts across an internal or external surface element in a material body, not necessarily in a direction lying in the surface.

D 653, D18

surface freezing index—the cumulative number of degree-days below 0°C for the surface temperature of the ground, or other surface on the ground, during a given period.

D 7099, D18

surface friction, n—resistance to slipping offered by surface harsh (high) to slippery (low).

D 123, D13

surface friction, n—resistance to slipping offered by surface harsh (high) to slippery (low).

D 4850, D13

surface hardening, n—a generic term covering any of several processes that, by **quench hardening** only, produce in a steel object a surface layer that is harder or more wear resistant than the **core**.

A 941, A01

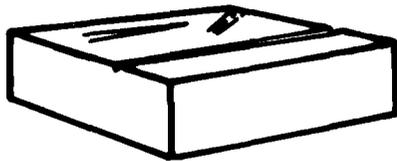
surface impoundment, n—a facility or part of a facility which is a natural topographic depression, man-made excavation, or diked area formed primarily of earthen materials (although it may be lined with man-made materials) which is designed to hold an accumulation of liquid wastes or materials containing free liquids and which is not an injection well.

E 2201, E50

surface marks—relatively long, narrow, shallow grooves or cuts in

surface marks

the surface, such as scratches, score marks, and machining marks. (See also **grinding mark**)



F 109, C21

surface micromachining—a MEMS fabrication process where micron-scale components are formed on a substrate by the deposition (or addition) and removal (in whole or in part) of structural and sacrificial layers. **E 2444, E08**

surface monitoring tire, *n*—a reference tire used to evaluate changes in a test surface over a selected time period. **F 538, F09**

surface normal, *n*—the direction normal or perpendicular to the surface of a plane specimen. **E 284, E12**

surface preparation, *n*—physical or chemical treatments, or both, applied to adherends to render them suitable for bonding. **D 907, D14**

surface preparation—a physical or chemical preparation, or both, of an adherend surface to render it suitable for adhesive joining. **E 631, E06**

surface preparation—a physical or chemical preparation, or both, of an adherend surface to render it suitable for adhesive joining. **E 1749, E06**

surfacers, *n*—a pigmented composition for filling minor irregularities to obtain a smooth uniform surface preparatory to applying finish coats; usually applied over a primer and sandpapered for smoothness. **D 16, D01**

surface reflection—reflection in which radiant energy is returned exclusively at the surface of the specimen. **E 131, E13**

surface resistance—see **resistance, surface**. **D 1711, D09**

surface resistivity, *n*—of paper, the resistance to electric current between electrodes placed on the same paper surface along the current path between the electrodes when a defined dc voltage is applied and the gap between the electrodes is specified. **D 1968, D06**

surface resistivity, ρ_s —the surface resistivity of a material is the ratio of the potential gradient parallel to the current along its surface to the current per unit width of the surface. **D 5077, D10**

surface roughness—AES, the deviation of the topography of an actual surface from an ideal atomically smooth and planar surface. The rms deviation from the center line average is a measure of surface roughness. **E 673, E42**

surface roughness, R_a , *n*—the arithmetic average deviation of the surface profile from the centerline, normally reported in micrometers. **G 126, G04**

surface sealer, *n*—material used to enhance weather resistance. **E 2110, E06**

surface segregation—a diffusion controlled process (as opposed to evaporation, preferential sputtering, or other processes) that causes the surface composition of a homogeneous solid to differ from the bulk composition. **E 673, E42**

surface tension—that property, due to molecular forces, that exists in the surface film of all liquids and tends to prevent the liquid from spreading. **B 374, B08**

surface tension, *n*—the property, due to molecular forces, by which the surface film of all liquids tends to bring the contained volume into a form having the least area. **C 1145, C28**

surface tension—the force existing in a liquid-vapor phase interface that tends to diminish the area of the interface. This force acts at each point on the interface in the plane tangent at that point. **D 459, D12**

surface tension, *n*—a property arising from the molecular forces of the surface film of all liquids which tend to alter the contained

volume of liquid into a form of minimum superficial area, expressed as work in newtons per millimetre. **D 1129, D19**

surface tension (γ), *n*—the specific surface free energy of a liquid gas interface, millinewton per metre (ergs/cm²). **D 4175, D02**

surface thawing index—the cumulative number of degree-days above 0°C for the surface temperature of the ground, or other surface on the ground, during a given period. **D 7099, D18**

surface topography, *n*—the geometrical detail of a solid surface, relating particularly to microscopic variations in height. **G 40, G02**

surface treatment, *n*—an application of bituminous material followed by a layer of mineral aggregate; multiple applications of bituminous material and mineral aggregate may be used. **D 8, D04**

surface void, (SV), *n*—as used in *fractography*, a cavity created at the surface/exterior as a consequence of the reaction/interaction between the material and the processing environment, for example, surface reaction layer or bubble that is trapped during processing. **C 1145, C28**

surface water absorption, *n*—by a fabric, the process of removing liquid water from a surface such as human skin, dishes, or furniture. **D 123, D13**

surface water absorption, *n*—by a fabric, the process of removing liquid water from a surface such as human skin, dishes, or furniture. **D 4850, D13**

surface wave—a wave confined to a thin layer at the surface of a body. (ISR) **D 653, D18**

surface wave—see **Rayleigh wave**. **E 1316, E07**

surface wetting and adhesion—See **wetting and adhesion, surface**. **C 168, C16**

surfacing mat, *n*—a thin mat of fine fibers used primarily to produce a smooth surface on a reinforced plastic. **D 883, D20**

surfactant—a contraction of the term surface-active agent. **D 459, D12**

surfactant—a material that improves the emulsifying, dispersing, spreading, wetting, or other surface-modifying properties of liquids. **E 609, E35**

surfactant—See **surface-active agent**. **E 1519, E35**

surfactants, *n*—surface active molecular species that exhibit both water soluble and oil soluble properties, and affect the physical behavior at the interface between water and oil phases by forming emulsions or changing the wetting characteristics of solid surfaces exposed to water and oil. **D 4175, D02**

surge magnetization—use of a high initial current for a short period (less than a second), then a continuous reduced current while the inspection medium is applied. **E 1316, E07**

surgical scissors with inserts—a stainless steel instrument, available in various sizes and configurations, used in surgical procedures for cutting body tissue, gauze, and suture. An instrument of this type has tungsten carbide, stellite, or other inserts. **F 1078, F04**

surrogate—a substance with properties that mimic the performance of the analyte of interest in the measurement system, but which is not normally found in the sample of concern and is added for quality control purposes. **D 5681, D34**

surrogate microbe, *n*—a microorganism which is used to act as a simulant for other microorganisms which are pathogenic to humans. **F 1494, F23**

surrogate species—a species that is tested to estimate responses of other species, for which direct testing is impractical. **E 943, E47**

surround, *n*—portion of the visual field immediately around the object or light source of interest. See **ambient field**. **E 284, E12**

surveillance, *n*—the act of maintaining supervision or vigilance over a well-specified portion of water so that detailed information is provided concerning the state of that portion. **D 1129, D19**

surveillance and long-term monitoring (SLTM), *n*—activities, conducted after remediation, such as monitoring, repairing and replacing parts, record keeping, maintenance, and other activities that are required to maintain an adequate level of human health and environmental protection from hazardous and radioactive waste residues. **E 833, E06**

surveillance and maintenance, *n*—activities such as monitoring, inspection, maintenance, replacement and repair of components and parts that are required for a site or a facility prior to remediation. **E 833, E06**

susceptibility, κ —a ratio of the intrinsic induction, B_i , as a result of the magnetization of a material to the induction in space because of the influence of the corresponding magnetic field strength, H .

$$\kappa = B_i/\Gamma_m H = \mu_r - 1$$

where:

Γ_m = magnetic constant and

μ_r = relative permeability.

NOTE—The preceding equations apply to an isotropic material if the SI, an abbreviation for the international system of units, are used.

NOTE—In the classical cgs-emu system of units:

$$\kappa = B_i/4\pi\Gamma_m H = (\mu_r - 1)/4\pi$$

A 340, A06

susceptibility, *n*—the ratio of the intrinsic induction due to the magnetization of a material to the induction in space due to the influence of the corresponding magnetizing force. **C 1145, C28**

susceptibility—when not otherwise qualified, the degree of change in viscosity with temperature. **D 1079, D08**

susceptibility, initial, κ_0 —the limiting value of susceptibility when the intrinsic induction approaches zero. **A 340, A06**

susceptibility, mass, χ —the susceptibility divided by the density of a body is called the susceptibility per unit mass, χ , or simply the mass susceptibility.

$$\chi = \kappa/\delta$$

where δ = density.

A 340, A06

susceptibility to hydrogen embrittlement—is a material property that is measured by the threshold stress intensity parameter for hydrogen induced stress cracking, $K_{I_{SCC}}$, $K_{I_{HE}}$, or $K_{E_{HE}}$, which is a function of hardness and microstructure. **F 2078, F07**

susctic cryogenic fabric—a distinct soil micromorphology resulting from the effects of freezing and thawing, in which coarser soil particles have vertical or near-vertical orientation. **D 7099, D18**

suspended sediment—sediment that is carried in suspension by the turbulent components of the fluid or by Brownian movement.

D 4410, D19

suspended-sediment concentration—See **concentration of sediment (by mass)**. **D 4410, D19**

suspended-sediment discharge—the quantity of suspended-sediment passing through a stream cross section per unit of time.

D 4410, D19

suspended-sediment load—that part of the sediment load which is suspended sediment. **D 4410, D19**

suspended-sediment sampler—a device that collects a representative portion of the water with its suspended-sediment load.

D 4410, D19

suspended solids (of activated sludge or other inoculum samples), *n*—solids present in activated sludge or inoculum samples that are not removed by settling under specified conditions. **D 4175, D02**

suspended solids (SS)—solid organic and inorganic particles that are held in suspension in a liquid. **D 6161, D19**

suspension—a mixture of liquid and solid materials. **D 653, D18**

suspension—a two-phase system consisting of a finely divided solid dispersed in a solid, liquid, or gas. **E 609, E35**

suspension—a two-phase system consisting of a finely divided solid dispersed in a liquid. **E 1316, E07**

suspension, *n*—the dispersion of a solid through a liquid with a particle size large enough to be detected by purely optical means.

F 2312, F04

suspension agent—an additive that decreased the settlement rate of particles in liquid. **D 653, D18**

suspension deflection—the change in the vertical distance between the axle at its centerline and a hypothetical reference line directly above the axle centerline on the rigid frame structure. **E 867, E17**

suspension effect—the change in junction potential when a reference electrode is immersed to different depths in a solution containing resins or charged colloids, such as certain clays and soils. The suspension effect, which can be as large as 100 mV, does not occur with sensing electrodes. **D 4127, D19**

suspension, liquid—See **liquid suspension**. **C 242, C21**

suspension stabilizer—a material that reduces the tendency of particles to settle. **E 609, E35**

sustainability, *n*—the maintenance of ecosystem components and functions for future generations. **E 2114, E06**

sustainable building, *n*—see **green building**. **E 2114, E06**

sustainable capacity, *n*—the power which a component of a geothermal facility (such as a reservoir or a power plant) is capable of sustaining for a specified period of time.

Examples of Usage:

This reservoir has a sustainable capacity of 100 MW for at least 30 years.

This reservoir has a capacity of 50 MW, sustainable for at least the first 20 years of a 30-year project life.

With proper maintenance, this power plant has a sustainable capacity of 30 MW for 30 years. **E 957, E44**

sustainable communities, *n*—communities that are founded in sustainable development practices. **E 2114, E06**

sustainable development, *n*—development that meets the needs of the present without compromising the ability of future generations to meet their own needs. **E 2114, E06**

sustained flaming, *n*—the existence of flame on or over the surface of the specimen for periods of 4 s or more. **E 176, E05**

sustained flaming, *n*—existence of flame on or over most of the specimen surface for periods of at least 4 s. **E 176, E05**

sustained flaming, *n*—existence of flame on or over the surface of the specimen for periods of 5 s. **E 176, E05**

sustained flaming, *n*—the existence of flame on or over the majority of the surface of the specimen for a period of 4 s or more. **E 176, E05**

sustained flaming, *n*—existence of flame on or over most of the specimen surface for periods of more than 4 s. **E 176, E05**

sustained pressure test—a constant internal pressure test for an extended period of time. **F 412, F17**

swab test—a low-voltage electrical test used to evaluate continuity of porcelain enamel. **C 286, B08**

swage, *n*—the term used to describe any attachment method that uses mechanical force to crimp the end of the needle and firmly hold the suture in place. **F 1840, F04**

swamp—a forested or shrub covered wetland where standing or gently flowing water persists for long periods on the surface. **D 653, D18**

swath, effective width—the center to center distance between overlapping broadcast applications. **E 1102, E35**

sweating, *n*—see **exudation**. **B 243, B09**

swedge—the formed end of a piece of toprail so that it will fit into and join another piece of toprail. **F 552, F14**

sweep—the uniform and repeated movement of an electron beam across the CRT. **E 1316, E07**

sweep—see **bend**. **F 412, F17**

sweeping mode—movement of a boom relative to the water for the purpose of controlling or collecting a floating substance. **F 818, F20**

sweep width (aka swath)—width intercepted by a boom in collection mode, the projected distance between the ends of a boom deployed in a "U," "V," or "J" configuration. **F 818, F20**

sweet—a term applied to easily workable glass. **C 162, C14**

sweet, *adj*

sweet, *adj*—taste produced by substances such as sucrose when in solution. E 253, E18

sweet gas—natural gas with sulfur compounds low enough that it can be used without further purification. D 4150, D03

swell, *n*—a hump in the pavement surface that may occur over a small area or as a longer, gradual wave; either type of swell can be accompanied by surface cracking. E 867, E17

swell, *n*—a hump in the pavement surface that may occur over a small area or as a longer, gradual wave; either type of swell can be accompanied by surface cracking. E 1778, E17

swelling, *n*—the increase in volume of a specimen immersed in a liquid or exposed to a vapor. D 1566, D11

swelling—increase in volume and dimensions caused by penetration of a liquid. D 1695, D01

swelling ground, *n*—*in tunneling*, soil or rock that contains a large amount of clay and that advances into the excavation principally because the material's volume is increasing. D 653, D18

swept gain—see DAC. E 1316, E07

swimwear, *n*—textile garments intended for wear in fresh, chlorinated, or salt water. D 123, D13

swimwear, *n*—textile garments intended for wear in fresh, chlorinated, or salt water. D 7022, D13

swing gate—a gate leaf attached to one gate post using hinges (frame and post hinges) which allow the gate leaf to open or close by pivoting on the hinges and to the opposite gate post or another gate leaf with a latch or other device. Swing gates may be single swing (one leaf) or double swing (two leaves). See Specifications F 654 and F 900. F 552, F14

swinging field—see **multidirectional magnetization**. E 1316, E07

swirl atomizer—a pressure atomizer in which the liquid is swirled, typically by means of tangential inlets, slotted distributors, vanes, or cores. E 1620, E29

swirl chamber atomizer—a swirl atomizer in which a chamber is located between the swirl generating devices and a discharge orifice. E 1620, E29

swirl coaxial injector—a pneumatic atomizer consisting of a central liquid stream surrounded by a high-velocity co-annular gas stream, wherein swirl is unparted to at least one of the streams. E 1620, E29

sword-point anvil—See **pointed clincher**. F 592, F16

SWRO—seawater reverse osmosis. D 6161, D19

symbol, *n*—a combination of linear bar code or two-dimensional symbol characters including start/stop characters, quiet zones, data characters, special function characters and error detection or correction characters, or both, required by a particular symbology to form a complete, scannable entity. F 1294, F05

symbol character, *n*—a unique bar or space pattern, or both, which is defined for a particular symbology. F 1294, F05

symbol check character, *n*—a symbol character calculated from other characters in a bar code symbol determined by an algorithm defined in the symbology specification and used to verify that the bar code has been correctly composed and read. The symbol check character does not include data encoded in the symbol. F 1294, F05

symbol contrast, SC, *n*—in reference to bar codes, the difference between the largest and smallest reflectances in a scan reflectance profile.

$$SC = R_{\max} - R_{\min}$$

F 1294, F05

symbol density, *n*—*in reference to bar codes*, the number of characters per lineal inch, limited by the width of the narrowest bar or space. F 1294, F05

symbol grade, *n*—*in reference to ANSI X3.182*, the simple average of all profile grades using the standard weighting 4.0 = A, 3.0 = B, 2.0 = C, 1.0 = D, and 0.0 = F. F 1294, F05

symbol length, *n*—the physical length of a bar code symbol, including quiet zones. F 1294, F05

symbology, *n*—*inference to readable codes*, a discrete set of characters used to represent and transmit information by use of a set of rules for encoding information in the symbol by an arrangement of parallel, rectangular, bars and spaces arranged in a predetermined pattern or by two dimensional cells arranged according to unambiguous rules. F 1294, F05

symbology identifier (SI), *n*—an optional three character code that may prefix transmitted data from a bar code reader identifying the symbology read and any options enabled in the reader or special features of a symbology encountered. F 1294, F05

symbology reference decode algorithm, *n*—a decoding algorithm that may be found in a particular application or symbology specification, or both. F 1294, F05

symmetrical—this refers to a snowboard shape that has a longitudinal line of symmetry, thereby allowing a single board to be used for both regular-foot and goofy-foot binding mounting positions. F 1107, F27

symmetrical laminate—See **laminate, symmetrical**.

system—of a building—See **building system**. E 631, E06

symmetrical laminate—See **laminate, symmetrical**. E 1749, E06

symmetrically cyclically magnetized condition, *SCM*—a magnetic material is in a *SCM* condition when, under the influence of a magnetic field strength that varies cyclically between two equal positive and negative limits, its successive hysteresis loops or flux-current loops are both identical and symmetrical with respect to the origin of the axes. A 340, A06

symmetrical thread—thread where following flank is a mirror-image of leading flank about line through crest and perpendicular to nail axis. F 547, F16

symmetrical weld—a fused joint joining two sheets in which the joint and weld configuration on either side of the sheets is identical. C 904, C03

symmetric laminate—a laminate in which the stacking sequence for the plies located on one side of the geometric midplane are the mirror image of the stacking sequence on the other side of the midplane. D 3878, D30

symmetric membrane—membrane and bulk polymer have equivalent characteristic (isotropic). D 6161, D19

symmetry—a property of a crystal in virtue of which equivalent lattice points can be brought into coincidence by operations such as rotation, inversion, or reflection. Such operations, are called symmetry operations or elements. E 7, E04

synchronous, *adj*—data sent together with a time base that allows the sender and receiver to operate locked together. F 1457, F05

synchronous data link control, *n*—the set of electronic signals used in the system network architecture. F 1457, F05

synchrotron radiation—*XPS*, a continuous radiation created by the acceleration of high energy electrons, as in a synchrotron or storage ring. Monochromatized, it is a practical variable energy source of photons for photoelectron spectroscopy. E 673, E42

syndet—a contraction of the term synthetic detergent. Now used to characterize personal washing bars containing surfactants in combination with soap. D 459, D12

syneresis—in grouting, the exudation of liquid (generally water) from a set gel which is not stressed, due to the tightening of the grout material structure. D 653, D18

syneresis, *n*—the contraction of a gel accompanied by the separation of a liquid. D 883, D20

syneresis, *n*—the exudation of small amounts of liquid by gels on standing. D 907, D14

syneresis, *n*—of lubricating greases, the separation of liquid lubricant from a lubricating grease due to shrinkage or rearrangement of the structure. D 4175, D02

syneresis, *n*—the contraction of a gel accompanied by the separation of a liquid. (D20) F 412, F17

synergism, *n*—the combination of two or more stimuli to produce an effect greater than the sum of their individual effects. E 253, E18

synergist—an auxiliary material that has the property of increasing the effect of the active ingredient, even though it may have little specific activity itself.

NOTE—In the case of insecticides, synergists are considered as active ingredients. **D 3064, D10**

syngas—the synthetic gas resulting from incomplete combustion or pyrolysis of organic material to primarily carbon monoxide and hydrogen. (See also **synthesis gas**.) **E 1705, E48**

syngeneic, n—cells, tissues, and organs in which the donor has an unreactive genotype with the recipient. Synonyms: *syngraft, isograft, isogeneic, or isogenic*. **F 2312, F04**

syngenetic ice—(1) ground ice that formed more-or-less simultaneously with the deposition of the ground in which it occurs; (2) ground ice developed during the formation of syngenetic permafrost. **D 7099, D18**

syngenetic ice wedge—an ice wedge formed during the formation of syngenetic permafrost; that is, formed more or less simultaneously with the deposition of the earth materials in which it occurs. **D 7099, D18**

syngenetic permafrost—(1) permafrost that formed more-or-less simultaneously with the deposition of the ground in which it occurs; (2) permafrost that formed through a rise of the permafrost table during the deposition of additional sediment or other earth material on the ground surface. **D 7099, D18**

syntactic cellular plastics—materials consisting of hollow sphere fillers in a resin matrix. **D 883, D20**

syntan—a synthetic organic tanning material. **D 1517, D31**

syntax, n—in reference to codes, the rules governing the use of appropriate identifiers, delimiters, separator character(s), and other non-data characters as well as data positioning within the message. **F 1294, F05**

syntectic equilibrium—a reversible univariant transformation in which a solid phase, that is stable only at lower temperature, decomposes into two conjugate liquid phases that remain stable at higher temperature; for example: $L_1 + L_2 = \alpha$. **E 7, E04**

synthesis gas—mixtures of gas in suitable proportions for the production of synthetic products without adding further reactants, such as carbon monoxide and hydrogen, for synthesis of methanol. **E 1705, E48**

synthesis grade—a quality of aromatic hydrocarbons and related chemicals representing the highest purity available on a commercial scale. It encompasses those materials identified with a quantitative index of purity. **D 4790, D16**

synthetic, adj—*in lubricants*, originating from the chemical synthesis of relatively pure organic compounds from one or more of a wide variety of raw materials. **D 4175, D02**

synthetic atmosphere—See **atmosphere**. **D 1356, D22**

synthetic blood, n—a mixture of a red dye/surfactant, thickening agent, and distilled water having a surface tension and viscosity, and a red color representative of blood and other body fluids, and making it more usable for visible detection. **F 1494, F23**

synthetic detergent—a detergent containing surfactants other than soap. Historically, the term differentiated the first detergents from the earlier soap-based detergents. **D 459, D12**

synthetic detergent—under **detergent**, see *synthetic detergent*. **D 459, D12**

synthetic fillers—generally of the “wood dough” type, limited to the repair of minor defects in panels. **D 1038, D07**

synthetic gypsum, n—a chemical product, consisting primarily of calcium sulfate dihydrate ($\text{CaSO}_4 \cdot 2\text{H}_2\text{O}$) resulting primarily from an industrial process. **C 11, C11**

synthetic hydrocarbon resin, n—a low molecular-weight thermoplastic polymer derived from steam-cracker fractions, coal-tar fractions, synthetic C5 fractions (for example, 1,3-pentadiene), and pure unsaturated monomers. **D 6440, D01**

synthetic insulating fluid—an insulating fluid derived from manufactured materials, whose basestock does not occur in nature, or whose basestock is derived through significant processing of

petroleum basestocks beyond fractionation, distillation, cracking, and hydrotreating. Examples of synthetic fluids are sulfur hexafluoride, silicone fluids, polybutene oils, synthetic isoparaffin fluids, and synthetic ester-based products. **D 2864, D27**

synthetic paint roller cover, n—a cover in which the paint applying material is man-made material. **D 16, D01**

synthetic patches, plugs, and shims—generally composed of two-component formulations of materials which will provide high level performance in terms of bond characteristics, weatherability and durability, used to repair defects in veneer or plywood panels. **D 1038, D07**

synthetic resin—see **resin, synthetic**. **D 16, D01**

syngen, n—the definition of all elements in a computing system. **F 1457, F05**

system—See **roofing system**. **D 1079, D08**
system, n—combination of an *IR thermometer* and an installed *probecover*. **E 344, E20**

system—*of a building*—See **building system**. **E 1480, E06**

systematically selected samples—commonly used technique whereby specimens are chosen for inspection or testing based on stated criteria of a sampling plan, such as occurs during process-control charting, during tooling changes, or at specific timed intervals. **F 1789, F16**

systematic composite sample, n—*for asbestos*, a composite sample that is obtained by taking every *n*th bag in the lot being sampled. **D 2946, C17**

systematic error—an error caused by undetected fundamental flaws in the test equipment by inadequate understanding of the theory underlying the measurement or by repetitious errors on the part of the analyst. **E 856, D34**

systematic error, n—errors introduced by the printer, reader, or other system elements that are consistent for all bars or all spaces. **F 1294, F05**

systematic error of result, n—a component of the error, which in the course of a number of test results for the same characteristic, remains constant or varies in a predictable way.

NOTE—Systematic errors and their causes may be known or unknown. **E 456, E11**

systematic sample, n—*for asbestos*, the sample that is formed from every *n*th bag of the lot to be examined. **D 2946, C17**

systematic sampling, n—the process of selecting units in a sample in accordance with a specific order or location in time or space, or both. **D 123, D13**

systematic sampling, n—sample selection procedure in which every *k*th element is selected from the universe or population; for example, $u, u + k, u + 2k, u + 3k, \text{etc.}$, where *u* is in the interval 1 to *k*. **E 456, E11**

systematic sampling, n—sample selection procedure in which every *k*th element is selected from the universe or population; for example, $u, u + k, u + 2k, u + 3k, \text{etc.}$, where *u* is in the interval 1 to *k*. **E 1402, E11**

system (crystal)—See **crystalsystem**. **E 7, E04**

system examination threshold—the electronic instrument threshold (see **evaluation threshold**) which data will be detected. **E 1316, E07**

systemic disease—a disease in which the pathogen or its products spread throughout the organism. **E 609, E35**

system induced artifacts—anomalies that are created by a system during the acquisition, display processing, or storage of a digital image. **E 1316, E07**

system network architecture, n—a proprietary communication system developed by IBM. (See **SNA**.) **F 1457, F05**

system noise, n—the difference between the maximum and minimum area readings per second for the first 20 area readings in the blank run. **D 4175, D02**

system noise—the noise present in a radiological measurement resulting from the individual elements of the radiological system. **E 1316, E07**

systems integrator, *n*

systems integrator, *n*—the individual or organization within a provider who is responsible for responding to performance statements at the highest level of the hierarchy of built elements and for

assigning the responsibility for responding to performance statements at lower levels to others, such as subcontractors, suppliers, or product manufacturers. **E 2151, E06**

T

- T**—in *electromagnetics*, symbol for transmittance. **D 4175, D02**
- t**—thickness of web material, in. (or mm) **E 631, E06**
- Δ_t —total deflection of diaphragm, in. (or mm) **E 631, E06**
- tab, n**—a piece of material used to hold the laminate specimen in a grip or fixture for testing so that the laminate is not damaged and is adequately supported. **D 3878, D30**
- tabby, n**—a *plainweave fabric*. In the context of tire cord fabric, it refers to sections of closely spaced weft yarns in a special section of fabric woven to provide as sample. **D 6477, D13**
- tabby sample, n**—the section of tire cord fabric between two tabbies that have been woven separately with a distance of 0.5 to 1.0 m (18 to 36 in.) between them. **D 123, D13**
- tabby sample, n**—the section of tire cord fabric between two tabbies that have been woven separately with a distance of 0.5 to 1.0 m (18 to 36 in.) between them. **D 6477, D13**
- Taber stiffness unit, n**—of *paper*, the common unit measure used with Taber instruments. **D 1968, D06**
- table dyeing**—see **brush coloring**. **D 1517, D31**
- table nut**—a hexagon nut used to attach the dial ring to the tube. **F 471, F12**
- table run**—used to describe leather that has not been sorted and graded before selling by the tanner. (Also known as tannery run, or TR). **D 1517, D31**
- tableware**—all utensils and decorative articles used on the table for meal service. **C 242, C21**
- tack, n**—in *building construction*, the sticky condition of the surface of an applied sealant. **C 717, C24**
- tack**—sticky or adhesive quality of the surface of applied sealant. **C 717, C24**
- tack, n**—for *rubber or rubber compounds*, a property that causes two layers of these materials, when pressed together, to adhere at the area of contact. **D 123, D13**
- tack, n**—the property of an adhesive that enables it to form a bond of measurable strength immediately after adhesive and adherend are brought into contact under low pressure. (See also **tack range** and **tacky-dry**.)
- aggressive tack, n*—Synonym for **dry tack**.
- dry tack, n*—the property of certain adhesives, particularly nonvulcanizing rubber adhesives, to adhere on contact to themselves at a stage in the evaporation of volatile constituents, even though they seem dry to the touch. (Synonym *aggressive tack*.) **D 907, D14**
- tack**—sticky, gummy character of a polish film, rendering the surface conducive to dust accumulation, fingerprinting, etc. **D 2825, D21**
- tack**—sticky, gummy character of a polish film, rendering polish surfaces conducive to dust accumulation. **D 2825, D21**
- tack, n**—for *rubber or rubber compounds*, a property that causes two layers of these materials when pressed together to adhere at the area of contact. **D 6477, D13**
- tack coat (bond coat), n**—an application of bituminous material to an existing relatively nonabsorptive surface to provide a thorough bond between old and new surfacing. **D 8, D04**
- tacker**—electric, manual, or pneumatic tool for driving light-wire staples without clinching. **F 592, F16**
- tackifier, n**—a compounding material that enhances the ability of vulcanized rubber to adhere to itself or another material. **D 1566, D11**
- tackifying resin, n**—a resin, which when mixed with certain compatible polymers, imparts tack, under use conditions, to the finished formulation. **D 6440, D01**
- tacking cut, n**—small holes or cuts along the selvage. **D 123, D13**
- tacking cut, n**—small holes or cuts along the selvage. **D 3990, D13**
- tack range, n**—the period of time in which an adhesive will remain in the tacky-dry condition after application to an adherend, under specified conditions of temperature and humidity. **D 907, D14**
- tack, rubber, n**—the property that causes contacting surfaces of unvulcanized rubber to adhere to each other. **D 1566, D11**
- tack tear, n**—the measurement of the resistance of a coated fabric to tearing under conditions simulating an installation that has been tacked in place. **D 123, D13**
- tacky-dry, adj**—pertaining to the condition of an adhesive when the volatile constituents have evaporated or been absorbed sufficiently to leave it in a desired tacky state. **D 907, D14**
- tactile layer**—optional feature incorporated into a membrane switch to alter the tactile response. **F 2112, F01**
- tactile response**—a physical sensation caused by a sudden collapse and/or snapback of a membrane switch. **F 2112, F01**
- tactile switch**—a switch assembly that provides a tactile ratio greater than zero. **F 2112, F01**
- Tafel slope**—the slope of the straight line portion of a polarization curve, usually occurring at more than 50 mV from the open-circuit potential, when presented in a semi-logarithmic plot in terms of volts per logarithmic cycle of current density (commonly referred to as volts per decade). **G 15, G01**
- tag, n**—a paper item, such as ticket or slip, which is marked to provide information to the consumer at the time of purchase, which is permanently affixed to the product. **D 123, D13**
- tag, n**—a **paperboard** card, metal plate, or plastic card on which shipping or identification data are given. (Compare **label**.) **D 996, D10**
- tag, n**—a paper item, such as a ticket or a slip, which is marked to provide information to the consumer at the time of purchase, and which is permanently affixed to the product. **D 3136, D13**
- tag board, n**—a paperboard used for shipping tags, file folders, printed forms, envelopes, etc. **D 1968, D06**
- tagged property**—property identified within an organization's property control system that by its nature (value, sensitivity, special measure of control) qualifies to receive a unique tag, usually a barcode, for identification and tracking. **E 2135, E53**
- tail height, h_T** —the height of the underside of the tail from a plane surface with the center of the ski body pressed against that surface. **F 472, F27**
- tail height, H_T** —the height of the underside of the tail from a plane surface with the snowboard unweighted on a plane surface. **F 1107, F27**
- tailing**—a fringe effect appearing on the trailing edge of the developed electrostatic image, but not directly attached to it. (See also **dragging**.) **F 335, F05**
- tailings**—the (size) residue, coarse or fine, removed from a separation process. **C 242, C21**
- tailings, n**—the underflow product from coal froth flotation. **D 121, D05**
- tail length, L_T** —the projected length of the tail turn-up, measured from the snowboard tail to the contact point where an 0.1-mm feeler gage intersects the running surface of the snowboard ski resting unweighted on a plane surface. **F 1107, F27**
- tail surface area**—that surface from the tail contact point aft. The tail contact point is located l_T from the tail. **F 472, F27**
- tail surface area**—that surface from the tail contact point aft. The tail contact point is located L_T from the tail. **F 1107, F27**
- tail turn-up length, l_T** —the projected length of the tail turn-up, measured from the ski tail to the contact point where a 0.5-mm feeler gage intersects the running surface with the ski body pressed against a plane surface. **F 472, F27**
- taint, n**—a taste or odor foreign to a product, usually the result of spoilage or contamination. **E 253, E18**
- take**—see **grout take**. **D 653, D18**
- takeoff rate, n**—the rate of product takeoff from the reflux divider expressed in millilitres per hour. **D 4175, D02**

takeoff rate, *n*

takeoff rate, *n*—in column distillation, the volume of product withdrawn from the reflux divider over a specified period.

D 4175, D02

take-out—a mechanical device for removing a finished article from any glass-forming unit.

C 162, C14

take-up, *n*—in fabrics, the difference in distance between two points in a yarn as it lies in a fabric and the same two points after the yarn has been removed from the fabric and straightened under a specified tension, expressed as a percentage of the straightened length.

D 123, D13

take-up, *n*—in fabrics, the difference in distance between two points in a yarn as it lies in a fabric and the same two points after the yarn has been removed from the fabric and straightened under a specified tension, expressed as a percentage of the straightened length.

D 4850, D13

take-up rollers, *n*—in open-end spinning machines, a pair of closely set, continuously rotating cylinders which withdraw the spun yarn from the rotor.

D 123, D13

take-up rollers, *n*—in open-end spinning machines, a pair of closely set, continuously rotating cylinders which withdraw the spun yarn from the rotor.

D 3888, D13

talc—a phyllosilicate mineral having the general formula $3MgO \cdot 4SiO_2 \cdot H_2O$ and noted for its extreme softness, low thermal and electrical conductivity, and fire resistance. (See also **steatite talc**.)

C 242, C21

talc—see **industrial talc** and **industrial talc, nonasbestotype**.

D 16, D01

talik—(1) a layer or body of unfrozen ground within the permafrost. It may be either a "closed" or "open" talik, depending on whether it is or is not entirely surrounded by permafrost; (2) a layer or body of unfrozen ground occurring in a permafrost area due to a local anomaly in thermal, hydrological, hydrogeological, or hydrochemical conditions.

D 7099, D18

tall oil, *n*—a generic name for a number of products obtained from the manufacture of wood pulp by the alkali (sulfate) process or more popularly known as the kraft process.

acid refined tall oil, *n*—the product obtained by treating crude tall oil in solvent solution with sulfuric acid under controlled conditions to remove dark color bodies and odoriferous materials. Removal of the solvent yields a product with lighter color and higher viscosity than crude tall oil with approximately the same fatty acids-to-rosin ratio.

crude tall oil, *n*—a dark brown mixture of fatty acids, rosin, and neutral materials liberated by the acidification of soap skimmings. The fatty acids are a mixture of oleic acid and linoleic acid with lesser amounts of saturated and other unsaturated fatty acids. The rosin is composed of resin acids similar to those found in gum and wood rosin. The neutral materials are composed mostly of esters, polycyclic hydrocarbons, sterols, and other high-molecular weight alcohols.

distilled tall oil, *n*—the class of products obtained by distilling crude tall oil in fractionating equipment under reduced pressure under such conditions that the ratio of rosin acids to fatty acids is varied over a wide range. The products that generally contain less than 90 % of fatty acids, are known as distilled tall oils.

D 804, D01

tall oil, distilled—See **distilled tall oil** under **tall oil**.

D 804, D01

tall oil fatty acids, *n*—the class of products containing 90 % or more fatty acids obtained by fractionation of crude tall oil.

D 804, D01

tall oil heads (light ends), *n*—the low-boiling fractions obtained by the fractional distillation of crude tall oil under reduced pressure.

D 804, D01

tall oil pitch, *n*—the residue from the distillation of crude tall oil. It is generally recognized that tall oil pitches contain some high-boiling esters and neutral materials with lesser amounts of rosin and fatty acids.

D 804, D01

tall oil rosin—See **rosin**.

D 804, D01

tall oil soap, *n*—the product formed by the saponification or neutralization of tall oil with organic or inorganic bases.

D 804, D01

talus—rock fragments mixed with soil at the foot of a natural slope from which they have been separated.

D 653, D18

tamped density—see **density, tamped**.

D 2652, D28

tamper—a heavy cylindrical metal section of tubing that is operated on a wire rope or cable. It slips over the riser and fits inside the casing or borehole annulus. It is generally used to tamp annular sealants or filter pack materials into place and prevent bridging.

D 653, D18

tan δ , *n*—is the dimensionless ratio of energy lost to energy returned during one cycle of a periodic process. $\tan \delta$ is normally calculated by dividing the loss component of the property measured by a periodic method by the storage component (for example, $\tan \delta = E''/E'$ as used in DMA).

E 473, E37

tandel, $\tan \delta$, *n*—mathematical tangent of the phase angle delta (δ); pure numeric; often written spaced: tan del; often written using "delta": tandelta, tan delta (Synonym—*loss factor*).

D 1566, D11

tan delta, $\tan \delta$ —the ratio of the loss modulus to the storage modulus, measured in compression, tension, flexure, or shear.

$$\tan \delta = \frac{K''}{K'} = \frac{E''}{E'} = \frac{G''}{G'}$$

D 4092, D20

tandem-axle load, [lb (kg)], *n*—the total load transmitted to the road surface by the tires on all wheels of two consecutive vehicle axles that are more than 3.3 ft (1 m) and not more than 8 ft (2.4 m) apart; a portion of the gross-vehicle weight.

E 867, E17

tangent delta, $\tan \delta$ —in dielectric measurements, the ratio of the loss factor, ϵ'' , to the absolute permittivity, ϵ' ; that is:

$$\tan \delta = \epsilon''/\epsilon'$$

E 1142, E37

tangent erosion rate, *n*—in cavitation or liquid impingement erosion, the slope of a straight line drawn through the origin and tangent to the knee of the cumulative erosion-time curve, when that curve has the characteristic S-shaped pattern that permits this. In such cases, the tangent erosion rate also represents the maximum cumulative erosion rate exhibited during the test.

G 40, G02

tangential—strictly, coincident with a tangent at the circumference of a tree or log, or parallel to such a tangent. In practice, however, it often means roughly coincident with a growth ring. A tangential section is a longitudinal section through a tree or limb perpendicular to a radius. Flat-grained lumber is sawed tangentially.

D 9, D07

tangential force, *n*—a force that acts on a moving body in the direction of a tangent to the curved path of the body.

F 141, F06

tangential stress—see **stress**.

D 653, D18

tangent modulus—See **modulus, tangent**.

C 717, C24

tangent modulus—the slope of a tangent line drawn at the steepest initial portion of the stress-strain curve.

C 904, C03

tangent modulus, *n*—the ratio of change in stress to change in strain derived from the tangent to any point on a stress-strain curve.

D 123, D13

tangent modulus—slope of the tangent to the stress-strain curve at a given stress value (generally taken at a stress equal to half the compressive strength). (ISRM)

D 653, D18

tangent modulus, *n*—in a stress strain curve, the ratio of the change in stress to the change in strain derived from the tangent at any point on the curve.

D 4848, D13

tangent point, *n*—for geotextiles, the first point of the force-elongation curve at which a major decrease in slope occurs.

D 4439, D35

tangible intellectual property—tangible property that is intellectual in nature, including software, technical data, printed information, and legal documents (such as claims, debts, insurance policies, stock certificates, and evidence of indebtedness).

E 2135, E53

tangible property—property having physical existence and hence capable of being valued monetarily. Property other than intangible property. **E 2135, E53**

tangle sheet, *n*—a piece of mica that splits well in places but tears in others, producing a large percentage of partial films. **D 1711, D09**

tank—synonymous with **melter**. **C 162, C14**

tank block—a generic term for large refractory blocks used in the structure of melters. See **pavers**. **C 162, C14**

tank heater—heating system that maintains the dishwasher's wash tank temperature. **F 1827, F26**

tank vacuum cleaner—See **canister vacuum cleaner**. **F 395, F11**

tank voltage—the total voltage between the anode and cathode of a plating bath or electrolytic cell during electrolysis. It is equal to the sum of: (1) the equilibrium reaction potential, (2) the *IR* drop, and (3) the electrode potentials. **B 374, B08**

tannery run—see **table run**. **D 1517, D31**

tan δ (tangent delta)—same as **dissipation factor**. **D 2864, D27**

tap—(1) to drain a furnace.
(2) to remove excess slag from the floor of a pot furnace. **C 162, C14**

tap density, *n*—the apparent density of the powder in a container that has been tapped under specified conditions. **B 243, B09**

tap density—See **tap density** under **density**. **C 242, C21**

tape, *n*—in **textiles**, a narrow fabric with a mass per unit area of less than 0.5 kg/m² (0.1 lb/ft²) for each 25.4 mm (1 in.) of width and which is used primarily for utilitarian purposes. (See also **narrow-fabric** and **textile ribbon**.) **D 123, D13**

tape, *n*—in **zippers**, a strip of material along one edge of which the bead and elements are attached. **D 123, D13**

tape:
gummed paper tape—a **kraft** paper in a wide range of basic weights, usually 35, 60 and 90 lb (24 by 35–500) that is gummed on one side and slit into rolls of various widths.

pressure-sensitive-adhesive tape—in **packaging**, a backing, as tape, coated so as to permit it to adhere instantaneously to most surfaces with the application of slight pressure.

reinforced gummed tape—an adhesive-coated tape that contains glass, rayon, or sisal fibers embedded in latex, resin or asphaltic laminants between two sheets of **kraft**. **D 996, D10**

tape—ribbons, usually of paper or cloth, coated with adhesive that are used to fasten veneers together for convenience in handling during the gluing operation. **D 1038, D07**

tape, *n*—a strip of material along one edge of which the bead and elements are attached. **D 2050, D13**

tape, *n*—in **textiles**, a narrow fabric with a mass per unit area of less than 0.5 kg/m² (0.1 lb/ft²) for each 25.4 mm (1 in.) of width and which is used primarily for utilitarian purposes. **D 7018, D13**

tape—materials in which the reinforcing filaments or fibers are laid in a single direction within a resin matrix in the B-stage.

tap test—See **test, tap**. **E 631, E06**

tape—materials in which the reinforcing filaments or fibers are laid in a single direction within a resin matrix in the B-stage. **E 1749, E06**

tape ends, *n*—in **zippers**, the tape extending beyond the stops at either or both ends of the stringers. **D 123, D13**

tape ends, *n*—the tape extending beyond the stops at either or both ends of the stringers. **D 2050, D13**

tapeless measure—a device which measures length using the number of rotations of a wheel in contact with the surface of the material to be measured. **D 996, D10**

taper—included angle of countersink. **F 547, F16**

taper—half of the difference between b_V and b_H or $(b_V - b_H)/2$. **F 1107, F27**

taper candle, *n*—a slender candle produced to be used with a candle accessory for support. **F 1972, F15**

tapered edge, *n*—an edge formation of gypsum board which provides

a shallow depression at the paper-bound edge to receive joint reinforcement. Also known as a **recessed edge**. **C 11, C11**

tapered edge strip—a tapered insulation strip used to elevate the roofing at the perimeter and at penetrations of the roof. **D 1079, D08**

tapered wedge point—point with two major planes forming “V” and with single minor plane on each flank; forming rectangular cross section. **F 547, F16**

tape replica—See **replica**. **E 7, E04**

taper, *V*—half of the difference between b_V and b_H or $(b_V - b_H)/2$. **F 472, F27**

tape width, exposed—See **exposed tape width**. **D 2050, D13**

tape yarn, *n*—a yarn of a flat, tape-like character produced by slitting an extruded film. **D 123, D13**

tape yarn, *n*—a yarn of a flat, tape-like character produced by slitting an extruded film. **D 4849, D13**

taping compound, *n*—(sometimes called **embedding compound**) a compound specifically formulated and manufactured for use in embedding of joint reinforcing tape at gypsum board joints. **C 11, C11**

tap test—See **test, tap**. **E 1749, E06**

tar, *n*—brown or black bituminous material, liquid or semisolid in consistency, in which the predominating constituents are bitumens obtained as condensates in the destructive distillation of coal, petroleum, oil-shale, wood, or other organic materials, and which yields substantial quantities of pitch when distilled. **D 8, D04**

tar—a brown or black bituminous material, liquid or semisolid in consistency, in which the predominating constituents are bitumens obtained as condensates in the processing of coal, petroleum, oil-shale, wood, or other organic materials. **D 1079, D08**

tar, *n*—a brown or black, bituminous, liquid or semi-solid comprised primarily of bitumens condensed in the processing of coal, petroleum, oil-shale, wood, or other organic materials. **D 4175, D02**

tar concrete, cold-laid, *n*—a plant mix containing a medium-viscosity grade of tar and a graded mineral aggregate, designed to be laid either shortly after mixing or when the mixture is at or near ambient temperature. **D 8, D04**

tar concrete, hot laid, *n*—a plant mix containing a high-viscosity grade of tar and a densely graded mineral aggregate designed to be laid at or near the elevated temperature of mixing. **D 8, D04**

tare, *n*—the mass of all external and internal packing materials (including bobbins, tubes, etc.) of a case, bale, or other type of container. **D 123, D13**

tare, *n*—the mass of all external and internal packing materials (including bobbins, tubes, etc.) of a case, bale, or other type of container. **D 4849, D13**

tare weight, *n*—the weight of a **container** or of packaging materials excluding the contents. **D 996, D10**

target—the object or “hot spot” that is being searched for. **D 5681, D34**

target—specimen under investigation.

thick—EIA, specimen whose thickness produces backscattered particles whose energies, for each constitutive element, vary greatly with respect to the system resolution.

thin—EIA, specimen whose thickness is sufficiently small that the variations in energies of particles backscattered from atoms of each constitutive element is small with respect to the system resolution. **E 673, E42**

target—that part of the anode of an X-ray emitting tube hit by the electron beam. **E 1316, E07**

target cost—the planning expenditure, determined in cooperation with the cost professionals and the design team, for project elements.

task lighting—See **lighting**. **E 631, E06**

target cost, *n*—the planning expenditure, determined in cooperation with the cost professionals and the design team, for project elements. **E 833, E06**

target (in X-ray tubes)

target (in X-ray tubes)—that part of an X-ray tube which the electrons strike and from which X-rays are emitted. E 7, E04

target monitoring zone—the ground water flow path from a particular area or facility in which monitoring wells will be screened. The target monitoring zone should be a stratus (strata) in which there is a reasonable expectation that a vertically placed well will intercept migrating contaminants. D 653, D18

target octane number, n—the research or motor octane number quality desired for a specific product. D 4175, D02

target plane, n—the plane, perpendicular to the line of sight of a radiation thermometer, that is in focus for that instrument. E 344, E20

target size, n—the diameter of a circle in the target plane of a radiation thermometer that is centered on its line of sight and contains 99 % of the input radiant power received by that instrument. E 344, E20

tarnish—corrosion products in the form of thin films or spots that do not protrude significantly from the surface of the metallic coating; for example, reaction products of copper from oxygen or reduced sulfur. B 374, B08

tarnish—the chemical compound on the surface of a contact resulting from the reaction of the contact material and the inorganic constituents of the surrounding atmosphere. B 542, B02

tarnish—a thin film of stain on the surface of glass. C 162, C14

tar or pitch bearing basic ramming mix, n—a tar or pitch bearing refractory that has suitable properties to permit ramming into place to form a monolithic structure. C 71, C08

tar or pitch bearing basic refractories, n—refractories consisting principally of basic grains to which either tar or pitch has been added during manufacture. C 71, C08

task lighting—See **lighting**. E 1480, E06

task lighting (éclairage(de travail) localisé)—localized lighting system consisting of a functional arrangement of luminaires to accommodate the specific visual task or work area needs. E 631, E06

task outline—a general plan of the estimating work to be performed.

technical performance—discouraged term for **performance**—of a building or performance—of a facility. E 631, E06

task outline, n—a general plan of the estimating work to be performed. E 833, E06

taste, n—perception resulting from stimulating the gustatory receptors in the taste buds. E 253, E18

taster, n—an assessor in a taste test. (See also **assessor**.) E 253, E18

tawing—the old English term applied to the process of making leather with alum as distinguished from tanning which was originally confined to vegetable tanning. D 1517, D31

taxa, pl., n—the units of classification of organisms, based on their relative similarities. D 4175, D02

TBC—total bacteria count, the total number of viable microorganisms present in the sample, excluding anaerobic organisms. D 6161, D19

TCC—total colony count. D 6161, D19

TDF, n—See *tire-derived fuel*. D 5681, D34

TDS—total dissolved solids, usually expressed as mg/L or ppm (parts per million). D 6161, D19

tealight candle, n—a cylindrical filled candle produced with a diameter and height of approximately 1.5 in. (38 mm) and 0.75 in. (19 mm) respectively. F 1972, F15

tear—an imperfection; a small surface section of glass torn out by adherence to another hot solid. C 162, C14

tear drop, n—*inwoven fabrics*, short elliptical deviations of one or more adjoining picks. D 123, D13

tear drop, n—*inwoven fabrics*, short elliptical deviations of one or more adjoining picks. (*Syn.* teariness) D 3990, D13

teariness—See **tear drop**. D 3990, D13

tearing—a defect in the surface of porcelain enamel, characterized by short breaks or cracks which have been healed. C 286, B08

tearing energy, n—the work done in tearing a material. D 123, D13

tearing energy, n—the work done in tearing a material. D 4850, D13

tearing force, n—the average force required to continue a tear previously started in a fabric. D 123, D13

tearing force, n—*in fabric*, the force required either (1) to start or (2) to continue or propagate a tear in a fabric under specified conditions. D 123, D13

tearing force, n—*in fabric*, the force required either (1) to start or (2) to continue or propagate a tear in a fabric under specified conditions. D 4850, D13

tearing strength, n—*in fabrics*, the capacity of a material to withstand the ultimate tearing force required to propagate a tear after its initiation. D 123, D13

tearing strength, n—the force required either (1) to start or (2) to continue or propagate a tear in a fabric under specified conditions. D 123, D13

tearing strength, n—*in fabric*, the capacity of a material to withstand the ultimate tearing force required to propagate a tear after its initiation. D 4850, D13

tearing strength, (F, (F), kN), n—the force required either (1) to start or (2) to continue or propagate a tear in a fabric under specified conditions. D 4439, D35

tear off—to remove an existing roofing system down to the structural deck. D 1079, D08

tear offs—small pieces of leather, less than half a skin, that are torn from a skin during the staking or other tanning operations. D 1517, D31

tear resistance, n—*in fabrics*, the resistance to a tearing force. D 123, D13

tear resistance, n—*in fabrics*, the resistance to a tearing force. D 4850, D13

tear (rubber), n—mechanical rupture initiated and propagated at a site of high stress concentration caused by a cut, defect, or localized deformation. D 1566, D11

tear strength, n—the maximum force required to tear a specified specimen, the force acting substantially parallel to the major axis of the test specimen. D 1566, D11

teaser—the worker in direct charge of furnace operations who regulates the charging of batch and adjusts fires. C 162, C14

technical performance—discouraged term for **performance**—of a building or performance—of a facility. E 1480, E06

technician—an employee of the testing laboratory assigned to perform the actual operations of testing. C 717, C24

technique, n—an examination protocol which includes a pretest interview, format, testing requirements, test data analysis, and may include posttest procedures. E 2035, E52

teemer—{archaic} the person who teems or casts the pot of glass. C 162, C14

teeming—See **casting**. C 162, C14

teeth, n—the resultant surface irregularities or projections formed by the breaking of filaments or strings which may form when adhesive-bonded substrates are separated. (Compare **legging**, **stringiness**, and **webbing**.) D 907, D14

teeth—serrations formed on the inside faces of the distal end of the tweezer halves. F 1638, F04

TEL—abbreviation for tetraethyllead (a gasoline antiknock agent). D 4175, D02

telco lines—telecommunication lines, such as telephone and other communication pathways that are used to transmit information from one location to another. F 1457, F05

telecommunication lines, n—any communication pathways such as telephone and others that are used to transmit information from one location to another. F 1457, F05

telegraphing, n—condition in a laminate or other type of composite construction by which irregularities, imperfections, or patterns of an inner layer are visibly transmitted to the surface. D 907, D14

telescoping—the movement of the outer layers of a spiral wound cartridge in the direction of the feed flow caused by excessive pressure drop through the feed channel spacer. D 6161, D19

telomer, *n*—a polymer composed of molecules having terminal groups incapable of reacting with additional monomers, under the conditions of the synthesis, to form larger polymer molecules of the same chemical type. (IUPAC, ISO) **D 883**, D20

telomer, *n*—a polymer composed of molecules having terminal groups incapable of reacting with additional monomers, under the conditions of the synthesis, to form larger polymer molecules of the same chemical type. (D20, IUPAC, ISO) **F 412**, F17

telomer, *n*—a polymer composed of molecules having terminal groups incapable of reacting with additional monomers, under the conditions of the synthesis, to form larger polymer molecules of the same chemical type. **F 1251**, F04

temper, *n*—*as related to metallic-coated steel wire*, stiffness or resistance to bending, typically described by reference to tensile strength. **A 902**, A05

temper—the metallurgical structure and properties of a product resulting from thermal or mechanical processing treatments. **B 846**, B05

temper, *v*—to mix or restore to a workable consistency. **C 11**, C11

temper, *v*—to bring a refractory mixture to a usable state by mixing with a liquid. **C 71**, C08

temper—(1) the degree of residual stress in annealed glass measured polarimetrically or by polariscopic comparison with a standard such as one or more strain disks. (See also **strain disk**.)

(2) term sometimes used in referring to tempered glass. (See also **tempered glass**.) **C 162**, C14

temper, *v*—in hydraulic-setting compounds, to bring to a usable state by mixing in or adding water. **E 631**, E06

temper, *v*—to bring to a workable state by adding water. **E 2110**, E06

temper annealing—a thermal treatment above the eutectoid temperature for copper-aluminum alloy products to minimize the presence of the stable eutectoid structure. **B 846**, B05

temperate bacteriophage—a bacteriophage that can grow lytically, killing the host, or can exist stably in the host. **E 1705**, E48

temperature—

absolute temperature, *n*—(1) temperature measured on the thermodynamic scale, designated as Kelvin (K). (2) temperature measured from absolute zero (−273.15°C or 459.67°F).

dry-bulb temperature (*t*), *n*—the temperature of the ambient air, for example, the temperature that is measured by the dry-bulb thermometer of a psychrometer.

ice-bulb temperature (*t_i*), *n*—the temperature that a thermometer indicates when its bulb is surrounded by a thin film of ice (or a frozen moistened covering), and allowed to cool by sublimation of the ice into the surrounding air.

sonic temperature (*T_s*) (*K*), *n*—an equivalent temperature that accounts for the effects of temperature and moisture on acoustic wavefront propagation through the atmosphere.

thermodynamic dew-point temperature (*T_d*), *n*—the temperature at which moist air with mixing ratio, *r_w*, and total pressure, *p*, when saturated with respect to water at the same pressure, *p*, will have a saturation mixing ratio, *r_w*, equal to the given mixing ratio, *r*.

thermodynamic frost-point temperature (*T_f*), *n*—the temperature at which moist air with mixing ratio, *r*, and total pressure, *p*, when saturated with respect to ice at the same pressure, *p*, will have a saturation mixing ratio, *r_i*, equal to the given mixing ratio, *r*.

thermodynamic ice-bulb temperature (*T_i*), *n*—the temperature that moist air at pressure, *p*, temperature, *t*, and mixing ratio, *r*, will attain when brought adiabatically to saturation at pressure, *p*, by sublimation of pure ice into the moist air.

thermodynamic wet-bulb temperature (*T_w*), *n*—the temperature that moist air at pressure, *p*, temperature, *t*, and mixing ratio, *r*, will attain when brought adiabatically to saturation at pressure, *p*, by the evaporation of pure liquid water into the moist air.

virtual temperature, *n*—the temperature, *T_v*, which dry air must have at the given barometric pressure, *p*, in order to have the same density as moist air at the same pressure, *P*, given temperature, *T*, and mixing ratio, *r*, provided that the dry and moist air behave in accordance with the perfect gas equation of state.

$$T_v = T \frac{(1+r/\epsilon)}{(1+r)}$$

where:

r = mixing ratio (mass of water vapor per mass of dry air, and

ε = ratio of the molecular weight of water vapor to that of dry air.

wet-bulb temperature (*t_w*), *n*—the temperature indicated by the wet-bulb thermometer of a psychrometer. **D 1356**, D22

temperature—the thermal state of matter as measured on a definite scale. **E 41**, G03

temperature coefficient of resistance, *α*, *n*—the ratio of the fractional change in electrical resistance of a substance to the corresponding change in temperature of that substance. **E 344**, E20

temperature correction factor—a multiplier that adjusts the measured gas volume to the actual volume at standard gas temperature, *T_{CF}*

$$\begin{aligned} &= \frac{\text{absolute standard gas temperature } ^\circ R}{\text{absolute actual gas temperature } ^\circ R} \\ &= \frac{\text{absolute standard gas temperature } ^\circ R}{[\text{gas temperature } ^\circ F + 459.67] ^\circ R} \end{aligned}$$

F 1827, F26

temperature correction factor (TCF)—defines the effect of temperature on permeate flow relative to a base temperature (25°C), TCF is mainly a function of fluid characteristics but also membrane polymer. **D 6161**, D19

temperature, dew point—see **dew point**. **E 41**, G03

temperature, dry-bulb—the temperature of the air as indicated by an accurate thermometer, corrected for radiation if significant. **E 41**, G03

temperature effects—changes in potential developed between a sensing and reference electrode due to changes in temperature. The slope of a sensing electrode varies with temperature, as does the potential developed by the internal reference element in the reference electrode. In addition, the solubility of salts such as AgCl or Hg₂Cl₂ changes with temperature. It is therefore advisable to measure all samples and standardizing solutions at the same temperature. **D 4127**, D19

temperature envelope—the temperature range over which a particular penetrant inspection test will operate. **E 1316**, E07

temperature index, *n*—a number which permits comparison of the temperature/time characteristics of an electrical insulating material, or a simple combination of materials, based on the temperature in degrees Celsius which is obtained by extrapolating the Arrhenius plot of life versus temperature to a specified time, usually 20 000 h. **D 1711**, D09

temperature limit, *n*—the minimum temperature of an oxidant (or oxidant mixture) that will just support sustained combustion of a material initially at given conditions of oxidant concentration, temperature, pressure, flow condition, and propagation direction. **G 126**, G04

temperature offset—the designed difference in predictive thermometer readings and water bath test temperatures. **E 344**, E20

temperature profile—the graphical or analytical expression of the variation in ground temperature with depth. **D 7099**, D18

temperature range—those temperatures at which electrode measurements can be made. The lower temperature limit is set by the freezing point of the solution that has the highest freezing point (including the sample as well as all filling solutions). The upper temperature limit is set by the boiling point of the solutions, except for liquid ion exchange electrodes, whose upper temperature limit is determined by the solubility of the ion exchange solution.

temperature range

- Electrode life decreases with exposure to high temperatures. In many cases, the limit of detection also rises with increasing temperature. For these reasons, it is preferable to cool hot solutions before measurement. **D 4127, D19**
- temperature resolution**, *n*—the minimum simulated or actual change in target temperature that gives a usable change in output or indication, or both. **E 344, E20**
- temperature rise**, ΔT , *n*—the difference between T_{\max} and the initial set temperature of the hot plate. **E 1445, E27**
- temperature stability**, *n*—for a *geotextile*, the percent change in tensile strength or in percent elongation as measured at a specified temperature and compared to values obtained at the standard conditions for testing geotextiles. **D 4439, D35**
- temperature uniformity**—the comparison of individual temperatures measured on the surface of a steel plate at the end of the test period in accordance with the heat-up temperature-response (see **heat-up temperature-response**) test. **F 1827, F26**
- temperature, wet-bulb**—wet bulb temperature (without qualification) is the temperature indicated by a wet-bulb psychrometer constructed and used according to specifications. **E 41, G03**
- temper brittleness**, *n*—brittleness that results when certain steels are held within, or are cooled slowly through, a certain range of temperature below the **transformation range**. **A 941, A01**
- temper carbon**, *n*—compact aggregates or nodules of graphite found in malleable iron as a result of heat treatment. **A 644, A04**
- temper carbon**—clusters of finely divided in malleable iron, that are formed as a result of decomposition of cementite, for example, by heating white cast iron to temperatures above the ferrite-austenite transformation temperature and holding at these temperatures for a considerable period of time (**graphite, nodular**). **E 7, E04**
- tempered**—reheated after hardening to some temperature below the critical range and subsequently cooled to increase toughness and ductility. **F 547, F16**
- tempered glass**—a general term for glass that has been subjected to a thermal treatment characterized by rapid cooling to produce a compressively stressed surface layer. See **fully tempered glass and heat-strengthened glass**. **C 162, C14**
- tempered hardboard**—a hardboard subjected to tempering as previously defined or specially manufactured with other variation in usual process so that the resulting product has special properties of stiffness, strength, and water-resistance associated with boards meeting specifications for that quality product. **D 1554, D07**
- tempered martensite**—the decomposition products which result from heating martensite to temperatures below the ferrite austenite (A_{e1}) transformation temper. Under the light microscope, darkening of the martensite needles is observed in the initial stages of tempering. Prolonged tempering at high temperatures produces spheroidized carbides in a matrix of ferrite. At the higher resolution of the electron microscope, the initial stage of tempering is observed to result in a structure containing a precipitate of fine epsilon iron carbide particles. At about 500°F (260°C), there is a transition to a structure of larger and elongated cementite particles in a ferrite matrix. With further tempering at higher temperature, the cementite particles become spheroidal, decreased in number, and increased in size. **E 7, E04**
- tempered refractory castable**, *n*—a refractory castable to which liquid has been added and sufficiently mixed to produce the desired consistency for placement. **C 71, C08**
- tempered service hardboard**—service hardboard, as previously defined, which has been given a tempering treatment to improve such properties as stiffness, strength, and water resistance. **D 1554, D07**
- tempering**, *n*—reheating a quench hardened or normalized steel object to a temperature below A_{c1} , and then cooling it at any desired rate. **A 941, A01**
- tempering**—a thermal treatment of a quench-hardened product to improve ductility. **B 846, B05**
- tempering**—the manufacturing process of adding to a fiber or particle panel material a siccative material such as drying oil blends of oxidizing resin which are stabilized by baking or other heating after introduction. **D 1554, D07**
- tempering-temperature-audit test**—means of checking whether a fastener was tempered at its specified temperature. **F 1789, F16**
- temper number**—a relative evaluation of the annealing process of glassware as determined with strain disks (see **Test Methods C 148**). **C 162, C14**
- tempest**—term used to describe techniques used to reduce emanation of electronic data or intelligence from a tactical shelter. **E 631, E06**
- tempest**—term used to describe techniques used to reduce emanation of electronic data or intelligence from a tactical shelter. **E 1749, E06**
- template**, *n*—(1) a pattern used as a guide in fabricating elements. (2) a precise, detailed pattern or layout to provide essential fabrication details. **E 631, E06**
- temple mark**, *n*—in woven fabrics, small holes or distortions adjacent to the selvage. **D 123, D13**
- temple mark**, *n*—in woven fabrics, small holes or distortions adjacent to the selvage. **D 3990, D13**
- temporal averaging**—the combination of particle size distributions obtained at different points in time into a distribution representative of a longer time interval. **E 1620, E29**
- temporal resolution**—because of ambiguities due to alternative definitions, it is recommended that “temporal resolution” not be used unless a specific definition is provided by the user. **E 1620, E29**
- temporal size distribution**—see **flux size distribution**. In context with particle size distributions, the use of *temporal* is not recommended because of possible confusion with other meanings for this term. **E 1620, E29**
- temporary coating**, *n*—a coating designed to protect or decorate a substrate for a limited time that can be readily removed either by mechanical or chemical means. **D 16, D01**
- temporary decommissioning**—the engineered closure of a well intended to be returned to service at some later date (generally no more than six months). Temporary plugging should not damage the structural integrity of the well. Plugging materials consist of sand, bentonite, or other easily removed materials. **D 653, D18**
- temporary hardness**—usually the bicarbonate salts of calcium and magnesium. **D 6161, D19**
- tenability limit (of humans to fire-generated conditions)**, *n*—limit at which a human being is rendered physically incapacitated or dies as a consequence of exposure to one or more factors (such as toxic gases, temperature, heat flux, or smoke obscuration) generated by a fire. **E 176, E05**
- tenability (of humans to fire-generated conditions)**, *n*—the capability of humans to occupy a room without becoming incapacitated or being killed as a result of a fire. **E 176, E05**
- tenacity**, *n*—in *atensile test*, the force exerted on the specimen based on the linear density of the unstrained material. **D 123, D13**
- tenacity**, *n*—the tensile stress expressed as force per unit linear density of the unstrained specimen. **D 4845, D13**
- tenacity**, *n*—in *atensile test*, the force exerted on the specimen based on the linear density of the unstrained specimen. **D 4845, D13**
- tenacity**, *n*—in *atensile test*, the force exerted on the specimen based on the linear density of the unstrained material. **D 4848, D13**
- tenacity-as-specified-elongation (TASE)**, *n*—the tenacity of a material at its force-at-specified-elongation. (Compare **breaking tenacity**.) **D 4848, D13**
- tenacity at rupture**, *n*—the tenacity at the force-at-rupture. (See also **force-at-rupture, rupture, tenacity**.) **D 123, D13**
- tenacity at rupture**, *n*—the tenacity at the force-at-rupture. (See also **force at rupture, rupture, tenacity**.) **D 4848, D13**
- tenacity-at-specified-elongation, TASE**, *n*—the tenacity of a material at its force-at-specified-elongation. (Compare **breaking tenacity**.) **D 123, D13**
- tenant** (locataire)—organization that has rights and obligations of occupancy in a facility, as specified in a lease or occupancy agreement. **E 631, E06**

tenant (locataire)—organization that has rights and obligations of occupancy in a facility, as specified in a lease or occupancy agreement. **E 1480, E06**

tensile, *adj*—relating to tension in, or on, a material. **D 123, D13**

tensile, *adj*—relating to tension in, or on, a material. **D 4848, D13**

tensile creep rupture strength, $[FL^{-1}]$, *n*—*for geosynthetics*, the force per unit width that will produce failure by rupture in a creep test in a given time, at a specified constant environment **D 4439, D35**

tensile creep strain, *n*—the total strain at any given time. **D 4439, D35**

tensile energy absorption (TEA), *n*—*of paper*, a mathematical quantity used to express the energy absorbed by a paper specimen prior to rupture in a tensile test carried to rupture under conditions specified. **D 1968, D06**

tensile hysteresis, *n*—*in mechanics*, hysteresis resulting from the extension of a material. (See *hysteresis*.) **D 4848, D13**

tensile hysteresis curve, *n*—a complex load-elongation or stress-strain curve obtained under either of two conditions:
 (1) When a specimen is successively subjected to the application of a load or force less than that causing rupture, and the removal of the load or force according to a predetermined procedure. **D 123, D13**
 (2) When a specimen is stretched less than the breaking elongation and allowed to relax by removal of the strain according to a predetermined procedure. **D 123, D13**

tensile index, *n*—a mathematical quantity calculated by dividing the tensile strength of a sample by its mass per unit area, both terms expressed in SI units. See **tensile strength**. **D 1968, D06**

tensile modulus, *n*—see **tensile stress at given elongation**, the preferred term. **D 1566, D11**

tensile modulus, J , (FL^{-1}) , Nm^{-1} , *n*—*for geotextiles*, the ratio of the change in tensile force per unit width to a corresponding change in strain (slope). **D 4439, D35**

tensile set, *n*—the extension remaining after a specimen has been stretched then allowed to retract in a specified manner expressed as a percentage of the original length. **D 1566, D11**

tensile stiffness, *n*—*of paper*, a mathematical quantity expressing the ratio of the tensile force on paper to its tensile strain in the elastic region of the tensile force-elongation behavior of the material **D 1968, D06**

tensile strain, *n*—the strain on a material subjected to tension. **D 123, D13**

tensile strain, *n*—the strain on a material subjected to tension. **D 4848, D13**

tensile strain recovery, *n*—the percent of recoverable extension to the total extension impressed on a fiber under specified conditions. **D 123, D13**

tensile strain recovery, *n*—the percent of recoverable extension to the total extension impressed on a fiber under specified conditions. **D 4848, D13**

tensile strength—the maximum load per unit of original cross-sectional area that a conductor attains when tested in tension to rupture. **B 354, B01**

tensile strength, *n*—a property of solid material that indicates its ability to withstand a uniaxial tensile load. **C 709, D02**

tensile strength, *n*—the strength of a material under tension as distinct from compression, torsion, or shear. **D 123, D13**

tensile strength, *n*—the strength shown by a specimen subjected to tension, as distinct from torsion, compression, or shear. **D 123, D13**

tensile strength, *n*—the breaking load (or force) per unit cross-sectional area of the unstrained specimen. **D 123, D13**

tensile strength, *n*—the strength of a material under tension as distinct from compression, torsion or shear. **D 123, D13**

tensile strength, *n*—*in an adhesive joint*, the maximum tensile stress that a material is capable of sustaining calculated from the

maximum load applied perpendicular to the joint divided by the original cross-sectional area of the joint. **D 907, D14**

tensile strength, *n*—the maximum tensile stress applied during stretching a specimen to rupture. **D 1566, D11**

tensile strength, *n*—*of paper*, the maximum tensile force developed per unit width of a paper test specimen prior to rupture in a tensile test which has been carried to rupture under conditions specified. **D 1968, D06**

tensile strength, *n*—a property of solid material that indicates its ability to withstand a uniaxial tensile load. **D 4175, D02**

tensile strength, *n*—*for geotextiles*, the maximum resistance to deformation developed for a specific material when subjected to tension by an external force. **D 4439, D35**

tensile strength, *n*—the strength of a material under tension as distinct from compression, torsion, or shear. **D 4845, D13**

tensile strength, *n*—the strength of a material under tension as distinct from compression, torsion or shear. **D 4848, D13**

tensile strength, fastener—see **ultimate strength**. **F 1789, F16**

tensile strength of metal connector plate—resistance to tensile force by net plate cross section normal to the direction of load application, expressed as force per unit of width of full cross section of connector plate, when used in pairs of plates.

test:

accelerated test—the testing of materials by exposure to intensified simulation of service conditions, for example, weathering, radiation, etc.

climbing drum peel test—a method of determining the relative peel resistance of adhesive bonds between a relatively flexible adherend and a rigid adherend, and the relatively flexible facing of a sandwich structure and its core (see Test Method D 1781).

destructive test—a test involving the destruction of assemblies or parts in order to evaluate the maximum performance of the assembly or part.

floating roller peel test—a method of determining the relative peel resistance of adhesive bonds between one rigid and one flexible adherend (see Test Method D 3167).

nondestructive test—an inspection test for the evaluation of structural quality without damaging the assembly, for example, ultrasonics, visual inspection, etc.

sag flow test—a method of determining the maximum thickness to which a material can be applied without sagging and that provides a means of measuring the amount of sag flow at a given thickness (for highly viscous resins) (see Test Method D 2730). **E 631, E06**

tensile strength, S_u $[FL^{-2}]$, *n*—the maximum tensile stress which a material is capable of sustaining. Tensile strength is calculated from the maximum force during a tension test carried to rupture and the original cross-sectional area of the specimen. **E 6, E28**

tensile strength, σ_{TS} $[FL^{-2}]$ —the maximum tensile stress that a material is capable of sustaining. Tensile strength is calculated from the maximum force during a tension test carried to rupture and the original cross-sectional area of the specimen. **E 1823, E08**

tensile strength (unconfined or uniaxial tensile strength), T_o (FL^{-2}) —the load per unit area at which an unconfined cylindrical specimen will fail in a simple tension (pull) test. **D 653, D18**

tensile stress, *n*—the stress within a material subjected to tension. **D 123, D13**

tensile stress—normal stress tending to lengthen the body in the direction in which it acts. (ISRM) **D 653, D18**

tensile stress, *n*—a stress applied to stretch a test piece (specimen). **D 1566, D11**

tensile stress, *n*—the stress within a material subjected to tension. **D 4848, D13**

tensile stress at given elongation, *n*—the stress required to stretch the uniform cross section of a test specimen to a given elongation. **D 1566, D11**

tensile stress [FL⁻²], *n*—normal stress due to forces directed away from the plane on which they act. **E 6, E28**

tensile test, *n*—*in textiles*, a test in which a material is extended in one direction to determine one or more of its force-extension, or stress-strain, characteristics; for example, breaking force, elongation at break. **D 123, D13**

tensile test, *n*—*in textiles*, a test in which a textile material is stretched in one direction to determine the force-elongation characteristics, the breaking force, or the breaking elongation. **D 4439, D35**

tensile test, *n*—*in textiles*, a test in which a specimen is extended in one direction to determine one or more of its force-extension, or stress-strain, characteristics; for example, breaking force, elongation-at-break. **D 4848, D13**

tensile test—application of tensile force concentric with the anchor axis. **E 2265, E06**

tensile testing machine, *n*—an apparatus designed to impart, or transmit, force/extension, or stress/strain, to a material and to measure the effect of the action. (See also **constant-rate-of-extension tensile testing machine, constant-rate-of-load tensile testing machine, and constant-rate-of-traverse tensile testing machine.**) **D 123, D13**

tensile testing machine, *n*—an apparatus designed to impart, or transmit, force/extension, or stress/strain, to a material and to measure the effect of the action. (See also **constant-rate-of-extension tensile testing machine, constant-rate-of-load tensile testing machine, and constant-rate-of-traverse tensile testing machine.**) **D 4849, D13**

tensile work, *n*—*of paper*, a term having the same meaning as **tensile energy absorption** when used for paper. **D 1968, D06**

tensiometer—a device for measuring soil-water matric potential (or tension or suction) of water in soil in-situ; a porous, permeable ceramic cup connected through a water filled tube to a pressure measuring device. **D 653, D18**

tension, *n*—a uniaxial force tending to cause the stretching of a material. **D 123, D13**

tension, *n*—a uniaxial force tending to cause the stretching of a material. **D 123, D13**

tension, *n*—a uniaxial force tending to cause the stretching of a material. **D 4848, D13**

tension, *n*—a uniaxial force tending to cause the stretching of a material. **D 4850, D13**

tension band—an offset strip of metal shaped to fit around the terminal post and used with a carriage bolt and nut to attach the tension bar to the post. **F 552, F14**

tension bar—the bar used with tension bands or other post connectors to secure the fabric to a terminal post. **F 552, F14**

tension control structural bolt-nut-washer assembly—assembly that consists of a bolt, nut, and washer capable of developing a minimum predetermined tension that is visually apparent by the separation of the spline end of the bolt from the bolt body during tightening. **F 1789, F16**

tension cracked ice—ice, banded or layered, which forms in cracks produced by tension or mechanical rupture of the ground, resulting mainly from the growth of segregated or intrusive ice. **D 7099, D18**

tension fatigue, *n*—fracture, through crack growth, of a component or test specimen subjected to a repeated tensile deformation. **D 1566, D11**

tension member—any component that carries horizontal (axial) tension loads imposed upon the boom. **F 818, F20**

tension parallel to grain—the imposition of a tensile stress which acts in a direction parallel to the fiber direction of the wood. **D 9, D07**

tension-recovery chart, *n*—*in tension testing*, a continuously plotted graph of tension versus extension resulting from a tension-recovery cycle. (Compare **extension-recovery chart**. See also **extension-recovery cycle and tension-recovery cycle.**) **D 123, D13**

tension-recovery cycle, *n*—*in tension testing*, the continuous application of tension on a specimen with a momentary hold at the maximum tension, followed by return to zero tension at a controlled rate. Compare **extension-recovery cycle**.) (See also **extension-recovery chart load-recovery cycle and tension-recovery chart.**) **D 123, D13**

tension set, *n*—see **tensile set**, the preferred term. **D 1566, D11**

tension-supported roof, *n*—a fabric roof-system, that is properly secured and primarily held in place by tensile forces applied across the system. **[D13.59] D 4851** **D 123, D13**

tension-supported roof, *n*—a fabric roof-system, that is properly secured and primarily held in place by tensile forces applied across the system. **D 4850, D13**

tension test, *n*—*in textiles*, a test designed to measure the tautness of a textile strand or fabric. (See also **tensile test.**) **D 123, D13**

tension test, *n*—*in textiles*, a test designed to measure the tautness in a textile strand or fabric. (See also **tensile test.**) **D 4848, D13**

tension test, *n*—*in textiles*, a test designed to measure the tautness of a textile strand or fabric. **D 4850, D13**

tension wire—a wire, with or without a marcelled pattern (see **marcelling**), typically used along the top of a chain link fence in place of a top rail and along the bottom of a chain link fence for additional security. See Specification A 824 for *marcelled tension wire*. (*Syn.* **coil spring wire.**) **F 552, F14**

tension wood—an abnormal form of wood found in the upper side of the bole and branches of leaning trees of some hardwood species and characterized by the presence of gelatinous fibers and excessive longitudinal shrinkage. Tension wood fibers hold together tenaciously so that sawed surfaces usually have projecting fibers, and planed surfaces often are torn or have raised grain. Tension wood may cause warping. **D 9, D07**

tenter mark, *n*—a visible deformation on the side edge or body of a fabric due to pressure from clips or pins. (See **clip mark, pin mark.**) **D 123, D13**

tenter mark, *n*—a visible deformation on the side edge or body of a fabric due to pressure from clips or pins. (*Syn.* **clip mark, pin mark.**) **D 3990, D13**

tenth-value-layer (TVL)—the thickness of the layer of a specified substance which, when introduced into the path of a given narrow beam of radiation reduces the intensity of this radiation by a factor of ten. **E 1316, E07**

teratogen—a chemical agent that causes congenital malformations in a developing embryo or fetus **E 609, E35**

term, compound, *n*—see **compound term** **E 1992, E02**

term, delimited, *n*—see **delimited term** **E 1992, E02**

terminal block, *n*—a screw terminal device for connection of thermoelements and extension wires or the connection of extension wires to each other or to instruments. **E 344, E20**

terminal erosion rate, *n*—*in cavitation or liquid impingement erosion*, the final steady-state erosion rate that is reached (or appears to be approached asymptotically) after the erosion rate has declined from its maximum value. (See also **terminal period and erosion rate-time pattern.**) **G 40, G02**

terminal period, *n*—*in cavitation or liquid impingement erosion*, a stage following the deceleration period, during which the erosion rate has levelled off and remains approximately constant (sometimes with superimposed fluctuations) at a value substantially lower than the maximum rate attained earlier. This occurs in some, but not all, cavitation and liquid impingement tests. (See also **erosion rate-time pattern.**) **G 40, G02**

terminal post—the basic load-bearing component for a line of fence, to or from which the fabric is stretched; it may be an end, gate, corner or pull post. **F 552, F14**

terminal solid solution—in a multicomponent system, any solid phase, of limited composition range, which includes the composition of one of the components of the system. **E 7, E04**

terminal velocity—the limiting velocity reached by a particle falling under the action of gravity in a still liquid at a specified temperature. **D 4410, D19**

terminator, *n*—a character or sequence of characters, such as a line ending, used to mark the end of a command whose length is variable. **F 1457, F05**

terminators, *n*—functions that basically take place outside of the National ITS Architecture but which interfere with one or more subsystems of the National ITS Architecture by sharing data or information, or both, with them. **E 867, E17**

terminology, *n*—a set of terms representing the concepts of a field. **E 1992, E02**

ternary system—the complete series of compositions produced by mixing three components in all proportions. **E 7, E04**

terne coating, *n*—a lead-based coating, most commonly applied to steel sheet; the coating typically contains from 3 to 20 % tin, and other minor (<1 %) alloying elements may be present. **A 902, A05**

terpene alcohol, *n*—an alcohol directly related to or derived from a terpene hydrocarbon. **D 804, D01**

terpene resins, *n*—the products formed by polymerization of β -pinene, α -pinene, limonene and other terpene hydrocarbons. **D 804, D01**

terpenes, *n*—a class of unsaturated organic compounds having the empirical formula $C_{10}H_{16}$ occurring in most essential oils and oleoresinous plants. **D 804, D01**

terpolymer, *n*—a polymer formed from three monomer species. **D 1566, D11**

terra sigillata—a porous, red clay ware characterized by embossed decorations of the same color and a satin-like unglazed surface. **C 242, C21**

terrazzo, *n*—a form of mosaic flooring made by embedding marble, onyx, granite, or glass chips in portland cement, polyacrylate modified portland cement, or resinous matrices. The terrazzo is poured in place, cured, ground, and then polished. Rustic terrazzo is a variation where, in lieu of grinding and polishing, the surface is washed with water or otherwise treated to expose the chips. Quartz, quartzite, and river bed aggregate can also be used. **F 141, F06**

terrestrial—consisting of land, as distinguished from water. **F 1600, F20**

terrestrial (or soil) environment, *n*—the aerobic environmental compartment which is found in and on natural soils. **D 4175, D02**

terrestrial (or soil) environment, *n*—the aerobic environmental compartment which is found in and on natural soils. **D 6384, D02**

terry fabric, *n*—a fabric with a woven warp pile or a knitted pile, with uncut loops on a single side or uncut loops on both sides, and which is used for such products as toweling, beachwear, and bathrobes. **D 123, D13**

terry fabric, *n*—a fabric with a woven warp pile or a knitted pile, with uncut loops on a single side or uncut loops on both sides, and which is used for such products as toweling, beachwear, and bathrobes. **D 4850, D13**

terry towel, *n*—a textile product with end hems or fringes and side hems or selvages which is made with loop pile on one or both sides generally covering the entire surface or forming strips, checks, or other patterns. **D 123, D13**

terry towel, *n*—a textile product with end hems or fringes and side hems or selvages which is made with loop pile on one or both sides generally covering the entire surface or forming strips, checks, or other patterns. **D 7023, D13**

4-tertiary butyl catechol—*p*-tert-butylcatechol ($C_{10}H_{14}O_2$) mol weight 166.2; colorless crystals; polymerization inhibitor for styrene, butadiene, and other olefins; boiling point, 285°C; melting point, 52°C. **D 4790, D16**

tertiary hole—*in grouting*, the third series of holes to be drilled and grouted usually spaced midway between previously grouted primary and secondary holes. **D 653, D18**

tertiary sampling unit, *n*—in multi-stage sampling, a subsampling unit selected at the 3rd stage of a sampling plan. See **stage**.

NOTE—Such a unit may be further subdivided to obtain a desired measurement. Terminology is not uniform for labeling of units at the 4th stage or beyond. **E 1402, E11**

tervariant equilibrium—a stable state among a number of conjugate phases equal to one less than the number of components, that is, having three degrees of freedom. **E 7, E04**

tesla, **T**—the SI unit of magnetic induction. One tesla is equal to 1.0 Wb/m² or 10⁴ gauss. **A 340, A06**

Tessar—trade name for a photographic objective made by combining a positive lens, a negative lens, and a doublet, which is used for making macrographs. **E 7, E04**

test, *n*—critical examination of the quality, composition, or properties of a material, usually involving standardized test procedures. **E 631, E06**

test—technical operation that consists of the determination of one or more characteristics of a given product, process or service according to a specified procedure, (ISO Guide 2). **E 1187, E36**

test, *n*—see preferred term **examination**. **E 1316, E07**

test, *n*—critical examination of the quality, composition, or properties of a material, usually involving standardized test procedures. **E 1605, E06**

test, *n*—technical operation that consists of the determination of one or more characteristics of a given product, process or service according to a specified procedure. **E 1732, E30**

test:

accelerated test—the testing of materials by exposure to intensified simulation of service conditions, for example, weathering, radiation, etc.

climbing drum peel test—a method of determining the relative peel resistance of adhesive bonds between a relatively flexible adherend and a rigid adherend, and the relatively flexible facing of a sandwich structure and its core (see Test Method D 1781-).

destructive test—a test involving the destruction of assemblies or parts in order to evaluate the maximum performance of the assembly or part.

floating roller peel test—a method of determining the relative peel resistance of adhesive bonds between one rigid and one flexible adherend (see Test Method D 3167).

nondestructive test—an inspection test for the evaluation of structural quality without damaging the assembly, for example, ultrasonics, visual inspection, etc.

sag flow test—a method of determining the maximum thickness to which a material can be applied without sagging and that provides a means of measuring the amount of sag flow at a given thickness (for highly viscous resins) (see Test Method D 2730). **E 1749, E06**

test, *n*—the single running of a list of test questions during physiological recording of the examinee. **E 2035, E52**

test, acceptance—one made at the option of the purchaser to verify that a product meets design criteria. **F 819, F18**

test assembly, *n*—the complete assembly of test specimens together with their supporting construction. **E 176, E05**

test assembly—the wall or floor into which the test sample(s) is (are) mounted or installed. **E 176, E05**

test assembly, *n*—horizontal or vertical construction on which test specimens are to be mounted together with associated instrumentation. **E 176, E05**

test bar, *n*—a bar-shaped coupon that is tested with or without subsequent preparation for the determination of physical or mechanical properties. **A 644, A04**

test beard, *n*—*in length testing of cotton*, the portion of the test specimen that has been combed and brushed into a “beard” which protrudes from the outside of the comb(s) or the clamp(s). **D 123, D13**

test beard, *n*—*in length testing of cotton*, the portion of the test

test beard, n

specimen that has been combed and brushed into a "beard" which protrudes from the outside of the comb(s) or the clamp(s).

D 7139, D13

test chemical, n—the liquid or gas that is used to challenge the protective clothing material specimen. **F 1494, F23**

test coil—the section of the coil assembly that examines the material under test in a comparative system; the coil used to examine the material in an absolute or differential comparative system. (E 566) **E 1316, E07**

test coupon, n—specially designed casting, or portion thereof, that is used to provide a representative sample of the iron from which it was cast. **A 644, A04**

test cycle, n—*intire testing*, one complete circuit of the specified test course. **F 538, F09**

test data analysis, n—the systematic evaluation of the physiological recordings, and for most techniques, entails the assignment of numbers according to patterns of responses to arrive at a decision regarding the examinee's truthfulness or concealed knowledge. **E 2035, E52**

test, design—one made on a sample treated as representative of an industrial product. These tests will not generally be repeated in quantity production. **F 819, F18**

test determination, n—(a) the process of carrying out the series of operations specified in a test method whereby one or more readings (observations) are made on a test specimen and the observations combined to obtain the value of a property of the test specimen, or (b) the value obtained by the process. **D 1968, D06**

test determination, n—the value of a characteristic or dimension of a single test specimen derived from one or more observed values. **E 456, E11**

test difference, n—the apparent thermoelectric difference attributable to mated connectors observed by the test procedure of this specification. **E 344, E20**

test distance, n—distance traveled by a vehicle after tire break-in. **F 538, F09**

test frequency—in electromagnetic testing, the number of complete cycles per unit time of the alternating current applied to the primary test coil. **E 1316, E07**

testing, n—the determination by technical means of properties; performance; or elements of materials, products, services, systems, or environments which involve application of established scientific principles and procedures. **D 1356, D22**

testing—an element of inspection which generally denotes the determination by technical means of the properties or elements of supplies, or components thereof, and involves the application of established scientific principles and procedures. **D 1517, D31**

testing—action of carrying out one or more tests, (ISO Guide 2). **E 1187, E36**

testing agency—see *testinglaboratory*. **E 1187, E36**

testing laboratory—a qualified organization authorized to test building sealants for compliance with specified standards. **C 717, C24**

testing laboratory—laboratory that measures, examines, tests, calibrates, or otherwise determines the characteristics or performance of materials or products, (ISO Guide 2, A). **E 1187, E36**

testing laboratory, n—laboratory that measures, examines, tests or otherwise determines the characteristics or performance of materials or products. **E 1732, E30**

testing programs—programs involving test procedures to determine chemical/protective clothing material interactions or compatibilities. Testing programs include, but are not limited to, testing protective clothing materials for resistance to degradation, penetration, and permeation. **F 1494, F23**

testing, ultrasonic—a nondestructive method of examining materials by introducing ultrasonic waves into, through or onto the surface of the article being examined and determining various attributes of the material from effects on the ultrasonic waves. **E 1316, E07**

test interval—a test interval is equal to one-quarter of the test period. **D 5681, D34**

test kit—equipment (for example, a cutting tool, adsorbent applicators, if necessary) and chemicals (for example, sulfide or rhodizonate spot test reagents and any extraction solutions needed) assembled for use during spot testing for lead. **E 631, E06**

test load, n—the force applied to a tire through the rim; it is normal to the metal loading plate onto which the tire is loaded. **F 538, F09**

test lug, n—a sample produced as an appendage on a casting, that may be removed and tested to qualify the casting or the iron from which it was produced. **A 644, A04**

test matrix, n—a group of candidate tires usually with specified reference tires; all tests are normally conducted in one test program. **F 538, F09**

test measurement, n—a quantitative expression of one value determined for a property of interest by a single application of a specified test procedure. **D 1711, D09**

test method, n—a definitive procedure for the identification, measurement, and evaluation of one or more qualities, characteristics, or properties of a material, product, system, or service that produces a test result. (Compare *practice*.) **D 123, D13**

test method, n—a definitive procedure that produces a test result. **E 456, E11**

test method—defined technical procedure to determine one or more specified characteristics of a material or product, (ISO Guide 2, A). **E 1187, E36**

test method, n—defined technical procedure to determine one or more specified characteristics of a material or product. **E 1732, E30**

test observation, n—see *observation*. **E 456, E11**

test of significance—a statistical test that, by use of a specified test statistic, purports to provide a test of a null hypothesis (under certain assumptions); for example, that an imposed treatment in the experiment is without effect. **E 1823, E08**

test oil, n—any oil subjected to evaluation in an established procedure. **D 4175, D02**

test (or testing), n—a procedure performed on an object (or set of nominally identical objects) using specified equipment that produces data unique to the object (or set). **F 538, F09**

test panel, n—for *in air wicking tests*, the composite structure of a rubber compound and fabric which is used to test the fabric for air wicking. **D 6477, D13**

test (performance test of a facility)—See *requirement statement*. **E 1480, E06**

test period—the test period is two to four continuous h of net-processing time. **D 5681, D34**

test piece—member of test specimen.
test pressure difference—the actual pressure difference across the building envelope, expressed in pascals (inches of water or pounds-force per square foot or inches of mercury). **E 631, E06**

test piece—a specimen containing known artificial or natural defects used for checking the efficiency of magnetic particle flaw detection processes. **E 1316, E07**

test pit—a shallow excavation made to characterize the subsurface. **D 653, D18**

test points—two preselected conductive points in a circuit loop, possibly including a switch. **F 2112, F01**

test portion, n—a quantity of material that is representative of the analysis sample and sufficient to obtain a single test result for the property or properties to be measured. **D 121, D05**

test program, n—an ordered series of tests grouped together using a predefined plane. **F 538, F09**

test quality cartridge—a new or remanufactured cartridge with poor graphic quality. **F 335, F05**

- test quality level*—see **rejection level**. E 1316, E07
- test record**, *n*—a document or electronic record that contains the observations and derived data obtained by applying a given test method. A 941, A01
- test report**, *n*—a document that presents the applicable qualitative or quantitative results obtained by applying one or more given test methods. A 941, A01
- test report**—document that presents test results and other information relevant to a test, (ISO Guide 2, A). E 1187, E36
- test report**—written document or electronic record, signed by an authorized party, which contains sufficient data and information to verify that the tested fastener properties conform to the particular specification requirements. F 1789, F16
- test result**, *n*—a value obtained by applying a given test method, expressed as a single determination or a specified combination of a number of determinations. (See **observation**.) D 123, D13
- test result**, *n*—the value that expresses the level of a property of the test unit. D 1711, D09
- test result**, *n*—the value obtained for a given property from one test unit, which may be a single observation or the combination of multiple observations, as required by a specific test method. See **test unit**. D 1968, D06
- test result**, *n*—a value obtained by applying a given test method, expressed either as a single observation or a specified combination of a number of observations. D 4439, D35
- test result**, *n*—a value obtained by applying a method one time to a test material. E 135, E01
- test result**, *n*—the value of a characteristic obtained by carrying out a specified test method. E 456, E11
- test result**, *n*—the average or median of a specified number of determinations; it is the reported value for a test. F 538, F09
- test ring**—a ring specimen containing artificial subsurface discontinuities which is used to evaluate and compare the overall performance and sensitivity of magnetic particle examination techniques. E 1316, E07
- test, routine**—a type of test made regularly on production material. F 819, F18
- test run**, *n*—a single pass of a loaded tire over a given test surface. F 538, F09
- test sample**, *n*—a portion of the product taken at the place where the product is exchanged, that is, where the responsibility for the product quality passes from the supplier to the receiver. Actually, this is rarely possible and a suitable sampling location should be mutually agreed on. D 4175, D02
- test sample**—a representative part of the experimental environment (gases, liquids, or solids) for purposes of analysis. E 176, E05
- test sample**, *n*—a quantity suitable for use directly in a selected testing device. E 1638, E29
- test section**—the portion of pipeline under test. C 896, C04
- test section**, *n*—a distinct area of construction. D 4439, D35
- test section**—portion(s) of a pipe, fitting, or pipeline under test. F 412, F17
- test sieve**, *n*—a sieve that meets all of the minimum requirements of ASTM Committee E11. E 1638, E29
- test skein**, *n*—a small skein which has a prescribed length of yarn and is used for the determination of linear density or breaking force, or both. D 123, D13
- test skein**, *n*—a small skein which has a prescribed length of yarn and is used for the determination of linear density or breaking force, or both. D 4849, D13
- test specimen**, *n*—a test object, suitably prepared from a sample, for evaluation of the chemical, physical, mechanical, or metallurgical quality of the sample. A 644, A04
- test specimen**—specimen, or portion thereof, which is to be tested and the test results reported, or which is to be prepared for further testing, and the test results reported. C 896, C04
- test specimen**, *n*—the specific portion of a test sample upon which a test is to be performed, and that is obtained by systematically reducing the size of the sample until a representative specimen of the required mass is obtained. C 1154, C17
- test specimen*, *n*—synonym for **test portion**. D 121, D05
- test specimen**, *n*—(*Fibrograph*), the cotton fibers placed randomly on a pair of Fibrograph combs for fiber length measurements. D 123, D13
- test specimen**, *n*—*in cotton length tests with the Length Analyzer*, the cotton fibers protruding randomly from the base of a Motion Control Inc. specimen clamp for fiber length measurement before being combed or brushed. D 123, D13
- test specimen**, *n*—*in cotton maturity tests*, the series of slides observed by one technician as one half of the test. D 123, D13
- test specimen**, *n*—*for wool top*, a length of specified mass taken at random from a length of wool top selected as a laboratory sample. D 123, D13
- test specimen**, *n*—a portion of a test unit upon which one or more test measurements are made. D 1711, D09
- test specimen**, *n*—*of paper*, test unit, or portion of the test unit, upon which single or multiple test determinations are to be made. See **test unit**. D 1968, D06
- test specimen**, *n*—the specific portion of a test sample upon which a test is to be performed, and that is obtained by systematically reducing the size of the sample until a representative specimen of the required mass is obtained. D 2946, C17
- test specimen**, *n*—*for wool top*, a length of specified mass taken at random from a length of wool top selected as a laboratory sample. D 4845, D13
- test specimen**, *n*—(*Fibrograph*), the cotton fibers placed randomly on a pair of Fibrograph combs for fiber length measurements. D 7139, D13
- test specimen**, *n*—*in cotton length tests with the Length Analyzer*, the cotton fibers protruding randomly from the base of a Motion Control Inc. specimen clamp for fiber length measurement before being combed or brushed. D 7139, D13
- test specimen**, *n*—*in cotton maturity tests*, the series of slides observed by one technician as one half of the test. D 7139, D13
- test specimen**, *n*—the specific construction assembly that was tested in accordance with Test Method E 119. E 176, E05
- test specimen**, *n*—a joint system of a specific material(s), design, and width. E 176, E05
- test specimen**, *n*—the fire stop being tested. E 176, E05
- test specimen**, *n*—stack of five identical stacking chairs. E 176, E05
- test specimen**, *n*—a short length, at least 300 mm long, cut from the bulk material length. E 344, E20
- test specimen**, *n*—the portion of a test unit needed to obtain a single test determination. E 456, E11
- test specimen**—portion of a test unit needed to obtain a single test determination. E 631, E06
- test specimen**—sample connections to be tested to determine a particular plate strength characteristic; fabricated by connecting two or more butted wood members with two parallel metal connector plates at each connection, placed symmetrically on opposite sides along the butted ends. E 631, E06
- test specimen**—portion of a test unit needed to obtain a single test determination. E 1605, E06
- test specimen**, *n*—a specific portion of the samples upon which the testing is to be performed. G 113, G03
- test start**, *n*—introduction of test oil into the engine. D 4175, D02
- test statistic**—a function of the observed values in a sample that is used in a test of significance. E 1823, E08
- test structure**—a structure (such as, a fixed-fixed beam or cantilever) that is used to extract information (such as, the residual strain or the strain gradient of a layer) about a fabrication process. E 2444, E08
- test surface**—that surface of a part through which the ultrasonic energy enters or leaves the part. E 1316, E07
- test, tap**—a nondestructive evaluation procedure for detecting areas

test, tap

of panel delamination in sandwich or other composite constructions; outer surface of the panel is tapped with a hammer or coin. Changes in acoustic emissions (sound) resulting from tapping are used to distinguish between delaminated and nondelaminated sections of the panel (see Test Method E 492). **E 631, E06**

test, tap—a nondestructive evaluation procedure for detecting areas of panel delamination in sandwich or other composite constructions; outer surface of the panel is tapped with a hammer or coin. Changes in acoustic emissions (sound) resulting from tapping are used to distinguish between delaminated and nondelaminated sections of the panel (see Test Method E 492). **E 1749, E06**

test target—a printed page design, which has a composition of graphic text elements. **F 335, F05**

test temperature, n—the temperature of the measuring junction. **E 344, E20**

test thermocouple, n—a thermocouple that is to have its temperature-emf relationship determined by reference to a temperature standard. **E 344, E20**

test thermoelement, n—a thermoelement that is to be calibrated with reference to platinum 67 (Pt-67) by comparing its thermal emf with that of a standard thermoelement. **E 344, E20**

test tire, n—a tire used in a test. **F 538, F09**

test tire set, n—one or more test tires as required by the test equipment or procedure, to perform a test thereby producing a single test result. **F 538, F09**

test unit, n—synonym for **analysis sample**. **D 121, D05**

test unit, n—a fraction of a unit of product from which one or more test specimens are taken for each property. **D 1711, D09**

test unit, n—of paper, a unit or portion of the sample sufficient to obtain the test result(s) for the property or properties to be measured. **D 1968, D06**

test unit, n—the total quantity of material (containing one or more test specimens) needed to obtain a test result as specified in the test method. See *test result*. **E 456, E11**

test wheel—a wheel and test tire assembly mounted to a test vehicle by means of a force or torque transducer. **E 867, E17**

tetragonal—having three mutually perpendicular axes, two equal in length and unequal to the third. **E 7, E04**

tex, n—the unit of linear density, equal to the mass in grams of 1000 meters of fiber, yarn, or other textile strand, that is used in a direct yarn numbering system. (See also **linear density** and **direct yarn numbering system**.) **D 123, D13**

tex, n—the unit of linear density, equal to the mass in grams of 1000 meters of fiber, yarn, or other textile strand, that is used in a direct yarn numbering system. (See also **linear density** and **direct yarn numbering system**.) **D 4849, D13**

Texas steers—usually side-branded steer hides of a narrow close compact pattern, plump, and not necessarily from Texas. **D 1517, D31**

textile, n—a general term for fibers, yarn intermediates, yarns, fabrics, and products that retain all the strength, flexibility, and other typical properties of the original fiber or filaments **D 123, D13**

textile, n—originally a woven fabric, now generally applied to: (1) staple fibers and filaments suitable for conversion to or use as yarns, or for the preparation of nonwoven fabrics, (2) yarns made from natural or manufactured fibers, (3) fabrics and other manufactured products made from fibers as defined above, and from yarns, and (4) garments and other articles fabricated wholly from one or more of the above elements, and articles made principally from the above when the products retain the characteristic flexibility and drape of the original fabrics. **D 123, D13**

textile, adj—of or pertaining to textiles. **D 123, D13**

textile, n—a general term applied to fibers and organized assemblies of fibers with sufficient integrity to retain the organization. **D 3878, D30**

textile fiber, n—general, a generic term for the various types of matter that form the basic elements of textile fabrics and other

textile structures.

D 123, D13

textile fiber, n—specific, a unit of matter that is characterized by having a length at least 100 times its diameter or width and which can be spun into a yarn or made into a fabric by interlacing in a variety of methods, including weaving, knitting, braiding, felting, and twisting. **D 123, D13**

textile floor covering, n—a system having a use-surface composed of textile material and generally used for floor covering. **D 123, D13**

textile floor covering, n—a system having a use-surface composed of textile material and generally used for floor covering. **D 5684, D13**

textile modulus, n—deprecated term. Use the preferred term **Young's modulus**. **D 4848, D13**

textural component, n—as used in *Test Method D 5061*, the collective term used to describe carbon forms and recognizable coal- and process-derived components (binder-phase, filler-phase, and miscellaneous material), in coke. **D 121, D05**

texture—(1) a modified appearance of dimension stone resulting from one or several mechanical surface treatments. Untreated stone surfaces have textural characteristics described under (2).

(2) that aspect of the physical appearance of a rock that is determined by size, shape, and mutual relations of the component grains or crystals. Textures related to dimension stone include *equigranular* (grains of approximately the same size); *inequigranular* (grains of markedly unequal sizes); *porphyritic*; *interlocking* (in which grains with irregular boundaries interlock by mutual penetration); interlocking and porphyritic textures are characteristic of granites and marbles; *clastic* (naturally cemented fragmental grains but without mosaic or interlocking relations; this texture is typical of sandstones and some limestones); *mosaic* (closely packed grains with smooth to moderately irregular, noninterlocking mutual boundaries); *granoblastic* (a megascopically granular mosaic texture in which the grains are tightly compacted and the minerals are dominantly equidimensional and present irregular mutual boundaries; mosaic and granoblastic textures are characteristic of metamorphic rocks). **C 119, C18**

texture, n—a surface pattern as compared with a smooth finish. **C 1154, C17**

texture—in wood anatomy, the sizes, distribution, and proportional volumes of the cellular elements of which wood is composed; often used interchangeably with grain. Depending on the relative size and distribution of the cellular elements, texture may be coarse (open grain) or fine, even, or uneven. **D 9, D07**

texture, n—the surface appearance and hand of a textile. **D 123, D13**

texture, n—in *pile yarn floor coverings*, in the case of pile yarn floor coverings, the detailed configuration of loops, cut pile ends, and individual fibers in the pile. **D 123, D13**

texture—of soil and rock, geometrical aspects consisting of size, shape, arrangement, and crystallinity of the component particles and of the related characteristics of voids. **D 653, D18**

texture—the arrangement in space of the components of a rock body and of the boundaries between these components. (ISRM) **D 653, D18**

texture, n—a surface pattern as distinguished from a smooth finish. **D 2946, C17**

texture—the geometric aspects of the component particles of a sediment deposit or rock including size, shape, and arrangement. **D 4410, D19**

texture, n—the surface appearance and hand of a textile. **D 4850, D13**

texture, n—in *pile yarn floor coverings*, in the case of pile yarn floor coverings, the detailed configuration of loops, cut pile ends, and individual fibers in the pile. **D 5684, D13**

texture, n—the rheological and structural (geometric and surface) attributes of a product perceptible by the kinesthetic, tactile, visual, and auditory senses. **E 253, E18**

texture, n—the visible surface structure depending on the size and

- organization of small constituent parts of a material; typically, the surface structure of a woven fabric. **E 284**, E12
- texture, *n***—any surface appearance as contrasted to a smooth surface. **E 2110**, E06
- texture (cube)*—See **preferred orientation**. **E 7**, E04
- textured, *adj***—*inevaluating the color of a surface*, structural quality of a surface determined by the topography of its constituents. **D 2946**, C17
- textured boards**—boards that are factory produced with a nonplanar surface by, for example, molding, embossing, machining, or post-forming or any combination of these processes. **D 1554**, D07
- texture (deformation)*—See **preferred orientation**. **E 7**, E04
- textured glass yarn, *n***—a yarn processed from continuous filament yarn in such a manner to induce bulk to the yarn by disorientation of the filaments. **D 123**, D13
- textured glass yarn, *n***—a yarn processed from continuous filament yarn in such a manner to induce bulk to the yarn by disorientation of the filaments. **D 7018**, D13
- textured product, *n***—*in cooling tower fill*, a product with bas-relief motifs that extend the external surface of a sheet sufficiently to increase its heat transfer capacity by at least 10 % under conditions of turbulent flow. **D 2946**, C17
- textured products, *n***—*in cooling tower fill*, those with bas-relief motifs that extend the external surface of a sheet sufficiently to increase its heat transfer capacity by at least 10 % under conditions of turbulent flow. **C 1154**, C17
- texture finish, *n***—any applied decorative finish other than smooth. **C 11**, C11
- texture shape factor, *n***—average of weighted sum of the ratios of amplitude to wavelength, as determined from an amplitude versus wavenumber (reciprocal of wavelength) spectrum. **E 867**, E17
- thalweg**—the line connecting the lowest or deepest point along a stream bed, valley, or reservoir, whether underwater or not. **D 4410**, D19
- thaw basin**—a depression of the permafrost table created by natural or artificial thawing. **D 7099**, D18
- thaw bulb**—a more-or-less symmetrical area of thaw in permafrost surrounding a man-made structure on or in permafrost and maintained at temperatures above 0°C. **D 7099**, D18
- thaw consolidation**—(1) the process by which a reduction in volume and increase in density of a soil mass occurs, following thaw, in response to the escape of water under the weight of the soil itself and/or an applied load; (2) the process by which settlement due to thaw (settlement) is impeded by flow of water from the soil. Thaw consolidation may proceed for many years. **D 7099**, D18
- thaw consolidation ratio**—a dimensionless ratio describing the relationship between the rate of thaw and the rate of consolidation of a thawing soil, which is considered to be a measure of the relative rates of generation and expulsion of excess water during thaw. **D 7099**, D18
- thawed ground**—previously frozen ground in which all of the ice has melted. **D 7099**, D18
- thawing front**—the advancing boundary between thawed ground and frozen ground. **D 7099**, D18
- thawing index**—the number of degree-days between 0°C (32°F) and the mean temperature each day on the cumulative degree-day time curve for one thawing season. The **air thawing index** is determined from temperatures measured about 1.4 m (4.5 ft) above the ground surface, while that determined from temperatures measured at, or immediately below, a surface is known as the **surfacing thawing index**. **D 7099**, D18
- thawing (of frozen ground)**—the melting of the ice in frozen ground, usually as the result of an increase in temperature. **D 7099**, D18
- thaw penetration**—the downward movement of the thawing front during the thawing of frozen ground. **D 7099**, D18
- thaw-sensitive permafrost**—perennially frozen ground which, upon thawing, will experience significant thaw settlement and suffer loss of strength to a value significantly lower than that for similar material in an unfrozen condition. **D 7099**, D18
- thaw settlement**—the generally differential downward movement of the ground surface resulting from escape of water on melting of excess ice in the soil and the thaw consolidation of the soil mass. **D 7099**, D18
- thaw sink**—a closed thaw basin with subterranean drainage. **D 7099**, D18
- thaw slumping**—a type of mass movement caused by the conversion of ice into water in a soil by ground thaw, creating the kind of landslide that most closely resembles the more temperate climate earth flow with a well-developed breakaway scarp front. **D 7099**, D18
- thaw stable permafrost**—perennially frozen soils that do not, on thawing, show loss of strength below normal long-time thawed values, or result in ground settlement. **D 7099**, D18
- thaw strain**—the amount that frozen ground compresses upon thawing. **D 7099**, D18
- thaw unconformity**—a boundary sometimes identified in perennially frozen ground, which represents the base of a relict active layer as well as the corresponding earlier permafrost table. **D 7099**, D18
- thaw unstable permafrost**—perennially frozen soils that show, on thawing, a significant loss of bearing strength, or below normal, long-time thawed values, and/or significant grounds settlement, as a direct result of the melting of the excess ice in the soil. **D 7099**, D18
- thaw weakening**—the reduction in shear strength due to the decrease in effective stresses resulting from the generation and slow dissipation of excess pore pressures when frozen soils containing ice are thawing. **D 7099**, D18
- the atmosphere*—See **atmosphere**. **D 1356**, D22
- σ_{th-EHE} —threshold stress—test conducted in a specified environment—geometry dependent **F 2078**, F07
- theoretical carbon dioxide (ThCO₂), *n***—the amount of CO₂ which could theoretically be produced from the complete biological oxidation of all of the carbon in a test material. **D 4175**, D02
- theoretical CO₂, *n***—the amount of CO₂ which could in theory be produced from the complete oxidation of all the carbon in a material. **D 4175**, D02
- theoretical CO₂ (carbon dioxide), *n***—the amount of carbon dioxide which could hypothetically be produced from the complete biological oxidation of all the carbon in a material. **D 6384**, D02
- theoretical elastic stress concentration factor (or stress concentration factor) *k_t***—the ratio of the greatest stress in the region of a notch or other stress concentrator as determined by the theory of elasticity (or by experimental procedures that give equivalent values) to the corresponding nominal stress. **E 1823**, E08
- theoretical O₂, *n***—the amount of oxygen which would theoretically be required to completely oxidize a material. **D 4175**, D02
- theoretical O₂(oxygen), *n***—the amount of oxygen that is theoretically required to oxidize a material. **D 4175**, D02
- theoretical O₂(oxygen), *n***—the amount of oxygen that is theoretically required to oxidize a material. **D 6384**, D02
- theoretical plate, *n***—the section of a column required to achieve thermodynamic equilibrium between a liquid and its vapor. **D 4175**, D02
- theoretical time curve*—see **consolidation time curve**. **D 653**, D18
- thermal analysis (TA), *n***—a group of techniques in which a physical property of a substance is measured as a function of temperature or time while the substance is subjected to a controlled-temperature program. (ICTAC) **E 473**, E37
- thermal and oxidative stability, *n***—*in lubricating oils used for manual transmissions and final driveaxles*, a lack of deterioration of the lubricating oil under high-temperature conditions that is observed as viscosity increase of the lubricating oil, insolubles formation in the lubricating oil, or deposit formation on the parts, or a combination thereof. **D 4175**, D02

thermal arrest—See **arrest**.

E 7, E04

thermal blanket, *n*—a blanket woven so that cells or openings are created in the fabric so that air warmed by the body is trapped between the yarns, such as textured or leno weaves; this product can be napped or unnapped. D 123, D13

thermal bonded batting, *n*—a textile filling material which contains low-melting point fibers or polymers which, when heated, fuse the batting materials together. D 123, D13

thermal bonded batting, *n*—a textile filling material which contains low-melting point fibers or polymers which, when heated, fuse the batting materials together. D 7022, D13

thermal bonded batting, *n*—a textile filling material which contains low-melting point fibers or polymers which, when heated, fuse the batting materials together; a textile filling material which contains low-melting point fibers or polymers which, when heated, fuse the batting materials together. D 7023, D13

thermal break, *n*—a solid or cellular material or combination of materials of low thermal transmission placed between components of high thermal transmission in order to reduce the heat flow across the assembly. D 883, D20

thermal capacity, *n*—the quantity of heat required to change the temperature of the body one degree. For a homogeneous body, it is the product of mass and specific heat. For a nonhomogeneous body, it is the sum of the products of mass and specific heat of the individual constituents. (May also be seen as heat capacity.) (In SI units: J/K) (In inch-pound units: Btu/F) C 168, C16

thermal capacity—the amount of thermal energy that can be stored in a storage device during a period of time and for a specific set of values (that is, initial temperature of the storage device, the temperature of the entering fluid, and the mass flow rate of fluid through the storage system). E 772, E44

thermal capacity, theoretical—the amount of energy that can be stored in the storage device if all its components undergo an increase in temperature from the original value to a final value. E 772, E44

thermal character, *n*—apparent difference in temperature of the fabric and the skin of the observer touching it. (See also .) D 123, D13

thermal character, *n*—that property of a fabric that makes it feel warm to the touch. D 123, D13

thermal character, *n*—that property of a fabric that makes it feel warm to the touch. D 4850, D13

thermal conditioning—adjusting the average temperature and reducing the thermal gradients in glass. C 162, C14

thermal conductance, Γ —time rate of heat flow through a unit area of a body induced by a unit temperature difference between the body surfaces. E 1142, E37

thermal conductivity, *n*—time rate of unidirectional heat transfer per unit area, in the steady-state, between parallel planes separated by unit distance, per unit difference of temperature of the planes. D 123, D13

thermal conductivity—the quantity of heat that will flow through a unit area of a substance in unit time under a unit temperature gradient. It is commonly expressed in joules per second per meter per degree K. D 7099, D18

thermal conductivity, λ —time rate of heat flow, under steady conditions, through unit area, per unit temperature gradient in the direction perpendicular to the area. E 1142, E37

thermal conductivity vacuum gage—a vacuum gage containing two surfaces at different temperatures between which heat can be transported by the gas molecules so that changes in the temperature (or in the heating power required to maintain constant temperature) of one of the surfaces can be correlated with the gas pressure. Various types of thermal conductivity gages are distinguished according to the method of indicating the temperature change. The common types are listed below:

(1) *Pirani Gage*—An increase of pressure from the zero point causes a decrease in the temperature of a heated filament of material having a large temperature coefficient of resistance

thus unbalancing a Wheatstone bridge circuit (or the circuit is adjusted to maintain the filament temperature constant).

(2) *Thermocouple Gage*—The decrease in temperature of a heated filament as the pressure rises is indicated by decreased emf in a thermocouple circuit having the junction in thermal contact with the center of the heated filament.

(3) *Thermistor Gage*—A form of Pirani gage employing a thermistor as the heated element.

(4) *Bimetallic Strip Gage*—Deflection of a bimetallic strip with changing temperature indicates the changes in pressure. E 1316, E07

thermal contraction crack—a tensile fracture resulting from thermal stresses in frozen ground. D 7099, D18

thermal-contraction-crack ice—ice formed in thermal contraction cracks in the ground. D 7099, D18

thermal curve—in *thermal analysis*, plot of a dependent variable (such as, heat flow or weight loss) against an independent variable, time or temperature, under defined time-temperature conditions. E 1142, E37

thermal decomposition, *n*—a process of extensive chemical species change caused by heat (different from thermal degradation, *q.v.*; compare **pyrolysis**). E 176, E05

thermal degradation, *n*—irreversible and undesirable change in the properties of a material due to exposure to heat. D 1566, D11

thermal degradation, *n*—a process whereby the action of heat or elevated temperature on a material, product, or assembly causes a loss of physical, mechanical, or electrical properties (different from **thermal decomposition**, *q.v.*). E 176, E05

thermal diffusivity—the ratio of the thermal conductivity to the volumetric heat capacity. D 7099, D18

thermal diffusivity—ratio of thermal conductivity of a substance to the product of its density and specific heat capacity. E 1142, E37

thermal electromotive force—the voltage generated when one junction of two dissimilar metal wires is at a different temperature than the other junction. E 7, E04

thermal electromotive force—voltage generated when one junction of two dissimilar electrical conductors is at a different temperature than the other junction. E 1142, E37

thermal electromotive force (thermal emf), *n*—the net emf set up in a thermocouple under conditions of zero current. (Same as **Seebeck emf**). E 344, E20

thermal end point—in testing of thermal protective materials, the point of where the sensor response on the recorder chart intersects the human tissue burn tolerance criteria overlay. F 1494, F23

thermal endurance—the relative ability of glassware to withstand thermal shock. C 162, C14

thermal endurance, *n*—an expression for the stability of an electrical insulating material, or a simple combination of materials, when maintained at elevated temperatures for extended periods of time. D 1711, D09

thermal endurance—property of a material to resist changes in chemical, physical, mechanical, or electrical properties upon exposure to temperatures for extended periods of time. E 1142, E37

thermal erosion—the erosion of ice-rich permafrost by the combined thermal and mechanical action of moving water or air (sublimation). D 7099, D18

thermal-erosional cirque—the unusually steep horseshoe-shaped headwall of a retrogressive thaw slump. D 7099, D18

thermal-erosional niche—a recess at the base of a river bank or coastal bluff produced by thermal erosion of ice-bonded permafrost. D 7099, D18

thermal expansion, *n*—in refractories, the reversible change in size of materials due to temperature changes. C 71, C08

thermal expansion—See **mean coefficient of thermal expansion; percent linear thermal expansion**. C 242, C21

thermal expansion—the increase in the dimensions or the volume of a body due to a change in temperature. (See **coefficient of thermal expansion**.) E 7, E04

thermal expansion—see **coefficient of linear thermal expansion**.

E 1142, E37

thermal expansion (or contraction) coefficient—the volume change per unit volume of a substance due to a one degree change in its temperature.

D 7099, D18

thermal hazard—relates to the laboratory test methods employed to measure thermal characteristics and to predict burn injury potential.

F 1494, F23

thermal imaging transfer ribbon, *n*—plastic film or other material, upon which a dye or pigmented coating is applied; imaging results when a thermal printhead transfers the coating onto a suitable substrate or receptor media.

F 1623, F05

thermal insulation, *n*—a material or assembly of materials used to provide resistance to heat flow.

C 168, C16

thermal insulation—a material or assembly of materials used primarily to provide resistance to heat flow.

C 634, E33

thermal insulation—a material applied to reduce the flow of heat.

D 1079, D08

thermal insulation, *n*—the resistance to dry heat transfer via conduction, convection, and radiation.

F 1494, F23

thermal insulation board, *n*—a system component of a specific type and density that functions to reduce heat flow through the wall and serves as the surface to receive the base coat.

E 2110, E06

thermal insulation system, *n*—applied or installed thermal insulation complete with any accessories, vapor retarder, and facing required.

C 168, C16

thermalization—the process of slowing neutron velocities by permitting the neutrons to come to thermal equilibrium with a moderating medium.

E 1316, E07

thermalization factor—the inverse ratio of the thermal neutron flux obtained in a moderator, per source neutron.

E 1316, E07

thermal life, *n*—the time necessary for a specific property of a material, or a simple combination of materials, to degrade to a defined end point when aged at a specified temperature.

D 1711, D09

thermal life—the time necessary for a property of a material or system to degrade to a defined end-point at a specified temperature.

E 1142, E37

thermal life curve, *n*—a graphical representation of thermal life at a specified aging temperature in which the value of a property of a material, or a simple combination of materials, is measured at room temperature and the values plotted as a function of time.

D 1711, D09

thermally bonded seam, *n*—a seam formed by heat and pressure. (Compare **glued seam**, **sewn seam**, **stapledseam**.)

D 123, D13

thermally bonded seam, *n*—*in home sewing*, a seam formed by the use of a heat-sensitive material that fuses two material sections together along a seam line when heat and pressure are applied. (Compare **glued seam**, **sewn seam**, **stapledseam**.)

D 4965, D13

thermally foamed plastic—a cellular plastic produced by applying heat to effect gaseous decomposition or volatilization of a constituent.

D 883, D20

thermally foamed plastic—a cellular plastic produced by applying heat to effect gaseous decomposition or volatilization of a constituent. (D20)

F 412, F17

thermally induced phase-separation membrane formation—process in which a dissolved polymer is precipitated or coagulated by controlled cooling to form a membrane structure.

D 6161, D19

thermally stimulated current analysis, *n*—a technique in which the current generated when dipoles change their alignment in a substance is measured as a function of temperature or time while the substance is subjected to a controlled-temperature program in a specified atmosphere. (ICTAC)

NOTE—The technique can be applied in several ways: for example; the substance can be pre-conditioned by heating and cooling in a nonscillating electric field to create aligned, frozen dipoles. The

substance may then generate a thermally stimulated current during subsequent heating with no field applied.

E 473, E37

thermally thick, *n*—the thickness of a medium that is large enough to have the predominate thermal (temperature) effects experienced within that distance, that is, negligible heat is lost from its unexposed side.

E 176, E05

thermal neutrons—neutrons in thermal equilibrium with the medium through which they are traveling or diffusing.

E 170, E10

thermal neutrons—neutrons having energies ranging between 0.005 eV and 0.5 eV; neutrons of these energies are produced by slowing down fast neutrons until they are in equilibrium with the moderating medium at a temperature near 20°C.

E 1316, E07

thermal operating level, *n*—the operating condition at which the radiance of the heat source produces a specified constant heat flux to some specified position at the specimen surface.

E 176, E05

thermal (or flamed)—a roughly textured surface produced by brief exposure to a high-temperature flame resulting in exfoliation of the stone surface.

C 119, C18

thermal pile(s)—structural piling modified to passively remove heat from the ground whenever the ambient air temperature is lower than the ground temperature. See: **thermopiles**, **thermoprobe**, **thermosyphon**, **thermo tube**.

D 7099, D18

thermal precipitation—See **precipitation**.

D 1356, D22

thermal processing—the application of heat to achieve a reduced level of microbiological activity.

F 17, F02

thermal processing—See **Terminology F 17**.

F 1327, F02

thermal profile, *n*—temperatures at which specific color phenomena occur in a liquid crystal thermometer.

E 344, E20

thermal properties of frozen ground—the properties of the ground governing the flow of heat through it, and its freezing and thawing conditions. These include: thermal conductivity, heat capacity (specific heat), and the latent heat of fusion.

D 7099, D18

thermal radiation, *n*—process of emission in which the radiant energy originates in the thermal agitation of the particles of matter (atoms, molecules, ions).

NOTE—The terms “thermal radiation” and, in German “Temperaturstrahlung” apply not only to the process of emission, but also to the radiation itself.

E 349, E21

thermal radiator, *n*—source emitting by thermal radiation. in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

E 349, E21

thermal regime of the ground—a general term encompassing the temperature distribution and heat flows in the ground and their dependence upon time.

D 7099, D18

thermal resistance, *n*—the reciprocal of thermal transmittance.

D 123, D13

thermal resistance, **R**, *n*—the difference in temperature which will develop under a given steady state heat flow between two parallel unit area surfaces for a given material thickness.

C 1154, C17

thermal resistance, **R**, *n*—*for asbestos-cement plastic-foam core insulating panels*, the thermal gradient that will develop under a given steady state heat flow between two parallel unit area surfaces for a given material thickness.

D 2946, C17

thermal resistance, **R**—Under steady-state conditions, the temperature difference required to produce a unit of heat flux through a specimen.

E 1142, E37

thermal resistivity, *n*—the reciprocal of thermal conductivity.

D 123, D13

thermal resistivity, **r**—under steady-state conditions, the temperature gradient, in the direction perpendicular to the isothermal surface, per unit heat flux.

E 1142, E37

thermal resolution—the smallest apparent temperature difference between two blackbodies that can be measured by an infrared sensing device.

E 1316, E07

thermal response, dynamic,, *n*

thermal response, dynamic,, *n*—the relationship between the thermal image optical density (*y*-axis) versus printhead energy (*x*-axis); printhead energy density (millijoules/square millimetres) is a function of printhead power times the pulse width (milliseconds) divided by the area of the printhead dot (square millimetres).

F 1623, F05

thermal shock—a rapid change in temperature imposed on a glass body. **C 162, C14**

thermal shock—a condition of stress brought about by a large temperature difference across a body or glaze. (See also **thermal shock failure; thermal shock resistance testing.**) **C 242, C21**

thermal shock, *n*—a large and rapid temperature change, resulting in large temperature differences within or across a body. **C 1145, C28**

thermal shock—the stress-producing phenomenon resulting from sudden temperature drops in a roof membrane when, for example, a rain shower follows brilliant sunshine. **D 1079, D08**

thermal shock failure—mechanical failure of a glaze or body, as a result of the stress caused by a large temperature difference across the ware. **C 242, C21**

thermal shock resistance testing—the act of exposing ware to a rapid temperature change to determine the temperature difference a glaze or body can withstand without mechanical failure.

$$\Delta T_{\max} = \sigma/T\alpha$$

where:

σ = stress,

E = Young's Modulus, and

α = mean coefficient of thermal expansion.

C 242, C21

thermal shrinkage, *n*—of textile yarns and cords, contraction in length caused by heat **D 123, D13**

thermal shrinkage, *n*—of textile yarn and cords, contraction in length caused by heat. **D 6477, D13**

thermal shrinkage force, *n*—that force induced when a restrained material is restricted from shrinking upon exposure to heat.

D 6477, D13

thermal shrinkage force tester, *n*—an apparatus that measures the force achieved when a yarn or similar specimen, held at a constant (fixed) length, is subjected to a temperature above that at which the specimen was mounted in the apparatus. **D 6477, D13**

thermal spalling—the breaking of rock under stresses induced by extremely high temperature gradients. High-velocity jet flames are used for drilling blast holes with this effect. (ISRM) **D 653, D18**

thermal spraying—a group of processes wherein finely divided metallic or nonmetallic materials are deposited in a molten or semimolten condition to form a coating. (The coating material may be in the form of powder, ceramic rod, wire, or molten materials.) **G 15, G01**

thermal stability, *n*—the resistance to permanent changes in properties caused solely by heat. **D 4175, D02**

thermal stability—resistance to permanent changes in property caused solely by heat, (D 2160, D02). **E 1142, E37**

thermal storage medium—see **storage medium, thermal.**

E 772, E44

thermal stress—the stress produced by a temperature differential within a glass body. **C 162, C14**

thermal talik—a layer or body of unfrozen ground in a permafrost area in which the temperature is above 0°C due to the local thermal regime of the ground. **D 7099, D18**

thermal transmittance, *n*—time rate of unidirectional heat transfer per unit area, in the steady-state, between parallel planes, per unit difference of temperature of the planes. **D 123, D13**

thermal transmittance, *n*—time rate of unidirectional heat transfer per unit area in the steady state, between parallel planes, per unit difference of temperature of the planes. **E 1142, E37**

thermal treatment—a controlled heating; time at maximum temperature-cooling cycle as needed to satisfy the property and grain structure requirements of the temper. **B 846, B05**

thermal vaporizer—an apparatus consisting of a container for chemical and a heater to maintain the vessel at a temperature sufficiently high to accelerate evaporation of the pesticide. The apparatus may contain a blower to disperse the pesticide vapor into a treated area or may rely upon natural turbulent diffusion for dispersion. **E 1102, E35**

thermionic cathode gun—(hot cathode gun). An electron gun which derives its electrons from a heated filament which may also serve as the cathode. **E 7, E04**

thermionic emission—the ejection of a stream of electrons from a hot cathode, usually under the influence of an electrostatic field. **E 7, E04**

thermistor, *n*—a semiconductor, the primary function of which is to exhibit a monotonic decrease in electrical resistance with an increase in sensor temperature, that is, a semiconductor for which the temperature coefficient of resistance is negative and exhibits neither discontinuities nor changes in sign. **E 344, E20**

thermistor, *n*—a temperature sensor employing a semiconductor that exhibits a large continuous change in electrical resistance with a change in sensor temperature, that is, a semiconductor for which the temperature coefficient of resistance is either negative or positive and exhibits no discontinuities. **E 344, E20**

thermoanalytical, *adj*—of, or pertaining to, thermal analysis. (IC-TAC) **E 473, E37**

thermochemical treatment, *n*—a heat treatment carried out in a medium suitably chosen to produce a change in the chemical composition of the steel object by exchange with the medium. **A 941, A01**

thermochromism, *n*—a change in color with temperature change. **E 284, E12**

thermocouple—two dissimilar electrical conductors so joined as to produce a thermal electromotive force when the junctions are at different temperatures. **E 7, E04**

thermocouple, *n*—in thermometry, the sensor of a thermoelectric thermometer, consisting of electrically conducting circuit elements of two different thermoelectric characteristics joined at a junction. **E 344, E20**

thermocouple—Two dissimilar electrical conductors joined as to produce a thermal electromotive force. **E 1142, E37**

thermocouple assembly, *n*—an assembly consisting of two thermocouple elements and one or more associated parts such as terminal block, connection head, and protecting tube. **E 344, E20**

thermocouple assembly—the cut-to-length, finished assembly consisting of thermocouple material with thermoelements having one end joined in a measuring junction. The assembly has the sheath closed at the measuring end and has a moisture seal at the reference junction end of the sheath. The assembly does not include a reference junction but may include a thermocouple connector. **E 344, E20**

thermocouple calibration, *n*—the process of determining the emf developed by a thermocouple with respect to temperature established by a standard. **E 344, E20**

thermocouple calibration point—a temperature, established by a standard, at which the emf developed by a thermocouple is determined. **E 344, E20**

thermocouple connector, *n*—as described in Specification E 1129, a quick-connect plug and jack using matching or compensating materials that have Seebeck coefficients like the extension wires or the thermoelements they connect. The thermocouple connector will match the Seebeck coefficient of the thermoelements over only a limited temperature range. **E 344, E20**

thermocouple gage—see **thermal conductivity vacuum gage.** **E 1316, E07**

thermocouple type, *n*—a nominal thermoelectric class of thermoelement materials that, used as a pair, have a standardized relationship and tolerance between relative Seebeck EMF and temperature, physical characteristics, and an assigned type letter designator and color code. **E 344, E20**

thermocouple vacuum gage—a thermal conductivity or hot-wire

gage in which the temperature of an electrically heated fine wire varies as the thermal conductivity of the residual gas. The thermocouple measures the temperature change. **E 7, E04**

thermodilatometry, *n*—a technique in which a dimension of a substance under negligible load is measured as a function of temperature while the substance is subjected to a controlled-temperature program in a specified atmosphere. (ICTAC)

NOTE—Linear thermodilatometry and volume thermodilatometry are distinguished on the basis of the dimension measured. **E 473, E37**

thermodynamic dew-point temperature—See **temperature**.
D 1356, D22

thermodynamic frost-point temperature—See **temperature**.
D 1356, D22

thermodynamic frost-point temperature—See **temperature**.
D 1356, D22

thermodynamic wet-bulb temperature—See **temperature**.
D 1356, D22

thermoelastic martensitic transformation, *n*—a diffusion-less thermally reversible phase change characterized by a change in crystal structure. **F 2005, F04**

thermoelectric effect error, *n*—the error caused by a thermal emf in the measurement circuit as a result of dissimilar metals and temperature gradients in the circuit. **E 344, E20**

thermoelectric power, *n*—the rate of change of thermal emf with temperature at a given temperature. (Same as **Seebeck coefficient**).
E 344, E20

thermoelectric pyrometer—a device with which temperatures are measured by utilizing the thermoelectric effects. In its simplest form, it consists of a thermocouple of two dissimilar metals which develop an emf when the junctions are at different temperatures and an instrument for measuring the emf developed by the thermocouple. **E 7, E04**

thermoelectric thermometer, *n*—thermometer for which the thermometric quantity is an emf produced by the Seebeck effect.
E 344, E20

thermoelement, *n*—one of the circuit elements comprising a thermocouple. **E 344, E20**

thermoelement, *n*—one of the two dissimilar electrical conductors comprising a thermocouple. **E 344, E20**

thermogalvanic corrosion—the corrosive effect resulting from the galvanic cell caused by a thermal gradient across the metal surface.
G 15, G01

thermogram—see **thermal curve**. **E 1142, E37**

thermogram—a visual image which maps the apparent temperature pattern of an object or scene into a corresponding contrast or color pattern. **E 1316, E07**

thermography, infrared—the process of displaying variations of apparent temperature (variations of temperature or emissivity, or both) over the surface of an object or a scene by measuring variations in infrared radiance.

NOTE—In general, *passive thermography* refers to examination of an object or system during its normal operational mode, without the application of any additional energy source for the express purpose of generating a thermal gradient in the object or system; *active thermography* refers to the examination of an object upon intentional application of an external energy source. The energy source (active or passive) may be a source of heat, mechanical energy (vibration or fatigue testing), electrical current, or any other form of energy. **E 1316, E07**

thermogravimetric analysis, (TGA), *n*—a technique in which the mass of a substance is measured as a function of temperature or time while the substance is subjected to a controlled-temperature program in a specified atmosphere. (ICTAC)

NOTE—The record is the thermogravimetric or TG curve. This definition is similar to the ICTAC definition of the term *thermogravimetry*. **E 473, E37**

thermogravimetry (TG), *n*—see **thermogravimetric analysis**.
E 473, E37

thermo-hydrometer, *n*—a glass hydrometer having a thermometer combined with a hydrometer in one instrument. **E 344, E20**

thermokarst—(1) karst topography (areas of depression and/or subsidence) resulting from the thawing of ice-rich permafrost or massive ice; (2) the process by which characteristic landforms result from the thawing of ice-rich permafrost. **D 7099, D18**

thermokarst lake—a lake occupying a closed depression formed by settlement of the ground following the thawing of ice-rich permafrost or the melting of massive ice. **D 7099, D18**

thermokarst mound—a hummock remaining after melting of the ice wedges surrounding an ice-wedge polygon. **D 7099, D18**

thermokarst terrain—the often irregular topography resulting from the melting of excess ground ice and subsequent thaw settlement. **D 7099, D18**

thermoluminescence dosimeter (TLD)—a dosimeter made of a material that stores energy when irradiated by ionizing radiation and then releases that energy in the form of visible light when heated. The light output of heated TLD is measured photometrically. TLDs are secondary-standard dosimetry systems. Examples of commonly available TLDs include lithium fluoride (LiF), calcium fluoride with various trace activators (such as CaF₂ : Mn and CaF₂ : Dy), calcium sulfate (CaSO₄ : Mn and CaSO₄ : Dy), and lithium borate (Li₂B₄O₇ : Mn). **E 170, E10**

thermomagnetometry, *n*—a family of thermoanalytical techniques in which a magnetic characteristic of a substance is measured as a function of temperature or time while the substance is subjected to a controlled-temperature program in a specified atmosphere. (ICTAC)

NOTE—Thermogravimetric analysis with a magnetic field acting on the specimen is the most common example. **E 473, E37**

thermomechanical analysis, (TMA), *n*—a technique in which the deformation of a substance under nonoscillatory load is measured as a function of temperature or time while the substance is subjected to a controlled-temperature program in a specified atmosphere. (ICTAC)

NOTE—The load on the substance may be compressive, tensile, flexural or torsional. When the applied load is too low to cause deformation, TMA measures a dimension of the substance and in this mode is called **thermodilatometry**. **E 473, E37**

thermomechanical process, *n*—controlled thermal and deformation treatment performed at an elevated temperature. **E 7, E04**

thermometric fixed point, *n*—fixed point useful in the practice of thermometry. **E 344, E20**

thermomicroscopy, *n*—see **thermoptometry**. **E 473, E37**

thermo-osmosis—the process by which water is caused to flow in small openings of a soil mass due to differences in temperature within the mass. **D 653, D18**

thermopile—a trade name for a load-carrying piling that is a thermosyphon. The pile shell is used to contain the thermosyphon working fluid. **D 7099, D18**

thermopile, *n*—a number of similar thermocouples connected in series, arranged so that alternate junctions are at the reference temperature and at the measured temperature, to increase the output for a given temperature difference between reference and measuring junctions. **E 344, E20**

thermopile—a number of temperature sensors connected in series and arranged such that there is an increase in output signal for a given temperature difference between alternate junctions maintained at a reference temperature and the measured temperature. **E 1142, E37**

thermoplastic—any one of a group of materials capable of being repeatedly softened or melted by increases in temperature followed by subsequent solidification on cooling. **C 904, C03**

thermoplastic, *n*—a plastic that repeatedly can be softened by heating and hardened by cooling through a temperature range characteristic of the plastic, and that in the softened state can be shaped by flow into articles by molding or extrusion. **D 883, D20**

thermoplastic, *adj*

thermoplastic, *adj*—capable of being repeatedly softened by heating and hardened by cooling through a temperature range characteristic of the plastic, and that in the softened state can be shaped by flow into articles by molding or extrusion for example.

D 883, D20

thermoplastic, *adj*—capable of being repeatedly softened by heat and hardened by cooling.

D 907, D14

thermoplastic, *n*—polymer or copolymer capable of being softened by heating and hardened by cooling.

D 907, D14

thermoplastic, *n*—a polymer that repeatedly can be softened by heating and hardened by cooling through a temperature range characteristic of the polymer, and in the softened state can be shaped into articles.

D 1566, D11

thermoplastic, *adj*—a property of a polymer that permits it to be repeatedly softened by heating and hardened by cooling through a characteristic temperature range, and in the softened state can be shaped into articles.

D 1566, D11

thermoplastic—a plastic that repeatedly can be softened by heating and hardened by cooling through a temperature range characteristic of the plastic, and that in the softened state can be shaped by flow into articles by molding or extrusion.

D 3878, D30

thermoplastic—a polymer material that will repeatedly soften when heated and harden when cooled.

E 631, E06

thermoplastic—a polymer material that will repeatedly soften when heated and harden when cooled.

E 1749, E06

thermoplastic, *n*—a plastic that can be repeatedly softened by heating and hardened by cooling through a temperature range characteristic of the plastic, and that in the softened state can be shaped by flow into articles by molding or extrusion. (D20)

F 412, F17

thermoplastic, *adj*—capable of being repeatedly softened by heating and hardened by cooling through a temperature range characteristic of the plastic, and that in the softened state can be shaped by flow into articles by molding or extrusion for example. (D20)

F 412, F17

thermoplastic—capable of being repeatedly softened by heating and hardened by cooling through a temperature range characteristic of the plastic, and that in the softened state can be shaped by flow into articles by molding or extrusion.

F 869, F08

thermoplastic, *n*—a plastic that repeatedly can be softened by heating and hardened by cooling through a temperature range characteristic of the plastic, and that in the softened state can be shaped by flow into articles by molding or extrusion.

F 1251, F04

thermoplastic elastomer, *n*—a material having the general properties of an elastomer and capable of being repeatedly softened by heat and hardened to shape by cooling without significant degradation of the polymer system.

C 717, C24

thermoplastic elastomers (TPE)—a diverse family of rubber-like materials that, unlike conventional vulcanized rubbers, can be processed and recycled like thermoplastic materials.

D 883, D20

thermoplastic elastomer (TPE), *n*—a diverse family of rubber-like materials, that, unlike conventional vulcanized rubbers, can be processed and recycled like thermoplastic materials.

D 1566, D11

thermoplastic piping compound—a mixture of a thermoplastic polymer with other ingredients such as fillers, stabilizers, catalysts, processing aids, lubricants, modifiers, pigments, or curing agents, but not plasticizers except in the case of CAB piping compound.

F 412, F17

thermoplastic vulcanizate, *n*—a thermoplastic elastomer with a chemically cross-linked rubbery phase, produced by dynamic vulcanization.

D 1566, D11

thermoplastic weld—the joining together of two plastic surfaces by a combination of heat and pressure, with or without filler material.

C 904, C03

thermoprobe—a trade name for a thermosyphon that is not a load-carrying piling.

D 7099, D18

thermoptometry, *n*—a family of techniques in which an optical characteristic of a substance is measured as a function of temperature or time while the substance is subjected to a controlled-temperature program in a specified atmosphere. (ICTAC)

NOTE—Measurement of total light, light of specific wavelength(s), refractive index, and luminescence leads, respectively, to *thermophotometry*, *thermospectrometry*, *thermorefractometry*, and *thermoluminescence*. Observations under the microscope lead to *thermomicroscopy*.

E 473, E37

thermoset, *n*—a plastic that, after having been cured by heat or other means, is substantially infusible and insoluble.

D 883, D20

thermoset, *adj*—pertaining to the state of a plastic in which it is substantially infusible.

D 883, D20

thermoset, *n*—monomer, polymer or copolymer, which when cured, changes into a substantially infusible and insoluble product.

D 907, D14

thermoset—a class of polymers that, when cured using heat, chemical, or other means, changes into a substantially infusible and insoluble material.

D 3878, D30

thermoset—a polymer material that will undergo or has undergone a chemical reaction by the action of heat, catalysts, ultraviolet light, etc., leading to a relatively infusible state.

E 631, E06

thermoset—a polymer material that will undergo or has undergone a chemical reaction by the action of heat, catalysts, ultraviolet light, etc., leading to a relatively infusible state.

E 1749, E06

thermoset, *n*—a plastic that, when cured by application of heat or chemical means, changes into a substantially infusible and insoluble product. (D20)

F 412, F17

thermoset elastomer, *n*—an elastomeric material that attains its intended properties by an irreversible cross-linking reaction caused by heat alone, heat with a cross-linking agent, chemical interaction, or by radiation; whereby after cross-linking, any reprocessing with heat and pressure will severely degrade the material.

C 717, C24

thermoset plastic, *n*—a plastic that, after having been cured by heat or other means, is substantially infusible and insoluble.

F 1251, F04

thermosetting, *adj*—capable of being changed into a substantially infusible or insoluble product when cured by heat or other means.

D 883, D20

thermosetting, *n*—capable of being changed into a substantially infusible and insoluble product when cured by heat or by other means such as radiation, catalysts, etc.

D 907, D14

thermosetting, *adj*—capable of being changed into a substantially infusible or insoluble product when cured by heat or other means. (D20)

F 412, F17

thermosetting resin, *n*—a polymeric material capable of crosslinking under the influence of heat, pressure, radiation, ultraviolet light, or chemical agents to form a thermoset. (See also **A-stage**, **B-stage**, and **C-stage**.)

D 907, D14

thermosiphon solar energy system—see **solar energy system, thermosiphon**.

E 772, E44

thermosyphon—a two-phase, passive, heat transfer device that removes heat from the ground whenever the ambient air temperature is lower than the ground temperature. Liquid in the lower end of the thermosyphon evaporates by absorbing thermal energy from the ground. Vapor condenses in the upper end of the thermosyphon that is exposed to the air. Condensate return to the lower end is by gravity.

D 7099, D18

thermo tube—a trade name for a convection tube.

D 7099, D18

thermowell, *n*—a closed-end reentrant tube designed for the insertion of a temperature-sensing element, and provided with means for pressure-tight attachment to a vessel. (See also **protecting tube**.)

E 344, E20

thick edge, *n*—a mica splitting with an edge or end thicker than 1½ times the maximum thickness measured at any other point on the splitting or if the thickness of the edge or end exceeds the maximum average thickness allowed for the grade of splittings.

D 1711, D09

thickener, *n*—*inlubricating grease*, a substance composed of finely divided solid particles dispersed in a liquid lubricant to form the product's structure.

D 4175, D02

- thickener**—a vessel designed to concentrate treatment sludges; similar to a clarifier. **D 6161, D19**
- thickener**—a material whose primary function is to increase the viscosity of a fluid. **E 609, E35**
- thickener (latex), n**—a substance used to raise or control the viscosity of latex without making major changes in the total solids content. **D 1566, D11**
- thick filling**—See **coarse pick**. **D 3990, D13**
- thickness, n**—a measurement of the cross section of the tile made perpendicular to its surface. **C 43, C15**
- thickness, n—inbuilding construction in glazing**, the minimum structural sealant dimension between structurally bonded substrates. **C 717, C24**
- thickness**—that dimension designed to lie at right angles to the face of the wall, floor, or other assembly. **C 1232, C15**
- thickness**—the distance between one surface and its opposite. **D 123, D13**
- thickness**—the perpendicular distance between bounding surfaces such as bedding or foliation planes of a rock. (ISRM) **D 653, D18**
- thickness, n—of an electrical insulating material**, the perpendicular distance between the two surfaces of interest, determined in accordance with a standard method. **D 1711, D09**
- thickness, n—of paper or paperboard**, the perpendicular distance between the two principal surfaces of the paper or paperboard as measured under the specified conditions. See **caliper**. **D 1968, D06**
- thickness, n**—the distance between one surface and its opposite. **D 4850, D13**
- thickness, compressed**—See **compressed thickness**. **D 4439, D35**
- thickness, t**—thickness, measured perpendicular to the running surface. X_A indicates the location of thickness measurement from the tail of the ski. **F 472, F27**
- thick place, n**—a yarn defect characterized by a diameter greater than that of the adjoining segments and extending for 6 mm ($\frac{1}{4}$ in.). (See also **thin place**.) **D 123, D13**
- thick place, n—in fabric**, an unintentional change in fabric appearance characterized by a small area of more closely spaced yarns, or by a congregation of thick yarns as compared to the adjacent construction. **D 123, D13**
- thick place, n—in fabric**, an unintentional change in fabric appearance characterized by a small area of more closely spaced yarns, or by a congregation of thick yarns as compared to the adjacent construction. **D 3990, D13**
- thick place, n**—a yarn defect characterized by a diameter greater than that of the adjoining segments and extending for 6 mm ($\frac{1}{4}$ in.). **D 4849, D13**
- thick splitting**—a mica splitting whose thickness in the major portion of its area (or over the entire area) exceeds the following:
 (1) A bookform splitting that exceeds the maximum average thickness allowed for the grade.
 (2) A loose splitting that exceeds 0.03 mm in thickness.
 (3) A loose with powder splitting that exceeds 0.025 mm in thickness. **D 1711, D09**
- thief**—an auxiliary cathode so placed as to divert to itself some current from portions of the work which would otherwise receive too high a current density. **B 374, B08**
- thigh, n—in garment construction**, with trouser leg laid out flat, measure from crotch seam straight across to leg side seam. **F 1494, F23**
- thigh girth, n—in body measurements**, the maximum circumference of the upper leg close to the crotch. (Compare **mid-thigh girth**.) **D 123, D13**
- thigh girth, n**—the maximum horizontal circumference of the upper leg, taken close to the crotch. **D 5219, D13**
- thigh girth, n—in body measurements**, the maximum circumference of the upper leg close to the crotch. **F 1494, F23**
- σ_{th-THE}** —threshold stress—test conducted in air—geometry dependent **F 2078, F07**
- thimble**—a refractory shape used for stirring a pot-made optical glass. **C 162, C14**
- thimble, n—in Soxhlet apparatus**, a closed-end porous cylinder used to hold the material to be extracted, usually made of thick matted filter paper but sometimes made of ceramic. **D 4175, D02**
- thimble element**—an element used in an impact printing device in which the fully formed characters are located on the ends of finger-like devices that are similar to a daisy wheel except that the device is formed to produce a cup-like or thimble structure. **F 909, F05**
- thimble printer**—an impact printing device utilizing a thimble element. The paper on the carriage remains stationary while the element is positioned and caused to strike the paper to produce the characters in their proper positions. **F 909, F05**
- thin end**—See **fine end**. **D 3990, D13**
- thin filling, n—in woven fabrics**, a filling yarn smaller in diameter than normal. **D 123, D13**
- thin filling, n—in woven fabrics**, a filling yarn smaller in diameter than normal. (Syn. fine filling, fine pick, light filling, light pick, thin pick) **D 3990, D13**
- thin film**—a layer of material, typically less than 100 nm in thickness deposited or grown on a substrate. **E 673, E42**
- thin film composite (TFC)**—see **composite membrane**. **D 6161, D19**
- thin film fluid lubricant, n**—fluid lubricants consisting of a primary liquid with or without additives of lubricating powders and without binders or adhesives, which form a film on one or both surfaces to be lubricated and perform their function after application and after excess material has drained from the application area, and without additional material being supplied by either a continuous or intermittent method. **D 4175, D02**
- thinner, n**—the portion of a paint, varnish, lacquer, or printing ink, or related product that volatilizes during the drying process. **D 16, D01**
- thinner, n**—a volatile liquid added to an adhesive to reduce the viscosity or other properties. **D 907, D14**
- thin pick**—See **thin filling**. **D 3990, D13**
- thin place, n**—a yarn defect characterized by a segment that is substantially (at least 25 %) smaller in diameter than the average diameter of the yarn. (See also **thick place**.) **D 123, D13**
- thin place, n—in fabric**, an unintentional change in fabric appearance characterized by a small area of loosely spaced yarns or by a congregation of thin yarns as compared to the adjacent construction. **D 123, D13**
- thin place, n—in fabric**, an unintentional change in fabric appearance characterized by a small area of loosely spaced yarns or by a congregation of thin yarns as compared to the adjacent construction. **D 3990, D13**
- thin place, n**—a yarn defect characterized by a segment that is substantially (at least 25 %) smaller in diameter than the average diameter of the yarn. **D 4849, D13**
- thin splitting, n**—a mica splitting whose thickness in the major section of its area, or over the entire area, is less than the minimum average for the grade. **D 1711, D09**
- thin spot**—See **crack mark**. **D 3990, D13**
- thin stone/thin veneer**—a cladding under 50 mm (2-in.) thick. **C 119, C18**
- thin-wall tube, n**—tube with specified wall thickness 3 % or less of the specified outside diameter. **B 899, B02**
- thiophene**—thiofuran (C_4H_4S) mol weight 84.13; a cyclic organosulfur; colorless, highly reactive liquid; freezing point, $-38.5^\circ C$; boiling point, $84.12^\circ C$. **D 4790, D16**
- third party**—person or body that is recognized as being independent of the parties involved, as concerns the issue in question, (ISO Guide 2). **E 1187, E36**
- third party certification, n**—a certification by an independent testing organization that a particular product meets a referenced standard. **F 1490, F32**

thixotropic, *n*

thixotropic, *n*—the property of a material that enables it to stiffen in a relatively short time on standing but, upon agitation or manipulation, to change to a very soft consistency or to a fluid of high viscosity, the process being completely reversible. **E 2201, E50**

thixotropy—the property of a material to thin upon isothermal agitation and to thicken upon subsequent rest. **C 904, C03**

thixotropy—the property of a material that enables it to stiffen in a relatively short time on standing, but upon agitation or manipulation to change to a very soft consistency or to a fluid of high viscosity, the process being completely reversible. **D 653, D18**

thixotropy, *n*—*in a liquid*, the property of thinning when subjected to strains greater than the yield strain and of rethickening with time upon subsequent rest. (See **yield strain** and **viscosity**.)
D 907, D14

thixotropy—a property of nonsag materials that display a reduction in viscosity when a shearing action is applied but resist seeking their own level when left undisturbed.

time horizon—See **study period**. **E 631, E06**

thixotropy—a decrease of the apparent viscosity under constant shear stress or shear rate, followed by a gradual recovery when the stress or shear rate is reduced to zero. **E 1142, E37**

thixotropy—a property of nonsag materials that display a reduction in viscosity when a shearing action is applied but resist seeking their own level when left undisturbed. **E 1749, E06**

thixotropy, negative—synonym of **anti-thixotropy**. **E 1142, E37**

THM—trihalomethanes; a group of low molecular weight molecules which can result from chlorination of organics typically found in surface water. **D 6161, D19**

THMP—trihalomethane precursors; organic molecules found in water which have the potential of reacting with chlorine to form THMs. **D 6161, D19**

thong hole, *n*—*in zippers*, the opening at the end of a pull.
D 123, D13

thong hole, *n*—the opening at the end of a pull. **D 2050, D13**

thread—annular and helical and, sometimes, longitudinal deformations rolled onto shank; in general, with deformations passing entirely around body; usually resulting in expanded ridges and depressions, larger and smaller, respectively, than wire diameter. (See **knurled**.) **F 547, F16**

thread break, *n*—*in sewn seams*, a mode of failure evidenced by rupture of the sewing thread. **D 123, D13**

thread break, *n*—*in sewn seams*, a mode of failure evidenced by rupture of the sewing thread. **D 4850, D13**

thread count—the total number of warp and filling threads in one square inch of fabric. **F 221, F05**

threaded—annular, helical or longitudinal, symmetrical or nonsymmetrical, flat-bottom or round-bottom deformations with single or double crest shoulders and with rounded or flat flanks; formed onto nail shank after heading by passing through roll-threading dies. (See **mechanically deformed**, **knurled**, **thread**.) **F 547, F16**

threaded deformed bar—steel bar that has a continuous hot-rolled pattern of thread-like deformations along its entire length that allows a nut and coupler to thread onto the bar. **F 1789, F16**

threaded nail

threaded common nail, threaded nail, threaded sinker, *n*—bright or galvanized, regular-stock-steel, stiff-stock or hardened-steel, annularly or helically threaded, 1 by 0.072 to 6 by 0.262-in. nails with flat $\frac{3}{16}$ to $\frac{1}{32}$ -in. head and $\frac{1}{8}$ by 0.072 to $\frac{5}{8}$ by 0.238-in. sinkers with $\frac{1}{64}$ to $\frac{1}{2}$ -in. sinker head and medium diameter point.

threaded shear-resistant nail—stout, short, helically threaded, $\frac{1}{2}$ to $2\frac{1}{2}$ by 0.135 and 0.148-in. nails with $\frac{5}{16}$ -in. sinker head and medium diameter point. **F 547, F16**

thread, element attaching—Deprecated term. **D 2050, D13**

thread galling—displacement of material between mating threads during tightening which causes interface contact points to shear, producing high friction, increased resistance to tightening, and even seizing of the threads. Thread galling is most prevalent with

fasteners made of materials that self-generate an oxide surface film. **F 1789, F16**

thread holder, *n*—the support package on which a sewing yarn is wound. **D 123, D13**

thread holder, *n*—the support package on which a sewing yarn is wound. **D 4849, D13**

thread lap—doubling over of metal on the thread which is created during roll threading operations. **F 1789, F16**

threadless pipe (TP)—seamless tube conforming to the particular dimensions commercially known as “threadless pipe (TP).”
B 846, B05

threatened species, *n*—a species which is likely to become endangered within the foreseeable future throughout all or a significant portion of its habitat as determined by the governmental entity have jurisdiction. **E 2114, E06**

three-body abrasive wear, *n*—a form of abrasive wear in which wear is produced by loose particles introduced or generated between the contacting surfaces. **G 40, G02**

three-coat work, *n*—plaster applied in three successive coats with time between coats for setting or drying, or both. **C 11, C11**

three-edge-bearing method—a method for applying the load to a pipe in an external load-crushing strength test. **C 822, C13**

three-phase system—a vapor phase and two liquid phases, one of which is usually the propellant inside the container. **D 3064, D10**

three-point flexure, *n*—configuration of flexural strength testing where a specimen is loaded at a location midway between two support bearings. **C 1145, C28**

three-quarter-hard wire—as applied to aluminum, wire that has been processed to produce a strength approximately midway between that of half-hard wire and that of hard-drawn wire.
B 354, B01

three (*s*) rating (3*s*), *n*—a statistical method used to derive rated strength, using the formula:

$$\text{Rated Strength} = \bar{x} - 3(s)$$

where:

\bar{x} = tested sample's average ultimate strength, and

s = tested sample's standard deviation.

F 1773, F08

three way sort—an electromagnetic sort based on a signal response from the material under test above or below two levels established by three or more calibration standards. **E 1316, E07**

threshold, absolute, *n*—See **threshold, detection**. **E 253, E18**

threshold concentration—the minimum concentration at which a substance can be detected or recognized by its taste or odor. **D 2652, D28**

threshold concentration—the concentration of a contaminant above which a hot spot is considered to be detected. **D 5681, D34**

threshold, detection, *n*—the lowest physical intensity of a stimulus that is perceived by an assessor a specified percentage of time, usually 50%. **E 253, E18**

threshold, difference, *n*—the minimum difference in physical intensity between a stimulus and a comparison stimulus such that there is a specified probability (most frequently 0.5) that an assessor will perceive the two stimuli as different. The difference threshold is often called the difference limen (DL) or the just noticeable difference (JND). **E 253, E18**

threshold level—the setting of an instrument that causes it to register only those changes in response greater or less than a specified magnitude. **E 1316, E07**

threshold limit value (TLV), *n*—threshold limit value-time weighted average (TLV-TWA) — the time-weighted average concentration for a conventional 8-h workday and 40-h workweek, to which it is believed that nearly all workers may be repeatedly exposed, day after day, without adverse effect. **D 1356, D22**

threshold neutron activation detector—a device containing a particular nuclide that is not significantly activated by neutrons below a certain threshold energy. **E 170, E10**

threshold, population, *n*—the median or other measure of central tendency of the distribution of detection or recognition thresholds for a specified population. **E 253, E18**

threshold potential—the minimum charge level on the surface of an electrostatic copy that is necessary to attract a particular toner by overcoming the attracting force between the toner and the carrier. **F 335, F05**

threshold pressure, *n*—the minimum gas pressure (at a specified oxygen concentration and ambient temperature) that supports self-sustained combustion of the entire standard sample. **G 126, G04**

threshold, recognition, *n*—the lowest physical intensity at which a stimulus is correctly identified by an assessor a specified percentage of the time, usually 50 %. **E 253, E18**

threshold setting—the setting of the instrument that causes it to register only those changes in eddy-current response greater than a specified magnitude. (E 215)

NOTE—Sensitivity and threshold settings usually are indicated by arbitrary numbers on the control panel of the testing instrument. These numerical settings differ among instruments of different types. It is, therefore, not proper to translate a numerical setting on one instrument to that of another type. Even among instruments of the same design and from the same manufacturer, sensitivity and threshold settings may vary slightly when detecting the same discontinuity. Therefore, undue emphasis on the numerical value of sensitivity and threshold settings is not justified. (E 215) **E 1316, E07**

threshold setting, in image analysis—the selected range of gray levels corresponding to a constituent in the field of the view. **E 7, E04**

threshold stopping speed (TSS), *n*—the maximum saw chain speed measured in metres per second (m/s) (feet per minute (f/m)) that does not produce a cut through when the chain saw is dropped onto the test specimen. **F 1494, F23**

threshold strain (ozone testing), *n*—the highest tensile strain at which a rubber specimen can be exposed continually to an ozone-containing environment without development of ozone cracks. **D 1566, D11**

threshold stress intensity (K_{th})—a stress intensity below which no hydrogen stress cracking will occur and above which, time-delayed fracture will occur. **F 2078, F07**

threshold stress (σ_{th})—a stress below which no hydrogen stress cracking will occur and above which time-delayed fracture will occur; in Test Method F 1624, the threshold is identified as the maximum load at the onset of cracking that causes a 5 % drop in load of NSF(B)_{F1624} under displacement control. **F 2078, F07**

threshold temperature, *n*—temperature on the ΔT versus T curve where the slope changes in the direction indicating an exothermic reaction, that is, the sample is beginning to self-heat. **E 1445, E27**

threshold, terminal, *n*—(1) the maximum intensity of a stimulus that will produce a given type of sensory experience without change in modality. (2) the intensity of stimulation above which increase in intensity cannot be detected. **E 253, E18**

threshold (th)—a point separating conditions that will produce a given effect from conditions that will not produce the effect; the lowest load at which subcritical cracking can be detected. **F 2078, F07**

threshold treatment—the process of stopping precipitation at the start of occurrence; usually does not stop the formation of nuclei but does inhibit growth. See **antiscalant**. **D 6161, D19**

throat—a fully or partially submerged, narrow passageway between the melter and refiner of a tank. **C 162, C14**

throat—the central part of a shoe vamp opening where it is seamed to the front of the quarter. **F 869, F08**

throat depth—distance at which a tool may place fastener from edge of the work. **F 592, F16**

throats, *n*—in zippers, the two openings in a slider that receive the stringers. **D 123, D13**

throats, *n*—the two openings in a slider that receive the stringers. **D 2050, D13**

throttling—in leak testing, reducing the net pumping speed of a pumping system by partially closing a valve or installing a section of pipeline with low conductance. **E 1316, E07**

through-body color, *n*—the range of surface color obtained when units without materials added to the surfaces for appearance purposes are fired. **C 43, C15**

through-coil technique—see **coil technique**. **E 1316, E07**

through-opening, *n*—a uninterrupted hole in the test assembly that is seen from the unexposed side when viewing the suspected hole from a position perpendicular to the plane of the test assembly. **E 176, E05**

throughput—the vector product of the area and solid angle of a beam at its focus and the square of the refractive index of the medium in which the beam is focused. **E 131, E13**

throughput—same as **flow rate**. **E 1316, E07**

throughput—the rate at which documents can be processed through an optical scanner. Usually expressed as “documents per minute.” **F 149, F05**

through transmission technique—a test procedure in which the ultrasonic vibrations are emitted by one search unit and received by another at the opposite surface of the material examined. **E 1316, E07**

through-wall flashing—a water-resistant membrane or material assembly extending totally through a wall and its cavities, positioned to direct any water within the wall to the exterior. **D 1079, D08**

throw, *n*—a removable, unfitted protective textile cover, used over upholstered furniture. (See **furniturecovering**.) **D 123, D13**

throw—the projection of broken rock during blasting. (ISRM) **D 653, D18**

throw, *n*—a removable, unfitted protective textile cover, used over upholstered furniture. (See **furniturecovering**.) **D 7023, D13**

throw—a quantity of liquid or powder ingredient that is augured, pumped, or dispensed into a liquid of larger mass and makes up the basic flavoring and/or solid of a finished product. **F 1827, F26**

throwing power—the improvement of the coating (usually metal) distribution over the primary current distribution on an electrode (usually cathode) in a given solution, under specified conditions. The term may also be used for anodic processes for which the definition is analogous. **B 374, B08**

thrust—force applied to a drill in the direction of penetration. (ISRM) **D 653, D18**

thrust collar—a plastic cylinder placed between the last spiral wound cartridge and vessel end plate to support the last cartridge in a pressure vessel against telescoping. **D 6161, D19**

thufur (Icelandic)—perennial hummocks formed in either the active layer of permafrost areas, or in the seasonally frozen ground in non-permafrost areas during freezing of the ground (singular thufa). **D 7099, D18**

ticket number, *n*—in sewing thread, the designator assigned to a sewing thread to designate its approximate linear density. **D 123, D13**

ticket number, *n*—in sewing thread, the designator assigned to a sewing thread to designate its approximate linear density. **D 4849, D13**

ticking—marks caused by the bottom of the upper case character while printing in the lower case, or opposite. **F 149, F05**

tie—wire, clip, or band used to attach the fabric to the top rail and line posts (see Specification F 626). **F 552, F14**

tie line—in a binary or higher order phase diagram, an isothermal, isobaric straight line connecting the compositions of a pair of conjugate phases. **E 7, E04**

tie line—in a binary or higher order phase diagram, an isothermal, isobaric straight line connecting the compositions of a pair of conjugate phases. **E 1142, E37**

tie-off, n

tie-off, n—in waterproofing, the transitional seal used to terminate a waterproofing application at the top or bottom of flashing or by forming a watertight seal with the substrate, membrane, or waterproofing system(s). **D 1079, D08**

tie points, n—the location where ties are placed securing the coils to brackets, wires, or cables including fence fabric, at the specified spacing. **F 1379, F14**

tiered response—a predetermined, protocol driven, level of medical care and vehicle operation mode based on multiple levels of resource response. The two types of tiered response are sequential response (q.v.) and simultaneous response (q.v.). **F 1177, F30**

ties and slits, n—in paper, ties are areas of uncut paper between slits of cut paper within a perforation. **D 1968, D06**

tie stitch—See **lock stitch**. **F 592, F16**

tie tetrahedron—in a quaternary or higher order phase diagram, an isothermal, isobaric four-cornered space figure connecting the compositions of four conjugate phases. **E 7, E04**

tie triangle—in a ternary or higher order phase diagram, an isothermal, isobaric plane three-cornered, straight-sided figure connecting the compositions of three conjugate phases. **E 7, E04**

tight—rock remaining within the minimum excavation lines after completion of a blasting record. (ISRM) **D 653, D18**

tight—in leak testing, free from leaks according to a given specification. **E 1316, E07**

tight end, n—in woven fabrics, a yarn which was woven under excessive tension or has shrunk more than a normal amount. **D 123, D13**

tight end, n—in woven fabrics, a yarn which was woven under excessive tension or has shrunk more than a normal amount. **D 3990, D13**

tightened inspection—inspection under a sampling plan using the same quality level as for normal inspection, but requiring more stringent acceptance criteria. **D 1517, D31**

tight filling—See **tight pick**. **D 3990, D13**

tight pick, n—in woven fabrics, a filling yarn which was woven under excessive tension or has shrunk more than a normal amount, which may cause puckering at the junction with normal picks. (Compare **wavy cloth**.) **D 123, D13**

tight pick, n—in woven fabrics, a filling yarn which was woven under excessive tension or has shrunk more than a normal amount, which may cause puckering at the junction with normal picks. (Compare **wavy cloth**.) **D 3990, D13**

tight piston ring, n—in internal combustion engines, a piston ring that will not fall in its groove under its own weight when the piston, with the ring in a horizontal plane, is turned 90° (putting the ring in a vertical plane); by subsequent application of moderate finger pressure, the ring will be displaced. **D 4175, D02**

tight selvage, n—in woven fabrics, selvage yarns shorter than warp yarn in the body of the fabric. **D 123, D13**

tight selvage, n—in woven fabrics, selvage yarns shorter than warp yarn in the body of the fabric. **D 3990, D13**

tight side—in knife-cut veneer, the side of the sheet that was farthest from the knife as the sheet was being cut and that contains no cutting checks. (See **loose side**.) **D 1038, D07**

tight twist end, n—a single end with higher than normal twist. **D 123, D13**

tight twist end, n—a single end with higher than normal twist. (Syn. hard end, wiry end) **D 3990, D13**

tight yarn, n—in inflatable restraint fabrics, a yarn with less crimp than surrounding fibers that may create puckering, which may appear to be shinier or to lie straighter in the weave pattern, or a combination thereof. **D 6799, D13**

tile—a thin modular stone unit. **C 119, C18**

tile—a ceramic surfacing unit, usually relatively thin in relation to facial area, made from clay or a mixture of clay and other ceramic materials, called the body of the tile, having either a “glazed” or “unglazed” face and fired above red heat in the course of manufacture to a temperature sufficiently high to produce specific

physical properties and characteristics. (See also **ceramic mosaic tile**; **conductive ceramic tile**; **faience tile**; **glazed ceramic mosaic tile**; **glazed interior tile**; **glazed tile**; **glazed tile, extra duty glaze**; **major tile facial dimensions**; **major tile thickness**; **minor tile facial dimension**; **minor tile thickness**; **porcelain tile**; **unglazed tile**; **wedging of tile**.) **C 242, C21**

tile nail

acoustical-tile nail—slender, electroplated, regular-stock-steel or stiff-stock, 1 to 1¾ by 0.062-in. nails with ¼-in. projection head with 0.135-in. collar and sharp, blunt, or medium diamond point.

asbestos-tileboard nail—stainless steel or other nonferrous metal nails with casing or oval head. (See also **asbestosboard nail**.)

roofing-tile nail—galvanized, regular-stock-steel, 5 to 7 by 0.148-in. nails with flat ⅝-in. head and medium diamond point.

tileboard nail—See **asbestosboard nail**, **fiberboard nail**, **insulation building-board nail**. **F 547, F16**

tile, resilient flooring, n—resilient flooring which is packaged in flat pieces which can be installed as individual units. **F 141, F06**

till—see **glacial till**. **D 653, D18**

tilt, n—rotation of a bar code symbol about an axis perpendicular to the substrate. Compare **pitch**, **skew**. **F 1294, F05**

tilt angle—in solar energy applications, the angle between the horizontal and the plane of the detector (collector, photovoltaic array, instrument) surface. **E 772, E44**

tilt angle, v—the angle between the horizontal and the plane of the test fixture, glass frame, or sensory instrumentation. **G 113, G03**

tilting skillet—see **braising pan**. **F 1827, F26**

tilt, of target—same as **angle of incidence**. **E 673, E42**

timbers—See **lumber**. **D 9, D07**

time angle of internal friction, φ_t—inclination of the time yield locus of the tangency - point with the Mohr stress circle passing through the origin. **D 653, D18**

time-averaged throughput method—the method whereby the average throughput is calculated by dividing the total mass size reduced by the net processing time. **D 5681, D34**

time-average sound level, TAV—L_{AT} where T is the time of the interval of measurement, [nd], (dB), n—ten times the logarithm to the base ten of the ratio of mean-square instantaneous A-weighted sound pressure, during a stated time interval T, to the square of the standard reference sound pressure. **C 634, E33**

time constant, n—the time required for the magnitude of change in a signal to reach a value of 63.2 % of its final value in response to a step function input. **D 1711, D09**

time constant, n—in data acquisition, a value which represents a measure of the time response of a system. For a first order system responding to a step change input, it is the time required for the output to reach 63.2 % of its final value. **D 4175, D02**

time constant, n—the 63.2 % response time of a sensor that exhibits a single-exponential response. **E 344, E20**

time constant—AES, the time required for a signal to change by 1 - (1/e) (63.2 %) of its final value in response to a step function input. **E 673, E42**

time constant—of a solar collector, the time required for the fluid leaving a solar collector to attain 63.2 % of the resulting change in equilibrium outlet temperature following a step change in solar irradiance or inlet fluid temperature.

NOTE—The step change involved should be spelled out in the procedure. **E 772, E44**

time constant—a measure of the rapidity of response of a system. **E 2161, E37**

time curve—see **consolidation time curve**. **D 653, D18**

time factor, T_v, T (D)—dimensionless factor, utilized in the theory of consolidation, containing the physical constants of a soil stratum influencing its time-rate of consolidation, expressed as follows:

$$T = k (1 + e) / (a_v \gamma_w H^2) = (c_v t) / H^2$$

where:

- k = coefficient of permeability (LT^{-1}),
 e = void ratio (dimensionless),
 t = elapsed time that the stratum has been consolidated (T),
 α_v = coefficient of compressibility (L^2F^{-1}),
 γ_w = unit weight of water (FL^{-3}),
 H = thickness of stratum drained on one side only. If stratum is drained on both sides, its thickness equals $2H$ (L), and
 c_v = coefficient of consolidation (L^2T^{-1}).

time horizon, n —See **study period**. **D 653, D18**
E 833, E06

time interval, n —the time between weighings of the permeation cup. **F 1494, F23**

time of drying, n —of insulating varnish, the time required for a film of varnish to dry to a tackfree state under specified conditions. **D 1711, D09**

time of flight—the sound path measurement of time for the transmitted, reflected or diffracted energy in a specimen. **E 1316, E07**

time of flight diffraction technique (TOFD)—an ultrasonic examination procedure using a pair of probes in a pitch-catch configuration, the probes being usually arranged symmetrically on the same surface, but opposite sides of a weld. Measurement of travel times for the forward reflected or diffracted energy from a flaw or reference surface is used to determine its depth and vertical extent. **E 1316, E07**

time of integration, n —in yarn evenness testing, the time during which a point-to-point integrator stays switched on. **D 123, D13**

time of integration, n —in yarn evenness testing, the time during which a point-to-point integrator stays switched on. **D 4849, D13**

time of setting, n —the elapsed time from the addition of mixing water to a cementitious mixture until the mixture reaches a specified degree of rigidity as measured by a specific procedure.

time of final setting (of concrete), n —the elapsed time, after initial contact of cement and water, required for the mortar sieved from the concrete to reach a penetration resistance of 4000 psi (27.6 MPa). (C 403/C 403M). **C 125, C09**

time of initial setting (of concrete), n —the elapsed time, after initial contact of cement and water, required for the mortar sieved from the concrete to reach a penetration resistance of 500 psi (3.5 MPa). (C 403/C 403M). **C 125, C09**

time-of-wetness, n —the total amount of time that a surface is wet. This is typically reported in hours. **G 113, G03**

time profile—a plot of the modulus or damping, or both of a material versus time. **D 4092, D20**

time-proportioned sample, n —a sample collected at preselected time intervals. **D 1129, D19**

time quenching, n —interrupted quenching in which the duration of holding in the quenching medium is controlled. **A 941, A01**

time response paper—a special graph paper on which electrode potentials are plotted on the vertical antilogarithmic axis and time is plotted on the horizontal axis as the reciprocal of time. The plot is extrapolated to time-equals-infinity to determine the final electrode potential that would be observed at complete system equilibrium. Time response paper is useful for evaluating electrode performance and for rapidly estimating solution concentration in cases where electrode response is slow, such as close to the lower limit of detection. **D 4127, D19**

time-temperature curve—in thermal analysis, a curve produced by plotting time against the temperature. **E 7, E04**

time-temperature curve—in thermal analysis, a curve produced by plotting time against the temperature (E 7, E04). **E 1142, E37**

time-to-break, n —the time interval during which a specimen is under prescribed conditions of tension and is absorbing the energy required to reach maximum load. **D 123, D13**

time-to-break, n —the time interval during which a specimen is under prescribed conditions of tension and is absorbing the energy required to reach maximum force. **D 4849, D13**

time to delta peak temperature, n —the time from beginning of the

initiation of the arc to the time the delta peak temperature is reached, s. **F 819, F18**

time to ignition, n —time between the start of the test and the presence of a flame on the specimen surface for a period of at least 4s. **E 176, E05**

time to ignition, n —time between the start of the test and the presence of a flame on or over most of the specimen surface for a period of at least 4 s. **E 176, E05**

time to sustained flaming, n —time to ignition. **E 176, E05**

time-to-thermal-runaway, (t_c), n —an estimation of the time required for an exothermic reaction, in an adiabatic container, (that is, no heat gain or loss to the environment), to reach the point of thermal runaway. **E 1445, E27**

time value of money—the time-dependent value of money stemming both from changes in the purchasing power of money (that is, inflation or deflation), and from the real earning potential of alternative investments over time. **E 631, E06**

time value of money, n —the time-dependent value of money stemming both from changes in the purchasing power of money (that is, inflation or deflation), and from the real earning potential of alternative investments over time. **E 833, E06**

time yield locus—the yield locus of a bulk solid which has remained at rest under a given normal stress for a certain time. **D 653, D18**

timing mark—a printed mark that controls the reading of a mark read field. The mark printed in scan ink tells the reader the location of information to be scanned. **F 149, F05**

tinned—See **electroplated, wash-tinned**. **F 547, F16**

tinned wire—see **coated wire**. **B 354, B01**

tin oxide (SnO_2)—in finely ground form used in glazes as an opacifier. **C 242, C21**

tint, n —a color produced by the mixture of white pigment or paint in predominating amount with a colored pigment or paint, not white. The tint of a color is, therefore, much lighter and much less saturated than the color itself. **D 16, D01**

tint, n —a color produced by the mixture of white pigment or paint with a chromatic pigment or paint. (See also **tint, v, shade, n, shade, v.**) **E 284, E12**

tint, v —to adjust the color of a test specimen to be a closer color match to the standard. (See also **tint, n; shade, vt; shade, n.**) **E 284, E12**

tinting, n —see **pigment bleed**. **D 6488, D01**

tinting, n —a background wash of color seen uniformly across the non-image area of a print. See **plate tinting**. **D 6488, D01**

tinting strength, n —the power of coloring a standard paint or pigment. **D 16, D01**

tinting strength, n —measure of the effectiveness with which unit quantity of a colorant alters the color of a material. **E 284, E12**

tint plate—a retardation plate introduced into the polariscope, which adds one wave (565 nm) of retardation to the field which it covers, and which shifts the observed retardation color scale to more easily distinguishable tints. **C 162, C14**

tint strength, n —the ratio, expressed as tint units, of the reflectance of a standard paste to a sample paste, both prepared and tested under specified conditions. **D 3053, D24**

tip height, h_s —the height of the underside of the tip from a plane surface with the center of the ski body pressed against that surface. **F 472, F27**

tip height, H_s —the height of the underside of the tip from a plane surface with the snowboard unweighted. **F 1107, F27**

tire, n —a load-bearing, ground-contacting circumferential attachment to a vehicle wheel. **D 123, D13**

tire, n —a continuous solid or pneumatic rubber covering encircling the wheel of a vehicle. **D 5681, D34**

tire, n —a load-bearing ground-contacting circumferential attachment to a vehicle wheel. **D 6477, D13**

tire, n —a load-bearing ground-contacting circumferential attachment to a vehicle wheel. **F 538, F09**

tire-axis system—the origin of the tire-axis system is the center of the

tire-axis system

- tire contact. The X' axis is the intersection of the wheel plane and the road plane with a positive direction forward. The Z' axis is perpendicular to the road plane with a positive direction downward. The Y' axis is in the road plane, its direction being chosen to make the axis system orthogonal and right-hand. **E 867, E17**
- tire axis system, *n***—the origin of the tire axis system is the center of the tire contact where the X' -axis is the intersection of the wheel plane and the road plane with a positive direction forward, the Z' -axis is perpendicular to the road plane with a positive direction downward, and the Y' -axis is in the road plane, its direction being chosen to make the axis system orthogonal and right-hand. **F 538, F09**
- tire bead, *n***—that part of a tire that comes in contact with the rim and that is shaped to secure the tire to the rim. **D 123, D13**
- tire bead, *n***—the part of a tire that comes in contact with the rim and is shaped to secure the tire to the rim. **D 6477, D13**
- tire bead wire, *n***—a monofilament steel wire with a metallic coating, usually bronze, used in forming a tire bead. **D 123, D13**
- tire bead wire, *n***—a monofilament of steel wire with a metallic coating, usually bronze, used in the forming of a tire bead. **D 6477, D13**
- tire, belted bias, *n***—a bias tire containing a belt. **F 538, F09**
- tire, bias, *n***—a pneumatic tire in which the ply cords that extend to the beads are laid at angles substantially less than 90° to the center line of the tread. **F 538, F09**
- tire chip, *n***—See *chipped tire*. **D 5681, D34**
- tire chips, *n***—Pieces of scrap tires that have a basic geometrical shape and are generally between 12 mm and 50 mm in size and have most of the wire removed (Syn. *chipped tire*). **D 5681, D34**
- tire cord, *n***—a twisted or formed structure composed of two or more single or plied industrial yarn elements having the same nominal twist, direction of twist, length, and tension. **D 123, D13**
- tire cord, *n***—a twisted or formed structure composed of one or more single or plied filaments, strands, or yarns of organic polymer or inorganic material. **D 6477, D13**
- tire cord fabric, *n***—a fabric consisting of tire cord warp with widely spaced (usually 1 to 5 picks/in.) single yarn filling. **D 123, D13**
- tire cord fabric, *n***—a fabric consisting of tire cord warp with widely spaced (usually 40 to 200 picks/m (1 to 5 picks/in.)) single yarn filling. **D 6477, D13**
- tire-derived fuel, *n***—the end product of a process that converts whole scrap tires into a specific chipped form. This specified product then would be capable of being used as fuel. **D 5681, D34**
- tire electrical resistance, *n***—the electrical resistance (in ohms) measured between the wheel of a mounted and inflated tire-wheel assembly and a metallic plate onto which the tire is loaded at a specified load. **F 538, F09**
- tire fabric, *n***—a textile fabric, other than tire cord fabric, which is used as a reinforcement in tires. **D 123, D13**
- tire fabric, *n***—a textile fabric, other than tire cord fabric, which is used as a reinforcement in tires. **D 6477, D13**
- tire forces**—the external forces acting on the tire by the road. **E 867, E17**
- tire forces [*F*], *n***—the external forces acting on a tire by the road. **F 538, F09**
- tire-load [lb (kg)], *n***—the portion of the gross-vehicle weight imposed upon the static tire at the time of weighing, expressed in units of mass, due only to the vertically-downward force of gravity acting on the mass of the static vehicle. **E 867, E17**
- tire longitudinal stiffness indicator, *n***—the rate of change of the slip friction number expressed as an angle near the zero value of the time or location. **E 867, E17**
- tire moments [*FL*], *n***—the external moments acting on the tire by the road. **F 538, F09**
- tire, pneumatic, *n***—a hollow tire that becomes load-bearing upon inflation with air, or other gas, to a pressure above atmospheric. **F 538, F09**
- tire, radial, *n***—a pneumatic tire in which the ply cords that extend to the beads are laid substantially at 90° to the center line of the tread, the tire being stabilized by a belt. **F 538, F09**
- tire shreds, *n***—Pieces of scrap tires that have a basic geometrical shape and are generally between 50 mm and 305 mm in size. **D 5681, D34**
- tire shreds, *n***—See *shredded tire*. **D 5681, D34**
- tire, snow (also mud and snow tire), *n***—a pneumatic tire designed for, or shown to have, good traction on roads covered with mud or snow. **F 538, F09**
- tire weight, *n***—the weight of an unmounted tire without tube or flap. **F 538, F09**
- tire-wet pavement interaction, zone concept, *n***—a division of the load-bearing surface of a moving pneumatic tire into three basic zones; noncontact, partial contact, and contact. **E 867, E17**
- tissue, *n***—an aggregation of similarly specialized cells united in the performance of a particular function. **F 2312, F04**
- tissue engineered medical product (TEMP), *n***—a medical product that repairs, modifies or regenerates the recipient's cells, tissues, and organs or their structure and function, or both. **F 2312, F04**
- tissue engineering, *vivon*, *n***—the application, *in vivo* and *in vitro* of scientific principles and technologies to form tissue engineered medical products (TEMPS) used for medical treatments and diagnoses as diagnostics. **F 2312, F04**
- tissue forceps**—a device formed in two generally symmetrical halves with their proximal ends secured together and set so their distal ends will stay separated unless pressed together. **F 1638, F04**
- tissue regeneration, *n***—healing in which lost tissue is replaced by proliferation of cells, which reconstruct the normal architecture. **F 2312, F04**
- tissue repair, *n***—healing in which lost tissue is replaced by a fibrous scar, which is produced from granulation tissue. **F 2312, F04**
- tit**—an imperfection; a small protrusion on a glass article. **C 162, C14**
- titania porcelain**—See *titania porcelain* under **porcelain**. **C 242, C21**
- titania whiteware**—See *titania whiteware* under **ceramic whiteware**. **C 242, C21**
- titer, *n***—the quantity of a substance required to react with, or to correspond to, a given amount of another substance. **F 1494, F23**
- titer (pronounced tē'ter) (of fatty acids)**—the maximum temperature achieved during the solidification of fatty acids, which have been cooled below the melting point by a standardized procedure. **D 459, D12**
- titration**—a quantitative analytical technique for measuring the concentration of a species by incremental addition of a reagent (titrant) containing a species that reacts with the sample species. Sensing electrodes can be used to follow titrations if they respond to either the species being determined or the titrant ion. Electrode potentials are plotted against millilitres of titrant added, either on standard coordinate graph paper or on Gran's plot paper, and the equivalence point (when equivalent amounts of the two species are present) is determined from the curve. **D 4127, D19**
- t-joint, *n***—the condition created by the overlapping intersection of three or four sheets in the membrane. **D 1079, D08**
- T_{max} , *n***—maximum temperature measured during test. **E 1445, E27**
- T nail**—bright, etched, coated, galvanized, aluminum-coated, plastic-coated, knurled or annularly threaded, stiff-stock or aluminum-alloy, round-wire, 1 by 0.080 to $2\frac{1}{2}$ by 0.131-in. nails of T shape with $\frac{5}{32}$ or $\frac{1}{16}$ -in. round, square or oval-finish head of sinker, with or without heavy fillet, and with diamond or chisel point; driven with special nailing machine provided with staple-type magazine. **F 547, F16**
- TOC**—total organic carbon, a measure of the level of organic constituents in water. **D 6161, D19**
- TOCI**—total organic chlorine. **D 6161, D19**
- toe area cut zone, *n***—in the testing of foot protective devices, that area excluding the sole which extends from the front most part of the footwear to a vertical plane $15 + 0.25$ mm behind the toe box; or in the absence of a toe box, the area which extends to a vertical plane $65 + 6.25$ mm from the front of the footwear. **F 1494, F23**

toe board—a vertical plate at the bottom of a railing system located at the open edge of a stairwell, platform, ramp, or floor; forming a low curb to provide a barrier preventing objects from falling beyond it. (Syns. *kick plate* and *toe plate*.)

toe board—See **railing systems**.

toe plate—See **railing systems**.

toe plate—Synonym for **toe board**. E 631, E06

toe board—a vertical plate at the bottom of a railing system located at the open edge of a stairwell, platform, ramp, or floor; forming a low curb to provide a barrier preventing objects from falling beyond it. (Syns. *kick plate* and *toe plate*.) E 1481, E06

toe box, *n*—in testing of foot protective devices, a component inserted into the toe area of footwear. F 1494, F23

toe-in—a small reduction of the outside diameter at the cut end of a length of thermoplastic pipe. F 412, F17

toe plate—Synonym for **toe board**. E 1481, E06

toggle, *n*—in buttons, a clip used to fasten a staple button to the flexible substrate. D 123, D13

toggle, *n*—in buttons, a clip used to fasten a staple button to the flexible substrate. D 5497, D13

tolerance, *n*—the allowable deviation from a value or standard; especially the total range of variation permitted in maintenance a specified dimension in machining, fabricating, or constructing a member or assembly. E 631, E06

tolerance—the defined limits of allowable (acceptable) departure from the true value of a measured quantity. E 867, E17

tolerance—the defined limit of allowable departure of a value measured or estimated by a WIM system from an accepted reference value. E 867, E17

tolerance—the total range of variation (usually bilateral) permitted for a size, position, or other required quantity; the upper and lower limits between which a dimension must be held. (E 380)

F 221, F05

tolerance interval, *n*—a range constructed from an experimental data sample so as to statistically enclose *P* % or more of the population from which the sample was drawn with a confidence level of 100 (1- α) %.

A 644, A04

tolerance interval, *n*—an interval computed so that it will include at least a stated percentage of the population with a stated probability.

C 1145, C28

tolerance interval—an interval computed so that it will include at least a stated percentage of the population with a stated probability.

E 1823, E08

tolerance level—the stated probability that the tolerance interval includes at least the stated percentage of the population. It is not the same as a confidence level but the term confidence level is frequently associated with tolerance intervals. E 1823, E08

tolerance limits, *n*—bounds of a tolerance interval. C 1145, C28

tolerance limits—the two statistics that define a tolerance interval. (One value may be “minus infinity” or “plus infinity.”)

E 1823, E08

tolerance limits (specification limits), *n*—limits that define the conformance boundaries for an individual unit of a manufacturing or service operation. E 456, E11

tolerance limits, specification or calibration—

(1) The permitted degree of departure of the value of some parameter, *X*, from its nominal value *X_n*.

(2) The guaranteed maximum error in the reading of some instrument scale, or in the calibration of some circuit component, or in the value of any parameter, from its correct value (which may be assumed to be a true value within the resolution of the calibration). Symmetrical tolerance limits, which do not involve the measurement of any parameter, may be quoted in two ways:

(a) **incremental tolerance, ΔX** —this is satisfied by the following limits:

$$X_n + \Delta X \geq X \geq X_n - \Delta X$$

(b) **fractional tolerance, *T_x***—this is defined by the following absolute ratio:

$$T_x = |\Delta X/X_n|$$

which is usually as a percentage, so that the allowed limits of *X* becomes $X_n | 1 \pm T_x |$. For a sum or difference function, the incremental tolerance, ΔF , equals the absolute sum of the component Δ values. For a product or ratio function, the fractional tolerance, *T_F*, equals the absolute sum of the component *T* values. For any other function, using calculus as follows:

$$\Delta F(x, y, x \dots) = \left(\frac{\delta F}{\delta x} \right) \Delta x + \left(\frac{\delta F}{\delta y} \right) \Delta y + \left(\frac{\delta F}{\delta z} \right) \Delta z \dots$$

NOTE—The preceding tolerance limits are symmetrical limits, such as ± 5 %. Occasionally, unsymmetrical limits may be specified such as +5 %, -2 % or 0 %, -5 % or 10 %, -0 %, and so forth. A 340, A06

tolerances, *n*—in mathematics, prescribed limits of variation for specified properties of a particular material based on observed values obtained by specified test methods and on samples that are representative of the material. D 123, D13

tolerances—dimensional limitations established by manufacturers, customers, associations, and government agencies. F 547, F16

tolerance specification, *n*—the total allowable variation around a level or state (upper limit minus lower limit), or the maximum acceptable excursion of a characteristic. E 456, E11

toluene—methyl benzene, toluol (obsolete) (C₇H₈) mol weight 92.13; clear, colorless, highly flammable liquid; odor somewhat like benzene; freezing point, -94.99°C; boiling point, 110.6°C.

D 4790, D16

toluene discoloration, *n*—the transmittance, at 425 nm, of the filtrate obtained from the toluene extract of carbon black, compared with that of pure toluene. D 3053, D24

toluene insolubles, *n*—that portion of the pentane insolubles not soluble in toluene (methylbenzene). D 4175, D02

toluene insolubles, *n*—in used oil analysis, the portion of pentane insolubles not soluble in toluene. D 4175, D02

toluene, nitration grade—toluene with maximum paraffin impurities of 1.5 volume % having a total distillation range of 1°C maximum. Refer to Specification D 841 for complete specifications.

D 4790, D16

toluene standardization fuels, *n*—for knock testing, those volumetrically proportioned blends of two or more of the following: reference fuel grade toluene, *n*-heptane, and *isooctane* that have prescribed rating tolerances for O.N._{ARV} determined by round-robin testing under reproducibility conditions. D 4175, D02

tomography—any radiologic technique that provides an image of a selected plane in an object to the relative exclusion of structures that lie outside the plane of interest (see **tomogram** and **(CT) computed tomography**). E 1316, E07

tonal, *adj*—in reference to audible sound, capable of exciting an auditory sensation having pitch. C 634, E33

toner, *n*—an organic pigment that does not contain inorganic pigment or inorganic carrying base. D 16, D01

toner—a material used to increase the intensity and to control the color of the ink image transferred from ribbon or carbon paper. F 221, F05

toner—the material in a developer system which when deposited by the field of an electrostatic charge pattern, becomes the visible record. F 335, F05

toner, *n*—a dispersion of concentrated pigment or dye used to manufacture, strengthen or modify the color of an ink.

F 1294, F05

toner reservoir

toner reservoir—(also known as toner hopper), an area of a toner cartridge that stores toner for future use in image development.

F 335, F05

toner reservoir shipping seal—(also known as a cartridge seal or seal), a component that covers the toner reservoir to prevent toner from escaping.

F 335, F05

toner throwout—see **dusting**.

F 335, F05

toner usage—the amount of toner (in milligrams per page) removed from the toner reservoir.

F 335, F05

tongue—see **male end of pipe**.

C 822, C13

tongue-and-grooved, *adj*—type of **lumber** joint consisting of a tongue and a groove on opposite edges to provide close fitting into an adjacent grooved or tongued piece.

D 996, D10

tongue tile—*in a port*, the projecting partition between gas and air stream.

C 162, C14

tonic response, *n*—shifting of tonic level, typically in response to changing conditions, as opposed to a sudden stimulus. Tonic responses take several seconds or minutes to occur, unlike phasic responses which tend to be much more rapid. Among the more common PDD methods, the only tests where tonic responses are used as diagnostic information are in the Peak of Tension tests, where a change in the trend of tonic activity can signal that the examinee is aware that the critical item in the series has passed.

E 2035, E52

toning, *n*—the deposit of ink in the non-image area caused by poor wiping of doctor blade.

D 6488, D01

tool—machine for driving fasteners.

F 592, F16

tooled—a linear patterned surface, consisting of parallel concave grooves 3-6 mm on center (or 4, 6, or 8 grooves per in.), produced by hand or pneumatic chisel, or planer tool.

C 119, C18

tooling—*in building construction*, the act of compacting and contouring a sealant in a joint.

C 717, C24

tooling—a term used to describe the shaping of a fillet bead of applied sealant to a feathered edge where it meets the substrate(s).

E 631, E06

tooling—a term used to describe the shaping of a fillet bead of applied sealant to a feathered edge where it meets the substrate(s).

E 1749, E06

tooling time, *n*—*of a sealant*, the time interval after application of a one-component sealant or after mixing and application of multi-component sealant during which tooling is possible.

C 717, C24

tool marks—longitudinal or circumferential grooves of shallow depth produced by the movement of manufacturing tools over the bolt, nut, or screw surface.

F 1789, F16

tooth, *n*—integral projection of metal connector plate formed in direction perpendicular to plate surface(s) during punching process. Also called prong, barb, plug, and nail, yet, preferably called tooth.

E 631, E06

toothed nail—flat, L-shaped, 1/2 to 1 5/16-in. cleats, sheared from 16-gage steel sheet; provided with toothed serrations along narrow sides of long shank and with slightly tapered, dull point; driven with special nailing machine provided with staple-type magazine.

F 547, F16

top, *n*—*in textiles*, (1) *worsted process*—a sliver in which the fibers have been parallelized, and usually combed; (2) *manufactured fibers or tow to top process*, a sliver obtained by drafting, along with breaking or cutting a multifilament tow. (See also wool top.)

D 123, D13

top, *n*—*in wool*, a continuous untwisted strand of wool fibers from which the shorter fibers or noils have been removed by combing.

D 123, D13

top, *n*—*in wool*, a continuous untwisted strand of wool fibers from which the shorter fibers or noils have been removed by combing.

D 4845, D13

top, *n*—*in textiles*, (1) *worsted process*—a sliver in which the fibers have been parallelized, and usually combed; (2) *manufactured*

fibers or tow to top process, a sliver obtained by drafting, along with breaking or cutting a multifilament tow. (see also wool top.)

D 4849, D13

top ash, *n*—another name for fly ash. See **fly ash**.

E 2201, E50

top grain—the first cut taken from the grain side of a split hide from which nothing except the hair and associated epidermis have been removed.

D 1517, D31

topic, *n*—*of serviceability*, a part of the serviceability of a facility for which a paried set of requirements and rating scales can be prepared.

E 631, E06

toplap, *n*—the shortest distance between the lower edge of an overlapping shingle or sheet, and the upper edge of the lapped unit in the first course below.

C 1154, C17

toplap—the shortest distance between the lower edge of an overlapping shingle or sheet, and the upper edge of the lapped unit in the first course below.

D 2946, C17

top loader—a vertically oriented agitation machine which is used for home laundry.

D 459, D12

top of borehole—the surface of the ground surrounding the borehole.

D 653, D18

top of the hydrometer, *n*—the top of the finished instrument.

E 344, E20

top of the thermometer, *n*—the top of the finished instrument.

E 344, E20

topology, *n*—*in a computer network*, the physical layout including the method of connection between nodes.

F 1294, F05

topping compound—see **finishing compound**.

C 11, C11

topping (the act of), *n*—See **skim coating**, the preferred term.

D 1566, D11

top rail—the uppermost member of a railing system.

top rail—See **railing systems**.

top story—See **building space**.

E 631, E06

top rail—the uppermost member of a railing system.

E 1481, E06

top rail—horizontal member of the framework running from terminal post to terminal post on top of the line posts.

F 552, F14

top roller guard—a safety device installed on a Type II, Class 1, cantilever slide gate with external rollers to isolate the upper roller mechanism to reduce the possibility of contact with the roller mechanism by a person. See Specification F 1184.

F 552, F14

top rope climbing, *n*—a technique of climbing where the climber is safeguarded by a roped belay from above.

F 1773, F08

top scissor half—the component which contains the screw head at assembly.

F 1078, F04

topset bed—a layer of sediment deposited on the top surface of an advancing delta that is continuous with the landward alluvial plain.

D 4410, D19

topsize, *n*—the opening of the smallest screen in the series upon which is retained less than 5 % of the sample (see Test Method D 4749).

D 121, D05

topsize, nominal—*for the purpose of Test Method D 4749*, the sieve designating the upper limit or topsize shall be that sieve of the series given in the Standard Series of Sieves section with the smallest openings upon which is cumulatively retained a total of less than 5 % of the sample. This defined topsize is not to be confused with the size of the largest particle in the lot.

D 121, D05

topsoil—surface soil, usually containing organic matter.

D 653, D18

topstitching, *n*—a line of stitching that shows on the face side in the finished article, usually stitched while having the face side of the fabric up.

D 123, D13

topstitching, *n*—*in home sewing*, a line of stitching that is visible on the face side of the finished product, usually stitched while having the face side of the material uppermost.

D 4965, D13

top stop, *n*—*in zippers*, a part affixed between or immediately above the interlocking elements, on either or both stringers, to prevent the slider from leaving the chain.

D 123, D13

top stop, *n*—a part affixed between or immediately above the interlocking elements on either or both stringers, to prevent the slider from leaving the chain.

D 2050, D13

top story—the uppermost **story** of a building. **E 631**, E06

torque, n —a moment (of forces) which produces or tends to produce rotation or torsion. **D 123**, D13

torque, n —a moment (of forces) which produces or tends to produce rotation or torsion. **D 4848**, D13

torque-controlled expansion anchor—a post-installed expansion anchor that derives its holding strength from the expansion of one or more sleeves or other elements against the sides of the drilled hole through the application of torque, which pulls the cone(s) into the expansion sleeve(s). After setting, tensile loading can cause additional expansion (follow-up expansion). **E 2265**, E06

torque [FL], n —a moment (of forces) that produces or tends to produce rotation or torsion. **E 6**, E28

torque [FL], n —of a wheel, the external torque applied to a tire from a vehicle about the wheel spin axis. **F 538**, F09

torque (T), wheel—the external torque applied to a tire from a vehicle about the wheel spin axis. Driving torque is positive wheel torque; braking torque is negative wheel torque. **E 867**, E17

torr—a unit of pressure equal to 1/760th of an atmosphere. **E 1316**, E07

torsional braid analysis, (TBA), n —a particular case of dynamic mechanical analysis in which the material is supported on a braid and the specimen is examined in torsion. (ICTAC) **E 473**, E37

torsional pendulum—a device for performing dynamic mechanical analysis, in which the sample is deformed torsionally and allowed to oscillate in free vibration. **D 4092**, D20

torsional shear test—a shear test in which a relatively thin test specimen of solid circular or annular cross-section, usually confined between rings, is subjected to an axial load and to shear in torsion. In-place torsion shear tests may be performed by pressing a dentated solid circular or annular plate against the soil and measuring its resistance to rotation under a given axial load. **D 653**, D18

torsional strength—load, usually expressed in terms of applied torque, at which the fastener fails by being twisted off about its axis. **F 1789**, F16

torsional stress—the shear stress on a transverse cross section, resulting from a twisting action. (E28) **D 4092**, D20

torsional stress[FL^{-2}], n —the shear stress in a body, in a plane normal to the axis of rotation, resulting from the application of torque. **E 6**, E28

torsion resistance, n —in tire beadwire, the number of turns of twist in a short length of wire that causes rupture **D 123**, D13

torsion resistance, n —in tire bead wire, the number of turns of twist in a short length of wire that causes rupture. **D 6477**, D13

total—see **radiometric properties and quantities**. **E 772**, E44

total annual freezing index—the cumulative number of degree-days, calculated by adding all of the negative mean daily air temperature (in degrees C) for a specific station during a calendar year. **D 7099**, D18

total annual thawing index—the cumulative number of degree-days, calculated by adding all of the positive mean daily air temperature (in degrees C) for a specific station during a calendar year. **D 7099**, D18

total carbon, n —carbon content remaining in the solid products derived from the combustion or reaction of coal, coal by-products, or coke, inclusive of carbonate in any form. **D 121**, D05

total case depth—distance measured perpendicularly from the surface of a hardened case to a point where differences in chemical or physical properties of the case and core no longer can be distinguished. **F 1789**, F16

total cold wall heat flux, n —the heat flux that would be transferred to an object whose temperature is 70°F (21°C). **E 176**, E05

total combustibles, n —combustible materials that include paints, lacquers, coatings, plastics, and so forth, associated with an

original metal product, as well as combustible materials which become associated with the product after it is manufactured.

D 5681, D34

total combustibles—materials that include paints, lacquers, coatings, plastics, etc., associated with the original ferrous product, as well as combustible materials (paper, plastic, textiles, etc.) which become associated with the ferrous product after it is manufactured. **D 5681**, D34

total contraction, n —of textured yarns, the difference between the original length and the length after heat treatment. **D 4849**, D13

total cross section—the sum of the absorption and scattering cross sections. **E 1316**, E07

total crotch length, n —in body measurements, the distance from the waist level at center front through the crotch to the waist level at center back. **D 123**, D13

total crotch length, n —in body measurements, the distance from the waist level at center front through the crotch to the waist level at center back. **F 1494**, F23

total cyanide—the total content of cyanide expressed as the radical CN^- , or alkali cyanide whether present as simple or complex ions. The sum of both the combined and free cyanide content of a solution. **B 374**, B08

total cycle period, τ_t [T]—the time for the completion of one cycle. The parameter τ_t can be separated into hold and non-hold (that is, steady and dynamic) components:

$$\tau_t = \Sigma\tau_h + \Sigma\tau_{nh}$$

where:

$\Sigma\tau_h$ = sum of all the hold portions of the cycle and,

$\Sigma\tau_{nh}$ = sum of all the non-hold portions of the cycle.

τ_t also is equal to the reciprocal of the overall frequency when the frequency is held constant. **E 1823**, E08

total dissolved solids content of steam, n —the concentration by mass of non-volatile, dissolved impurities in geothermal steam. **E 957**, E44

total distillation range—the temperature range, expressed in degrees Celsius, observed in vaporizing a material under specified conditions. **D 4790**, D16

total efficiency—the ratio of the net count rate for all energies in a gamma ray spectrometer system to the gamma ray emission rate of monoenergetic photons from a sample. The value is dependent on the source-detector-shield geometry and the photon energy. If gamma rays of more than one energy are emitted by the source, it may be necessary to determine a separate total efficiency for each such energy. **E 170**, E10

total elongation, El , n —the elongation determined after fracture by realigning and fitting together of the broken ends of the specimen. **E 6**, E28

total elongation (TE), n —of rope, the entire elongation at any given applied force. **D 123**, D13

total fluid constituent, n —in lubricating grease analysis, the n -hexane-soluble material extracted from the lubricating grease sample. **D 4175**, D02

total flux meter, n —the instrument used to measure the level of radiant heat energy incident on the specimen plane at any point. **E 176**, E05

total glycerin, n —is the sum of free and bonded glycerin. **D 4175**, D02

total image unsharpness—the blurring of test object features, in a radiological image resulting from any cause(s). **E 1316**, E07

total immersion thermometer, n —a liquid-in-glass thermometer designed to indicate temperatures correctly when just that portion of the thermometer containing the liquid is exposed to the temperature being measured. (Compare **complete immersion thermometer** and **partial immersion thermometer**.) **E 344**, E20

total insulation (I_T), n —the total resistance to dry heat loss from the manikin, that includes the resistance provided by the clothing and the air layer around the clothed manikin. **F 1494**, F23

total internal surface

total internal surface—the surface of a cellulosic material available for absorption of a given substance. A useful substance for this purpose is water; the value obtained with water is close to the potential maximum surface that can be developed without disruption of the crystalline structure. **D 1695, D01**

total irradiance, n —(1) the integral of the solar spectral irradiance; (2) the solar irradiance measured by a wide bandwidth radiometer. **E 1328, E44**

total Kjeldahl nitrogen, n —the sum of the nitrogen contained in the free ammonia and other nitrogen compounds which are converted to ammonium sulfate under specified digestion conditions. **D 1129, D19**

total length, n —the distance from the bottom of the bulb to the top of the finished thermometer, including any special finish at the top. **E 344, E20**

total length, n —the overall length of the finished hydrometer. **E 344, E20**

total life—the time required for open circuit to occur in the test thermoelement. **E 344, E20**

total mass, n —*in pile yarn floor coverings*, the mass of all matter in the mass per unit area expressed in grams per square metre (ounces per square yard) or in grams per linear metre (ounces per linear yard). **D 123, D13**

total mass, n —*in pile yarn floor covering*, the mass of all matter in the mass per unit area expressed in grams per square metre (ounces per square yard) or in grams per linear metre (ounces per linear yard). **D 5684, D13**

total mass stopping power, S/ρ —of a material for charged particles, the quotient of dE by ρdl , where dE is the energy lost by a charged particle in traversing a distance, dl , in the material of density ρ (ICRU).

$$S/\rho = (1/\rho) dE/dl$$

Unit: $J \cdot m^2 \cdot kg^{-1}$

($eV \cdot m^2 \cdot kg^{-1}$ is also used).

E 170, E10

total matter, n —the sum of the particulate and dissolved matter. **D 1129, D19**

total moisture—See *total moisture* under **moisture**. **D 121, D05**

total moisture—the water contained in a sample. The determination of the total moisture is made by drying a sample under controlled conditions of temperature, time, and air flow. The determination may consist of a single-stage or a two-stage drying process. **E 856, D34**

total n-hexane-insoluble material, n —*in lubricating grease analysis*, that portion of grease (excluding free alkali) that is essentially insoluble in n-hexane. **D 4175, D02**

total or gross-contact area [L^2], n —that area encompassed by the outer periphery of a tire footprint. **F 538, F09**

total pressure—See **pressure**. **D 1356, D22**

total reflectance, ρ, n —the ratio to the incident flux of the radiant or luminous flux reflected at all angles within the hemisphere bounded by the plane of measurement. **E 284, E12**

total reflectance factor, n —the ratio of the radiant or luminous flux, reflected at all angles within the hemisphere bounded by the plane of the specimen, to the flux reflected from the perfect reflecting diffuser under the same geometric and spectral conditions of measurement. **E 284, E12**

total-sediment discharge—the total quantity of sediment passing a section per unit of time. **D 4410, D19**

total-sediment load (total load)—all of the sediment in transport; that part moving as suspended load plus that moving as bedload. **D 4410, D19**

total soil-water potential—the sum of the energy-related components of a soil-water system; for example, the sum of the gravitational, matrix and osmotic potentials. **D 653, D18**

total solar ultraviolet, adj —solar energy above the solar cut on and below the visible, when received after transmittance through the atmosphere. **G 113, G03**

total solvent extractable content (TSEC)—the total concentration by weight (w/w) of organic materials that is extractable from a soil or solid waste by the selected solvent. **D 5681, D34**

total stress—see **stress**. **D 653, D18**

total sum of squares (TSS), n —a statistic used to quantify the information content from the inter-laboratory study in terms of total variation of sample means relative to the standard error of each sample mean. **D 4175, D02**

total transmittance, τ_p, n —the ratio of the flux transmitted at all forward angles to the incidence flux. **E 284, E12**

total variance—See *total variance* under **variance**. **D 121, D05**

total vertical trunk length, n —*in body measurements*, the distance from the right shoulder line midway between the neck base and the shoulder joint, down the back through the crotch and over the projection of the right breast to the starting point. **D 123, D13**

total water content (of frozen ground)—the total amount of water (water and ice) contained in soil or rock. This may be determined: (1) on a dry weight basis, as the ratio of the mass of the water and ice to the dry mass of the sample, expressed as a percentage; (2) on a volume basis, as the ratio of the volume of water and ice to the volume of the entire sample, expressed as a percentage. Using the volumetric method, the ratio cannot exceed unity. In the gravimetric method, however, it can. **D 7099, D18**

total weight basis moisture content—of biomass fuels, the ratio of the weight of the water in a sample to the weight of the wet material. It is expressed as a percent (also called wet basis moisture content). **E 1705, E48**

touch sanding—*in plywood*, a light surface sanding to control thickness; not intended as a full surfacing operation. **D 1038, D07**

touch trip—See **bottom trip**. **F 592, F16**

toughened glass—See **tempered glass**. **C 162, C14**

toughness—See **resistance, impact (toughness)**. **C 168, C16**

toughness, n —the capacity of a material to absorb energy. (Compare **work-to-break, work-to-rupture**.) **D 123, D13**

toughness, n —the capacity of a material to absorb energy (Compare **work to break, work to rupture**). **D 4848, D13**

toughness—ability of a fastener to absorb energy and to deform plastically before fracture. **F 1789, F16**

toughness at rupture, n —toughness of a material to breaking or tearing apart. **D 123, D13**

toughness at rupture, n —toughness of a material to breaking or tearing apart. **D 4848, D13**

toughness index, I_T, T_w —the ratio of: (1) the plasticity index, to (2) the flow index. **D 653, D18**

tough pitch copper—copper of any origin cast in the form of refinery shapes, containing a controlled amount of oxygen in the form of cuprous oxide. By extension the term is also applicable to fabricators' products made therefrom. **B 846, B05**

tow, n —*in flax fibers*, a combination of fiber bundles and ultimate fibers that have a maximum length of 50 cm. **D 123, D13**

tow, n —*in manufactured fibers*, a twistless multifilament strand suitable for conversion into staple fibers or sliver, or for direct spinning into yarn. **D 123, D13**

tow—*in fibrous composites*, a continuous, ordered assembly of essentially parallel, collimated filaments, normally without twist and of continuous filaments (Synonyms: strand and silver). **D 3878, D30**

tow, n —*in manufactured fibers*, a twistless multifilament strand suitable for conversion into staple fibers or sliver, or for direct spinning into yarn. **D 4849, D13**

tow, n —*in flax fibers*, a combination of fiber bundles and ultimate fibers that have a maximum length of 50 cm. **D 6798, D13**

towel, n —an absorbent textile product used for drying or wiping. **D 123, D13**

towel, n —an absorbent textile product used for drying or wiping. **D 7023, D13**

towing—transporting a boom from one place to another by pulling from one end. **F 818, F20**

- TOX**—total organic halides. **D 6161, D19**
- TOXFP**—total organic halide formation potential. **D 6161, D19**
- toxic hazard, *n***—*as related to fire*, the potential for physiological harm from toxic products of combustion. **E 176, E05**
- toxicity, *n***—the propensity of a test material to produce adverse behavioral, biochemical, or physiological effects in a living organism. **D 4175, D02**
- toxicity, *n***—the propensity of a test material to produce adverse behavioral, biochemical, or physiological effects in a living organism. **D 6384, D02**
- toxicity, *n***—the propensity of a substance to produce adverse biochemical or physiological effects. **E 176, E05**
- toxicity**—the property of a chemical, or combination of chemicals, to adversely affect organisms, tissues, or cells. **E 943, E47**
- toxicity, *n***—the property of a material, or combination of materials, to adversely affect organisms. **E 2114, E06**
- toxicity, *n***—the propensity of a substance to produce adverse biochemical or physiological effects. **F 1494, F23**
- toxicity**—the property of a material, or combination of materials, to adversely affect organisms. **F 1600, F20**
- toxicity characteristic leaching procedure (TCLP)**—a mild laboratory extraction procedure designed to determine the mobility of organic and inorganic constituents present in liquid, solid, and multiphasic wastes. **E 631, E06**
- toxicity characteristic leaching procedure (TCLP)**—a mild laboratory extraction procedure designed to determine the mobility of organic and inorganic constituents present in liquid, solid, and multiphasic wastes. **E 1605, E06**
- toxicity test**—an experiment used to study the adverse effect (*s*) of one or more chemicals on whole organisms, tissues, or cells. **E 943, E47**
- toxic potency, *n***—*as applied to inhalation of smoke or its component gases*, a quantitative expression relating concentration and exposure time to a particular degree of adverse physiological response, for example, death, on exposure of humans or animals. **E 176, E05**
- toxic waste, *n***—waste, based on the physical, chemical, radiological, or biological nature of the substance, and when exposed (that is, inhaled, ingested, or absorbed) to the human body, can cause acute or chronic injury or disease. **E 833, E06**
- trace, *n***—a constituent or impurity making up only a small portion of the sample, the upper limit of the trace or microconstituent being about 100 µg/g; this upper boundary is not rigidly fixed. **C 1145, C28**
- traceability**—the ability to demonstrate by means of an unbroken chain of comparisons that a measurement is in agreement within acceptable limits of uncertainty with comparable nationally or internationally recognized standards. **E 7, E04**
- traceability**—the property of a result of a measurement whereby it can be related to appropriate standards, generally international or national standards, through an unbroken chain of comparison, (ISO Guide 2). **E 1187, E36**
- traceability, *n***—the ability to trace the history, application, or location of an item or activity and like items or activities by means of recorded identification. (ANSI/ASQC-1987, A) **E 1187, E36**
- traceability, *n***—ability to trace the history, application, or location of that which is under consideration. **E 1605, E06**
- traceability**—the ability to trace the history, application, or location of an item or activity and like items or activities by means of recorded identification.
- traceability—Property of the result of a measurement or value of a standard whereby it can be related with a stated uncertainty, to stated references, usually national or international standards (i.e. through an unbroken chain of comparisons). **E 1732, E30**
- traceability**—ability to verify the manufacturing history, raw material, heat number, location, or application of an item by means of recorded identification. **F 1789, F16**
- tracer gas**—a gas which, passing through a leak, can then be detected by a specific leak detector and thus disclose the presence of a leak. Also called search gas. **E 1316, E07**
- tracer probe leak location**—Same as **probe test**. **E 1316, E07**
- track, *n***—a partially conducting path of localized deterioration on the surface of an insulating material. **D 1711, D09**
- track**—See **rail**. **F 592, F16**
- track-etch membrane formation**—process for forming membranes with well-defined pores by exposing a dense film to ion bombardment followed by etching of the damaged region. Usually produces pores with a narrow size distribution. **D 6161, D19**
- track etch technique**—a measurement method consisting of a dielectric material that records the passage of energetic heavy ionizing particles as latent tracks that can be developed or enlarged by various chemical methods and observed by microscopy methods or other techniques. **E 170, E10**
- tracking, *n***—the process that produces tracks as a result of the action of electric discharges on or close to the insulation surface. **D 1711, D09**
- tracking, *n***—the undesired appearance of ink on the copy in a repeat pattern. **D 6488, D01**
- tracking collector**—see **collector, tracking**. **E 772, E44**
- tracking, contamination, *n***—tracking caused by scintillations that result from the increased surface conduction due to contamination. **D 1711, D09**
- tracking error**—(1) for a two-axis tracking collector, the angular deviation between the collector-sun line and a line that is normal to the aperture plane. (2) for a single-axis tracking collector, the angular deviation between two planes that intersect along the axis of rotation. One plane contains the optical axis of the collector and the other contains the center of the sun. **E 772, E44**
- tracking resistance, *n***—the quantitative expression of the voltage and the time required to develop a track under specified conditions. **D 1711, D09**
- traction**—transport of debris by running water in which the particles are swept along close to the bed of the stream by rolling, sliding, or saltation. **D 4410, D19**
- traction, *n***—the adhesive friction of a body on a surface on which it moves. **F 141, F06**
- traction**—the coefficient of friction generated between the outsole and typical jogging or running surface. **F 869, F08**
- traction, *n***—*in tribology*, a physical process in which a tangential force is transmitted across the interface between two bodies through dry friction or an intervening fluid film, resulting in motion, reduction in motion, or the transmission of power. **G 40, G02**
- traction coefficient, *n***—*in tribology*, the dimensionless ratio of the traction force transmitted between two bodies to the normal force pressing them together. (See also **traction** and **traction force**.) **G 40, G02**
- traction, $S_1, S_2, S_3(\text{FL}^{-2})$** —applied stress. **D 653, D18**
- traction test, *n***—in tire testing, a series of *n* test runs at a selected operational condition; a traction test is characterized by an average value for the measured performance parameter. **F 538, F09**
- traction test**—method of evaluating the traction characteristics of footwear. **F 869, F08**
- traction vector angle, (rad or degree), *n***—the angle between the resultant traction force vector and the *X'*-axis. **F 538, F09**
- tractive force coefficient, *n***—*of a tire*, the ratio of tractive force to normal force on a tire footprint. **F 538, F09**
- traffic marking**—marring or discoloration, or both, of a floor surface by traffic. **D 2825, D21**
- traffic-rail system**—a railing system designed to control the movement of people and requiring special consideration for given use conditions. Also, *queue-rail system*.
- traffic-rail system—See **railing systems**.
- transfer-rail system—See **railing systems**. **E 631, E06**

traffic-rail system

traffic-rail system—a railing system designed to control the movement of people and requiring special consideration for given use conditions. Also, *queue-rail system*. E 1481, E06

traffic surface—a surface exposed to traffic, either pedestrian or vehicular, also described as finish wearing surface. C 717, C24

trailing—see **dragging**. F 335, F05

train—a grouping of devices (or cassettes immersed in a tank all connected to the same permeate pump). See **array**, **bank**, **block**. D 6161, D19

trained assessor, n—an assessor with a high degree of sensory acuity who has experience with the test procedure and an established ability to make consistent and repeatable sensory assessments. (See also **assessor** and **expert**.) E 253, E18

trajectory, n—the rectilinear or curvilinear path of a vehicle during a stopping maneuver; it is defined by the center of gravity and the transient angular orientation of the vehicle. F 538, F09

trajectory guide line (TGL), n—the centerline marked on the test course pavement that constitutes the intended trajectory; it is used by the driver to guide or steer the vehicle on its intended path. F 538, F09

trammage, n—in *wovencrepes*, a puckered area in which a filling yarn has twist running in the same direction for several picks instead of alternating S and Z twist. D 123, D13

trammage, n—in *wovencrepes*, a puckered area in which a filling yarn has twist running in the same direction for several picks instead of alternating S and Z twist. D 3990, D13

tranquil flow—see **subcritical flow**. D 4410, D19

transcrystalline cracking—cracking or fracturing which occurs through or across a crystal; intracrystalline cracking. E 7, E04

transducer, n—a device that provides a measurable output (for example, resistance, emf, etc.) as a function of temperature. E 344, E20

transducer—an electromagnetic device for converting electrical energy into magnetic or mechanical energy and vice versa. (E 1033) E 1316, E07

transducer—an electroacoustical device for converting electrical energy into acoustical energy and vice versa. See also **crystal**. E 1316, E07

transducers, acoustic emission—see **sensor, acoustic emission**. E 1316, E07

transducer shadow correction, n—the ratio of the *true* along-axis velocity, as measured in a wind tunnel or by another accepted method, to the instrument along-axis wind measurement. D 1356, D22

transfer, n—the process of substituting a loadbearing element from one test specimen for the loadbearing element in another test specimen, or utilizing a loadbearing element from one test specimen for use in another test specimen that does not include a loadbearing element. E 176, E05

transfer—the act of moving a developed image, or a portion thereof, from one surface to another as by electrostatic or adhesive forces. F 335, F05

transfer efficiency—the amount (weight/mass) deposited on a specified target divided by the spray gun output (weight/mass) per unit of time. C 286, B08

transference, n—process by which blocking results. F 1857, F05

transference number (transport number)—the proportion of the total current carried by the ions of a given kind. B 374, B08

transference (or transport, or migration)—the movement of ions through the electrolyte associated with the passage of the electric current. B 374, B08

transference, thermal, n—the steady-state heat flow from (or to) a body through applied thermal insulation and to (or from) the external surroundings by conduction, convection, and radiation. It is expressed as the time rate of heat flow per unit area of the body surface per unit temperature difference between the body surface and the external surroundings. C 168, C16

transfer failure, n—in *characterizing the locus of failure in a*

pressure-sensitive article, separation at the interface of adhesive and backing. D 907, D14

transfer function ($U_r = a + bR$, m/s)—the linear relationship between wind tunnel speed and the rate of rotation of the anemometer throughout the specified working range. D 1356, D22

transfer glass—optical glass cooled in the pot in which it was melted. C 162, C14

transfer molding—a method of forming articles by fusing a plastic material in a chamber and then forcing essentially the whole mass into a hot mold where it solidifies. D 883, D20

transfer molding—a method of forming articles by fusing a plastic material in a chamber and then forcing essentially the whole mass into a hot mold where it solidifies. (D20) F 412, F17

transfer-rail system—a railing system designed to support and to permit the transfer of body weight in such locations as toilets, showers, and tub enclosures.

treatment—see **hazardous-waste treatment**. E 631, E06

transfer-rail system—a railing system designed to support and to permit the transfer of body weight in such locations as toilets, showers, and tub enclosures. E 1481, E06

transfer standard—See **standard**. D 1356, D22

transfer standard, n—a physical standard used to transfer a calibration from one instrument to another, usually from a reference instrument in a standards laboratory to an instrument in the field. E 284, E12

transfer-standard dosimeter—a dosimeter, often a reference-standard dosimeter suitable for transport between different locations, used to compare absorbed-dose measurements. E 170, E10

transflection—an experimental method whereby radiant energy that is transmitted through the specimen is returned through the specimen by means of an external reflector. E 131, E13

transformation, n—the change from one set of variables, x , to another set, x' , by the use of a function, $x' = f(x)$. D 123, D13

transformation ranges, n—those ranges of temperature within which austenite forms during heating and transforms during cooling. A 941, A01

transformation temperature, n—the temperature at which a change in phase occurs, with the limiting temperatures of the **transformation ranges** designated using the following symbols:

Ac_{cm} —the temperature at which the solution of cementite in austenite is completed during heating.

Ac_1 —the temperature at which austenite begins to form during heating.

Ac_3 —the temperature at which transformation of ferrite to austenite is completed during heating.

Ac_4 —the temperature at which austenite transforms to delta ferrite during heating.

$Ae_1, Ae_3, Ae_{cm}, Ae_4$ —the temperatures of phase change at equilibrium.

Ar_{cm} —the temperature at which precipitation of cementite starts during cooling.

Ar_1 —the temperature at which transformation of austenite to ferrite or to ferrite plus cementite is completed during cooling.

Ar_3 —the temperature at which austenite begins to transform to ferrite during cooling.

Ar_4 —the temperature at which delta ferrite transforms to austenite during cooling.

M_r —the temperature at which transformation of austenite to martensite is substantially completed during cooling.

M_s —the temperature at which transformation of austenite to martensite starts during cooling. A 941, A01

transformation temperature—the temperature at which a change in phase occurs. The term is sometimes used to denote the limiting temperature of a transformation range. Sometimes incorrectly and loosely referred to as Critical Point. E 7, E04

transformation temperature—temperature at which a change in phase occurs, (E 7, E04). E 1142, E37

transformation temperature range, n —in a shape memory alloy, the temperature range in which a change of phase occurs.

F 2005, F04

transformed data, n —values created by combining data with other data or subjected to a methodology or mathematical process such as logarithmic transformation, averaging; for example, annual average daily traffic, average speed by segment, congestion indices, or equivalent single-axle loads.

E 867, E17

transformed flow net—a flow net whose boundaries have been properly modified (transformed) so that a net consisting of curvilinear squares can be constructed to represent flow conditions in an anisotropic porous medium.

D 653, D18

transformer oil, oxidation inhibited—a suitably refined mineral insulating oil to which an oxidation inhibitor has been added.

D 2864, D27

transformer oil, uninhibited—a suitable refined mineral insulating oil containing no additives and only such as remain in the oil.

D 2864, D27

transient talik—a layer or body of unfrozen ground in a permafrost area that is being eliminated gradually by freezing.

D 7099, D18

translational edge—an edge of a MEMS structure that is characterized by a distinctive out-of-plane vertical displacement as seen in a 2-D data trace.

E 2444, E08

transitional hours—See **hours of operation**.

E 1480, E06

transitional hours, n (heures de transition)—times in the morning after the first workers normally arrive, until a facility is fully operational, and in the evening from the end of normal work until the occupants have left.

E 631, E06

transition curve—in a P-T diagram, the locus of the temperature and pressure values at which a congruent equilibrium between two solid phases exists.

E 7, E04

transition, first order—a change of state, associated with crystallization or melting in a polymer.

D 883, D20

transition, first order, n —a reversible change in phase of a material; in the case of polymers, usually crystallization or melting.

D 1566, D11

transition, first order—a change of state, associated with crystallization or melting in a polymer. (D20)

F 412, F17

transition flow—in leak testing, the flow of gases under conditions intermediate between laminar viscous flow and molecular flow.

E 1316, E07

transition, glass, n —the reversible physical change in a material from a viscous or rubbery state to a brittle, glassy state.

D 1566, D11

transition phase—a non-equilibrium state that appears in a chemical system in the course of transformation between two equilibrium states.

E 7, E04

transition point—at a stated pressure, the temperature, or at a stated temperature, the pressure, at which two solid phases exist in congruent equilibrium, that is, an allotropic transformation temperature, or pressure.

E 7, E04

transition point, n —in bar code reading, the edge of a space or bar where continued movement to an adjacent and complementary module causes a photodetector to reverse its bias from dark current to saturation and vice versa.

F 1294, F05

transition, second order, n —see **transition, glass**.

D 1566, D11

transition structure—in precipitation from solid solution, a metastable precipitate which is coherent with the matrix.

E 7, E04

transition temperature, n —the test temperature for which the fracture surface of the test specimen shows 50 % ductile and 50 % brittle fracture.

A 644, A04

transition time, t_T [T]—time required for extensive creep conditions to develop in a cracked body. For specimens, this is the time required for the creep deformation zone to spread through a substantial portion of the uncracked ligament.

E 1823, E08

transitory flaming, n —the existence of flame on or over the surface of the specimen for periods of between 1 and 4 s.

E 176, E05

transitory flaming, n —existence of flame on or over most of the specimen surface for periods between 1 and 4 s.

E 176, E05

transit rate—the speed at which the suspended-sediment sampler is lowered and raised in the sampling vertical.

D 4410, D19

transit-rate ratio—the ratio computed by dividing the transit rate by the mean stream velocity in the vertical being sampled.

D 4410, D19

transit time (t , (s)), n —the time required for an acoustic wavefront to travel from the transducer of origin to the receiving transducer.

D 1356, D22

translucency, n —the property of a specimen by which it transmits light diffusely without permitting a clear view of objects beyond the specimen and not in contact with it.

E 284, E12

translucent, *adj*—transmitting light diffusely, but not permitting a clear view of objects beyond the specimen and not in contact with it.

E 284, E12

translucent base media—materials with properties that allow radiological interpretation by transmitted or reflected light.

E 1316, E07

translucent body, n —body that transmits light principally by diffuse transmission. Objects are not seen distinctly through such a body.

E 349, E21

transmembrane pressure (TMP)—the net driving force (pressure or vacuum) across the membrane. The hydraulic pressure differential from the feed side to permeate side less the osmotic pressure differential on each side.

D 6161, D19

transmission, n —of radiant energy, the process whereby radiant energy passes through a material or object. (See also **diffuse transmission**, **mixed transmission**, **regular transmission**.)

E 284, E12

transmission, n —passage of radiation through a medium without change of frequency of the monochromatic components of which the radiation is composed.

E 349, E21

transmission—passage of radiant energy through a material so that it emerges from a surface other than the surface of incidence, without change in frequency.

E 772, E44

transmission coefficient—fraction of monochromatic flux internally transmitted by unit path length of a medium. One minus the absorption coefficient.

NOTE—The transmission coefficient changes with wavelength.

E 772, E44

transmission coefficient—the ratio of the amount of radiant energy leaving the last surface of an optical system to the amount of radiant energy incident on the first surface.

F 2429, F07

transmission densitometer—an instrument that measures the intensity of the transmitted light through a radiographic film and provides a readout of the transmitted film density.

E 1316, E07

transmission density, D_T , n —the negative logarithm to base ten of the transmittance factor.

E 284, E12

transmission, heat, n —the quantity of heat flowing through unit area due to all modes of heat transfer induced by the prevailing conditions.

C 168, C16

transmission method—a method of X-ray or electron diffraction in which the recorded diffracted beams emerge on the same side of the specimen as the transmitted primary beam.

E 7, E04

transmission microscope—a microscope in which the image forming rays pass through (are transmitted by) the specimen being observed.

E 7, E04

transmission (optical) density, n —logarithm to the base 10 of the reciprocal of the transmittance. Symbol: D , $D = -\log_{10} \tau$.

E 349, E21

transmission rate, water vapor—See **water vapor transmission rate**.

C 168, C16

transmission/reflection interaction—see **transflection**.

E 131, E13

transmissivity—the volume of water at the existing kinematic viscosity that will move in a unit time under a unit hydraulic gradient through a unit width of the aquifer.

D 653, D18

transmissivity—the rate at which water of the prevailing kinematic viscosity is transmitted through a unit width of the aquifer under a unit hydraulic gradient.

D 653, D18

transmissivity

transmissivity—the volume of water of the prevailing kinematic viscosity transmitted in a unit time through a unit width of the aquifer under a unit hydraulic gradient. **D 653, D18**

transmissivity of an absorbing material, n —internal transmittance of a layer of the material such that the path of the radiation is of unit length. **E 349, E21**

transmittance, n —the ratio of the radiant power transmitted by a material to the radiant power incident upon it. **E 135, E01**

transmittance, n —of light, that fraction of the incident light of a given wavelength that is not reflected or absorbed, but passes through a substance. **E 253, E18**

transmittance, τ , n —the ratio of transmitted flux to incident flux, under specified geometric and spectral conditions. (See also **diffuse transmittance, internal transmittance, regular transmittance, total transmittance**.) **E 284, E12**

transmittance, n —ratio of the transmitted radiant or luminous flux to the incident flux. Symbol: $\tau_e, \tau_v, \tau; \tau = \tau_r + \tau_d$.

NOTE—Where mixed transmission occurs, the (total) transmittance may be divided into two parts, regular transmittance (τ) and diffuse transmittance (τ_d), corresponding, respectively, to the two modes of transmission referred to above.

In general, the values of the various transmittances depend upon the mode of irradiation, the spectral composition, and the state of polarization of the incident radiation. **E 349, E21**

transmittance, τ —the ratio of the transmitted radiant flux to the incident flux (Practice E 491). See **radiometric properties and quantities**. **E 772, E44**

transmittance, τ —the ratio of the radiant flux transmitted through a body to that incident upon it. **E 1316, E07**

transmittance, n —the ratio of transmitted flux to incident flux under specified geometric and spectral conditions, expressed either as a percentage or a decimal fraction. **G 113, G03**

transmittance density, D_n , n —the negative logarithm to base ten of the transmittance. **E 284, E12**

transmittance factor, T , n —ratio of the flux transmitted by the specimen to the flux transmitted by the perfect transmitting diffuser under the same geometric and spectral conditions of measurement. **E 284, E12**

transmittance, spectral, n —the transmittance as a function of wavelength. **G 113, G03**

transmittance, T , n —the fraction of radiant energy entering a substance that reaches its further boundary. **D 4175, D02**

transmittance, T , n —the molecular property of a substance that determines its transportability of radiant power, expressed by:

$$T = P/P_o$$

where:

P = the radiant power passing through the sample, and

P_o = the radiant power incident upon the sample.

D 4175, D02

transmittance, T —the ratio of radiant power transmitted by the sample to the radiant power incident on the sample. **E 131, E13**

transmittance, thermal, n —the heat transmission in unit time through unit area of a material or construction and the boundary air films, induced by unit temperature difference between the environments on each side. **C 168, C16**

transmitted film density—the density of radiographic film determined by measuring the transmitted light. **E 1316, E07**

transmitted light scanner—an optical scanner that operates by sensing light transmitted through paper instead of reflected from its surface. **F 149, F05**

transparency, n —(I) the degree of regular transmission, thus the property of a material by which objects may be seen clearly through a sheet of it.

(2) an image on a sheet, intended to be viewed or reproduced by light transmitted through it. **E 284, E12**

transparency illuminator, n —a device to permit viewing a transparency by diffusely illuminating it from the back. **E 284, E12**

transparent, adj —transmitting radiant energy without diffusion. **E 284, E12**

transparent body, n —body in which the light transmission is mainly regular and which has a high regular transmittance. Objects are seen distinctly through such a body if its geometrical form is suitable. **E 349, E21**

transpassive region—the region of an anodic polarization curve, noble to and above the passive potential range, in which there is a significant increase in current density (increased metal dissolution) as the potential becomes more positive (noble). **G 15, G01**

transplantation, n —for therapeutic purposes, the process of implanting in one part, cells, tissue(s), or organ(s) taken from another part or from another individual. **F 2312, F04**

transportation—the complex process of moving sediment particles by water. The principal factors affecting transportation are turbulence; ratio of settling velocity to water velocity; shape, size, density, and quantity of particles; and saltation. **D 4410, D19**

transported soil—soil transported from the place of its origin by wind, water, or ice. **D 653, D18**

transport package, n —a package used to protect goods during the process of distribution (handling, storage and transportation). It includes all industrial packaging and the shipping containers used for the distribution of consumer packaged goods. **D 996, D10**

transport packaging, n —methods and materials used to protect goods during the process of distribution (handling, storage and transportation). **D 996, D10**

transverse—directions in wood at right angles to the wood fibers. Includes radial and tangential directions. A transverse section is a section through a tree or timber at right angles to the pitch. **D 9, D07**

transverse—crosswise; at right angles to the longitudinal axis of the body. **F 869, F08**

transverse construction joint deterioration, n —(CRCP only) series of closely spaced transverse cracks or a large number of interconnecting cracks occurring near a construction joint. **E 867, E17**

transverse construction joint deterioration, n —(CRCP only) series of closely spaced transverse cracks or a large number of interconnecting cracks occurring near a construction joint. **E 1778, E17**

transverse cracking, n —cracks in the pavement that are predominantly perpendicular to the direction of traffic. **E 867, E17**

transverse cracking, n —cracks in the pavement that are predominantly perpendicular to the direction of traffic. **E 1778, E17**

transverse direction—See **cross direction**. **E 7, E04**

transverse element, n —a component or subassembly that links longitudinal members together. **F 1582, F04**

transverse loads, n —loads which are perpendicular to the facings: synonymous with flatwise load. **C 274, D30**

transverse profile, n —the vertical deviations of the pavement surface from a horizontal reference perpendicular to the lane direction. **E 867, E17**

transverse rupture strength, n —the stress calculated from the flexure formula, required to break a specimen supported near the ends as a simple beam; the load is applied midway between the center lines of the supports. **B 243, B09**

transverse strain, n —linear strain in a plane perpendicular to the axis of the specimen. **E 6, E28**

transverse wave—see **shear wave**. **E 1316, E07**

transverse wave—wave motion in which the particle displacement at each point in a material is perpendicular to the direction of propagation. (E 494) **E 1316, E07**

transverse wave (shear wave)—a wave in which the displacement at each point of the medium is parallel to the wave front. (ISRM) **D 653, D18**

transverse wave, v_t (LT^{-1})—wave in which direction of displacement of element of medium is parallel to wave front. The propagation velocity, v_p , is calculated as follows:

$$v_i = \sqrt{G/\rho} = \sqrt{\mu/\rho} = \sqrt{(E/\rho)[1/2(1 + \nu)]}$$

where:

- G = shear modulus,
 ρ = mass density,
 ν = Poisson's ratio, and
 E = Young's modulus.

D 653, D18

trap, *n*—a device utilized to selectively retain specific portions (individual or groups of hydrocarbons or oxygenates) of the test sample and to release the retained components by increasing the trap temperature. D 4175, D02

trap efficiency—the percent of the incoming sediment load that is deposited. D 4410, D19

trapezoidal wire—a wire with a keystone-shaped (wedge) cross section with two circular parallel sides. B 354, B01

trash, *n*—*in cotton*, undeveloped seed, motes, small bits of seed coat, or particles of leaf appearing as specks. D 123, D13

trash, *n*—*in flax fiber*, any non-fibrous material. D 123, D13

trash, *n*—*in testing cotton with the Trash Meter*, foreign matter having a distinct difference, as seen by a video camera, between light and dark color from that of cotton. D 123, D13

trash, *n*—*in cotton*, undeveloped seed, motes, small bits of seed coat, or particles of leaf appearing as specks. (*Syn.* mote trash) D 3990, D13

trash, *n*—*in flax fiber*, any non-fibrous material. D 6798, D13

trash, *n*—*in cotton*, undeveloped seed, motes, small bits of seed coat, or particles of leaf appearing as specks. D 7139, D13

trash, *n*—*in testing cotton with the Trash Meter*, foreign matter having a distinct difference, as seen by a video camera, between light and dark color from that of cotton. D 7139, D13

Trash Meter, *n*—an instrument which optically measures the amount of trash on the surface of a raw cotton sample as presented to the viewing window. D 123, D13

Trash Meter, *n*—an instrument which optically measures the amount of trash on the surface of a raw cotton sample as presented to the viewing window. D 7139, D13

trash removal device, *n*—*in open-end spinning machines*, a system for removing impurities from the opened feed stock before the fibers are conveyed to the rotor. D 123, D13

trash removal device, *n*—*in open-end spinning machines*, a system for removing impurities from the opened feed stock before the fibers are conveyed to the rotor. D 3888, D13

trauma care system—a subsystem within the EMS system designed to manage the treatment of the trauma patient. F 1177, F30

travel, *n*—a change in appearance of a material as it is viewed over a wide range of aspect angles. E 284, E12

travel—measured distance of movement when a membrane switch is depressed. F 2112, F01

traveled surface, *n*—any man-made, solid surface for vehicular travel, for example, highways, runways, rails, guideways. E 867, E17

traveled surface roughness, *n*—the deviations of a surface from a true planar surface with characteristic dimensions that affect vehicle dynamics, ride quality, dynamic loads, and drainage, for example, longitudinal profile, transverse profile, and cross slope. E 867, E17

travertine—a porous or cellularly layered partly crystalline calcite rock of chemical origin. C 119, C18

TRC—total residual chlorine. D 6161, D19

tread, *n*—that portion of the tire which contacts the road. D 5681, D34

tread, *n*—*of a tire*, the part of a tire that comes in contact with the ground. F 538, F09

tread arc width, *n*—the length of the arc measured from one extreme of tread design proper to the opposite extreme; that is, from shoulder to shoulder perpendicular to the circumferential center line. F 538, F09

tread band, *n*—an annular volume of rubber that encompasses the outer pavement contacting periphery of a tire; the width is normally much greater than the thickness, and both of these dimensions vary with tire size. F 538, F09

tread depth average, *n*—*in a single tire*, the average of all tire groove (void) depth measurements. F 538, F09

tread depth [L], *n*—synonym for *groove (void)depth*. F 538, F09

tread hardness, *n*—the hardness of an element in the tread design as measured by a designated standard gage. F 538, F09

treadlife, *n*—the distance required to produce wear-out. F 538, F09

tread radius, *n*—the radius of a circle whose arc best fits the tread surface when radius template used is held perpendicular to the circumferential center line of an inflated tire. F 538, F09

tread rubber, *n*—compounded, natural, or synthetic rubber, which is placed on a buffed casing and vulcanized to it to provide a new wearing surface. D 5681, D34

treadwear indicator, *n*—a raised portion of a groove bottom or a void bottom that is molded in a tire at fairly regular intervals around the circumference to provide a visual indication that most of a tread has been worn away. F 538, F09

treated carbon—carbon that is coated or impregnated on the side not carbonized. The treatment is ordinarily applied to improve curl resistance or slip resistance of the sheet or both. F 221, F05

treated iron, *n*—molten cast iron to which all basic alloys and nodulizing alloys have been added but not necessarily all inoculating alloy additions. A 644, A04

treatment—a process that is applied to one or both sides of the copper foil to enhance the adhesion of the foil to the base substrate that shall not degrade the foil or the base substrate. B 846, B05

treatment—the act or manner of treating wood; the quantity of preservative or other substance specified or used to treat wood. D 9, D07

treatment, *n*—a combination of the levels (versions) of each of the factors assigned to an experimental unit, synonym **treatment combination**. E 456, E11

treatment, *n*—a combination of the levels (versions) of each of the factors assigned to an experimental unit, synonym **treatment combination**. E 1325, E11

treatment—see **hazardous-waste treatment**. E 1605, E06

treatment, *n*—any method, technique, or process designed to change the physical, chemical or biological character of a waste to neutralize the waste, render it less hazardous, make it safer to transport or manage, or reduce its volume. E 2201, E50

treatment combination, *n*—*in experimenting*, one set of experimental conditions. D 123, D13

treatment combination, *n*—see **treatment**. E 456, E11

treatment combination, *n*—see **treatment**. E 1325, E11

treatment table, *n*—a recompression schedule used to treat decompression sickness or embolisms. F 1549, F32

tree—a woody plant having one well-defined stem and a more or less definitely formed crown, usually attaining a height of at least 8 ft. D 9, D07

trees—branched or irregular projections formed on a cathode during electrodeposition especially at edges and other high current density areas. B 374, B08

tremie—material placed under water through a tremie pipe in such a manner that it rests on the bottom without mixing with the water. D 653, D18

tremie method—the method whereby materials are emplaced in the bottom of a borehole with a small diameter pipe. D 653, D18

tremolite asbestos, *n*—asbestiform variety of the monoclinic amphibole silicate minerals of the tremolite-actinolite (ferroactinolite) series. D 2946, C17

trench—usually a long, narrow, near vertical sided cut in rock or soil such as is made for utility lines. (ISRM) D 653, D18

trench foundation—The area below the pipe and bedding which supports the pipe bedding structure. C 896, C04

triangle bars

triangle bars—burning bars of triangular cross section (see also **burning bars, points, or tools**). C 286, B08

triangle test, *n*—a method of discrimination testing comprised of three coded samples, two of which are identical. The assessor is asked to select the odd sample. E 253, E18

triangular magnifying lens—thermometer stem glass in which the numerals and graduations lie on surfaces that smoothly merge to form a lens. It is so named for its approximately triangular cross section. E 344, E20

triaxial compression—compression caused by the application of normal stresses in three perpendicular directions. (ISRM) D 653, D18

triaxial shear test (triaxial compression test)—a test in which a cylindrical specimen of soil or rock encased in an impervious membrane is subjected to a confining pressure and then loaded axially to failure. D 653, D18

triaxial state of stress—state of stress in which none of the three principal stresses is zero. (ISRM) D 653, D18

triboelectric effect—the phenomenon of producing an electrostatic voltage differential between dissimilar materials by contact or friction as between the toner and the carrier. F 335, F05

triboelement, *n*—one of two or more solid bodies that comprise a sliding, rolling, or abrasive contact, or a body subjected to impingement or cavitation. (Each triboelement contains one or more **tribosurfaces**.) G 40, G02

tribology, *n*—the science and technology concerned with interacting surfaces in relative motion, including friction, lubrication, wear, and erosion. G 40, G02

tribosurface, *n*—any surface (of a solid body) that is in moving contact with another surface or is subjected to impingement or cavitation. G 40, G02

tribosystem, *n*—any system that contains one or more triboelements, including all mechanical, chemical, and environmental factors relevant to tribological behavior. (See also **triboelement**.) G 40, G02

trichromatic system, *n*—system for specifying color stimuli in terms of tristimulus values based on matching colors by additive mixture of three suitably chosen reference color stimuli. E 284, E12

trickle collector—see **collector, trickle**. E 772, E44

trickling filter—a facility for the waste waters which utilizes a flow of liquid over fixed-media. C 896, C04

triclinic—having three axes of any length, none of the included angles being equal to one another or equal to 90°. E 7, E04

tricomponent fiber, *n*—a fiber consisting of three polymers which are chemically different, physically different, or any combination of such differences. D 123, D13

tricomponent fiber, *n*—a fiber consisting of three polymers which are chemically different, physically different, or any combination of such differences. D 4466, D13

trigger trip—tool activation by trigger operation in conjunction with bottom trip activation. F 592, F16

trim, *v*—**in textiles**, to cut off a portion of a material. D 123, D13

trim—the removal of parts of a raw hide not suitable for making leather, such as portions from the outer edges of heads, shanks and bellies. D 1517, D31

trim, *v*—**in homesewing**, to cut off a narrow strip, width, or portion of a material, usually along a cut edge of a seam allowance. D 4965, D13

trimmed block, *n*—dressed crude mica that has been split into thickness of 0.18 mm and over, and has side trimming done to remove irregularities, imperfections, and residues of dirt and rock. D 1711, D09

trimmers—units of various shapes consisting of such items as bases, caps, corners, mouldings, angles, and so forth, necessary or desirable to make a complete installation and to achieve sanitary purposes as well as architectural design for all types of tile work. C 242, C21

trim nail—See **moulding nail**. F 547, F16

triple-axle load, [lb (kg)], *n*—the total load transmitted to the road surface by the tires on all wheels of three consecutive vehicle axles, with not more than 12 ft (3.7 m) between the two axles furthest apart; a portion of the gross-vehicle weight. E 867, E17

triple-cavity mold—See **multiple-cavity mold**. C 162, C14

triple-cavity process—See **multiple-cavity process**. C 162, C14

triple curve—in a P-T diagram, a line representing the sequence of pressure and temperature values among which two conjugate phases occur in univariant equilibrium. E 7, E04

triple-gob process—See **multiple-cavity process**. C 162, C14

triple point—in a P-T diagram, the temperature and pressure at which three phases occur in invariant equilibrium. E 7, E04

triple point, *n*—fixed point of a system in which three phases are in equilibrium. E 344, E20

triple point of water, *n*—triple point of the liquid, solid, and vapor phases of water. E 344, E20

triplet injector—an impinging jet atomizer in which there are three colliding liquid jets. E 1620, E29

triplet state—an electronic state with a total spin quantum number of one. E 131, E13

tripoli—friable and dustlike silica used as an abrasive. B 374, B08

trisodium phosphate (TSP)— $\text{Na}_3\text{PO}_4 \cdot 12\text{H}_2\text{O}$, a cleaning agent. D 6161, D19

tristimulus colorimeter, *n*—instrument that measures psychophysical color, in terms of tristimulus values, by the use of filters to convert the relative spectral power distribution of the illuminator to that of a standard illuminant, and to convert the relative spectral responsivity of the receiver to the responsivities prescribed for a standard observer. E 284, E12

tristimulus filters, *n*—**in cotton fiber color testing with the Color Meter**, optical filters used in conjunction with specific color lamps to obtain a response function approximating the tristimulus functions of the CIE Standard Observer for Source C. D 123, D13

tristimulus filters, *n*—**in cotton fiber color testing with the Color Meter**, optical filters used in conjunction with specific color lamps to obtain a response function approximating the tristimulus functions of the CIE Standard Observer for Source C. D 7139, D13

Tristimulus Values, *n*—the amounts of three specified stimuli required to match a color. D 4175, D02

tristimulus values—the amounts of three specified stimuli required to match a color. (See also **CIE spectral tristimulus values**.) E 284, E12

tristimulus weighting factors, $S \bar{x}$, $S \bar{y}$, $S \bar{z}$, *n*—factors obtained from products of the spectral power S of an illuminant and the spectral color matching functions \bar{x} , \bar{y} , \bar{z} of an observer, usually tabulated at wavelength intervals of 10 or 20 nm, used to compute tristimulus values by multiplication by the spectral reflectance, transmittance, or radiance (or the corresponding factors) and summation. E 284, E12

trivial name, *n*—a name that is not produced by any systematic procedure of naming. D 1129, D19

trolley wire—a round or shaped, solid bare, hard conductor ordinarily used to supply current to motors through traveling current collectors. B 354, B01

trommel, *n*—a mechanical device that sorts size-reduced scrap tires. D 5681, D34

troostite—a previously unresolvable, fine aggregate of carbide and ferrite produced by tempering martensite at temperatures in the vicinity of 400°C. Term variously and erroneously applied to bainite and nodular fine pearlite. Confusion arose because of similarity in appearance among the three structures before the advent of high-power microscopy.

(Contemporary). With reference to tool steels, synonymous with upper bainite. E 7, E04

tropical—the region lying between the tropics of Cancer and Capricorn. F 1600, F20

- trough*—See **valley**. **E 1823**, E08
- trouser back rise**, *n*—*in garment construction*, a measurement from the crotch seam to bottom edge of waistband at center of the back. **F 1494**, F23
- trouser front rise**, *n*—*in garment construction*, a measurement from the crotch seam to the bottom edge of waistband at center front. **F 1494**, F23
- trouser hips**, *n*—*in garment construction*, the garment's circumference measured at the bottom of pockets or bartack on fly. **F 1494**, F23
- trousers**,—*n, pl*—an outer garment extending from the waist to the ankle covering each leg separately. (Syn. pants). **F 1494**, F23
- trouser waist**, *n*—*in garment construction*, with trousers folded in half by the crease or mating the leg inseams, measure across waist-band's width and double the measurement. **F 1494**, F23
- troweled finish**—a concrete finish provided by smoothing the surface with power driven or hand trowels or both, after the float finishing operation. A troweled finish is smoother than the floated finish. For specifications, see ACI 301-72. **C 717**, C24
- truck tire**, *n*—a tire with a rim diameter of 500 mm or larger. **D 5681**, D34
- truck tire**, *n*—tires with a rim diameter of 20 in. (50.8 cm) or larger. **D 5681**, D34
- true attenuation**—that portion of the observed ultrasound energy loss which is intrinsic to the medium through which the ultrasound propagates. True attenuation losses may be attributed to the basic mechanisms of absorption and scattering. (E 664) **E 1316**, E07
- true continuous technique**—magnetic particle examination in which the magnetizing current is applied prior to the application of the magnetic particles and is maintained without interruption throughout the examination. **E 1316**, E07
- true gage length**, *n*—*in tensile testing*, a precise length between well-defined bench marks located on the specimen while under known tension in the unsupported portion between the holding clamps and free from contact with any snubbing surfaces or other sources which could result in nonuniform strain. **D 123**, D13
- true gage length**, *n*—*in tensile testing*, a precise length between well-defined bench marks located on the specimen while under known tension in the unsupported portion between the holding clamps and free from contact with any snubbing surfaces or other sources which could result in non-uniform strain. **D 4849**, D13
- true international roughness index**, *n*—the value of international roughness index that would be computed for a longitudinal profile measurement with the constant interval approaching zero. **E 867**, E17
- true negative**, *n*—correct classification of a truthful person as truthful. **E 2035**, E52
- trueness**, *n*—the closeness of agreement between the population mean of the measurements or test results and the accepted reference value.
- NOTE—The measure of trueness usually is expressed in terms of bias. Greater bias means less favorable trueness.
- NOTE—"Population mean" is, conceptually, the average value of an indefinitely large number of test results.
- NOTE—Trueness is the systematic component of accuracy. **E 456**, E11
- trueness**—the lack of significant curvature, inclination, note-worthy elevations, or depressions. **E 867**, E17
- true positive**, *n*—correct classification of a deceptive person as deceptive. **E 2035**, E52
- true rise**, *n*—*inbody measurements*, the vertical distance (plumb line) from the waist level at the side to the crotch. **D 123**, D13
- true rise**, *n*—the vertical distance from the waist level at the side of the body to the flat surface, taken with subject sitting on hard, flat surface (crotch depth). **D 5219**, D13
- true solution**—one in which the components are 100 % dissolved in the base solvent. **D 653**, D18
- true strain**, ϵ , *n*—the natural logarithm of the ratio of instantaneous gage length, L , to the original gage length, L_0 ; that is, $\epsilon = \ln(L/L_0)$ or $\epsilon = \ln(1+e)$. **E 6**, E28
- true stress**, σ [FL⁻²], *n*—the instantaneous normal stress, calculated on the basis of the instantaneous cross-sectional area, A ; that is, $\sigma = F/A$; if no necking has occurred, $\sigma = S(1+e)$. **E 6**, E28
- true temperature**, *n*—temperature attributed to a particular site of a *subject* or object of measurement and accepted as having a specified uncertainty. **E 344**, E20
- true value**, μ , *n*—*in statistics*, the value towards which the average of single results obtained by N laboratories tends, when N becomes very large. **D 4175**, D02
- true value**, (μ), *n*—for practical purposes, the value towards which the average of single results obtained by N laboratories tends, when N becomes very large. Consequently, such a true value is associated with the particular test method employed. **D 4175**, D02
- true value**—value of measurand that would be obtained by a perfect measurement. **E 170**, E10
- true value**, *n*—*ofa temperature*, value attributed to a particular temperature and accepted, sometimes by convention, as having an uncertainty appropriate for a given purpose. **E 344**, E20
- truncated point**—needle point with its tip sheared square. **F 547**, F16
- truncation**—*in fatigueloading*, the exclusion of cycles with values above or below a specified level (referred to as truncation level) of a loading parameter (peak, valley, range, and so forth). **E 1823**, E08
- truncation**, *n*—*inbar code printing*, decreasing the length of bars to reduce the height of the symbol below normal specifications. **F 1294**, F05
- trunk**—the main stem or body of a tree. **D 9**, D07
- trunk length (total vertical)**, *n*—the circumference taken from a point on the right shoulder midway between the neck base and the shoulder joint, down the back through the crotch and up over the prominence of the right chest/bust apex to the starting point, avoiding constriction at the crotch. **D 5219**, D13
- trunk nail**—bright, regular-stock-steel, 1/2 to 1 3/4-in. nails with rivet or oval head and extra long "V" point. **F 547**, F16
- trunnions**, *n*—*inzippers*, the two pivots at the end of the pull that fit into the bail. **D 123**, D13
- trunnions**, *n*—the two pivots at the end of the pull that fit into the bail. **D 2050**, D13
- truss**—a coplanar system of structural elements joined together at their ends usually to construct a series of triangles that form a stable beam-like framework. **E 631**, E06
- trussed rafter nail**—See **threaded nail**. **F 547**, F16
- truss plate**—See **metalconnector plate**. **E 631**, E06
- truss rod**—a tensioning rod, used for bracing in gates and at terminal posts. May be threaded at one or both ends or contain a tightener or turnbuckle for adjusting tension. **F 552**, F14
- truss rod tightener**—a tightening device used with an adjusting nut and a truss rod (sometimes incorrectly called *turnbuckle*). **F 552**, F14
- truth-in-data**, *n*—provision of adequate and appropriate metadata that should be given to users of an ADMS that a particular information set they are using is not original source data or information but rather is transformed data; that is, some transportation management centers (TMC) estimate/calculate average traffic speed by detector for each time period based upon algorithms that use volume and lane occupancy as original source data, that could also apply to some of the data being imputed. **E 867**, E17
- TSD facility**—facility for treatment, storage, or disposal of hazardous waste. **E 631**, E06
- TSEC**—total solvent extractable content. The total concentration by weight (w/w) of organic materials that are extractable from a soil or solid waste by the selected solvent. **D 5681**, D34
- TSP**—tri-sodium phosphate. **E 631**, E06
- TSP**—tri-sodium phosphate. **E 1605**, E06

TSS—total suspended solids. Concentration of undissolved solids in a liquid, usually expressed in mg/L or ppm. **D 6161, D19**

t-test, n—a test of statistical significance based on the use of Student's *t*-distribution and used to compare two sample averages or a sample average and a hypothetical value. **D 123, D13**

TTHM—total trihalomethane. **D 6161, D19**

T titration—a titration in which the sensing electrode responds to the titrant ion, not to the sample species being determined. **D 4127, D19**

tube, n—hollow wrought product that is long in relation to its cross section, which is symmetrical and is round, elliptical, a regular hexagon or octagon, or square or rectangular with sharp or rounded corners, and has uniform wall thickness except as affected by corner radii.

Alclad tube, n—a composite tube product comprised of an aluminum-alloy core having on either the inside surface (only) or outside surface (only) a metallurgically bonded aluminum or aluminum-alloy coating that is anodic to the core, thus electrolytically protecting the core against corrosion.

arc-welded tube, n—tube made from sheet or plate formed by positioning two opposite edges of the metal together and butt welded by either the gas-tungsten or gas-metal arc-welding method, with or without the use of filler metal; individually fabricated tube may be welded together to produce the ordered length.

drawn tube, n—tube brought to final dimensions by drawing through a die.

extruded tube, n—tube formed by hot extruding.

finned tube, n—tube which has integral fins or projections protruding from its outside surface.

heat exchanger tube, n—tube used in apparatus in which fluid inside the tube will be heated or cooled by fluid outside the tube, but the term is usually not applied to coiled tube or to tube for use in refrigerators or radiators.

seamless tube, n—a tube that does not contain any junctures (metallurgical welds) resulting from the method of manufacture and may be produced by die and manrel, or by hot piercer processes.

sized tube, n—tube that, after extrusion, has been cold drawn a slight amount to minimize ovality.

structural tube, n—tube commonly used for structural purposes.

welded tube, n—tube produced by forming and seam-welding sheet longitudinally. **B 881, B07**

tube, n—a hollow product of round or any other cross section having a continuous periphery of uniform shape.

NOTE—The following standards use the same definition for "tube," less the words "of uniform shape." **B 899, B02**

tube, n—a cylindrical paperboard **container**, convolutely or spirally wound, having paper, wood, metal, or combination ends.

collapsible tube—in packaging, a flexible **container** having a dispensing tip and cap at one end, and closed at the opposite end, serving as both package and dispenser.

composite tube—in packaging, a **tube** consisting usually of multiple layers of **fiberboard**, film, or foil providing barrier properties, and an outer layer of paper.

fiberboard tube—in packaging, a cylindrical or multisided form.

paperboard (mailing) tube—in packaging, a cylindrical **container** wherein the length does not exceed ten times the girth with a minimum 1/8-in. (3-mm) wall thickness. **D 996, D10**

tube, n—a tubular conduit for transport of fluids or finely divided solids; also, a hollow structural member; a hollow product of round or other cross section. **E 631, E06**

tube—the component that encloses the spindle. It is attached to the lock horn and dial ring (not used in all lock designs). **F 471, F12**

tube, air conditioning—a seamless copper tube conforming to a standard series of sizes, and to specified internal cleanliness

requirements normally furnished in straight lengths, with the ends capped or sealed. **B 846, B05**

tube A manchette—in grouting, a grout pipe perforated with rings of small holes at intervals of about 12 in. (305 mm). **D 653, D18**

tube, automotive and general service—a seamless copper tube of small diameter conforming to a standard series of sizes commercially known as automotive and general service tube. **B 846, B05**

tube, capillary—a tube of small inside diameter with an inside surface of highest quality and conforming to close-diameter tolerances. It is subject to special tests to ensure precision and uniformity of bore and is specially cleaned and packed. **B 846, B05**

tube, condenser—see tube, heat exchanger. **B 846, B05**

tube, copper service—a bendable copper water tube for underground water service. **B 846, B05**

tube, copper water—a seamless copper tube conforming to the particular dimensions commercially known as copper water tube and designated as Types K, L, and M. **B 846, B05**

tube current—the current, measured in milliamperes, passing between the cathode and anode during the operation of an X-ray tube. **E 1316, E07**

tube current—the transfer of electricity, created by the flow of electrons, from the filament to the anode target in an X-ray tube; usually expressed in unit of milliamperes. **E 1316, E07**

tube, ferrule—a tube from which metal rings or collars (ferrules) are made for use in installing condenser tubes. **B 846, B05**

tube furnace—a muffle furnace in which combustion occurs within alloy tubes. **C 286, B08**

tube, heat exchanger—a tube manufactured to special requirements as to dimensional tolerances, finish, and temper for use in condensers and other heat exchangers. **B 846, B05**

tube, heat exchanger with integral enhanced surface—an external or internal surface, or both, modified by a cold forming operation, to produce an enhanced surface for improved heat transfer. The enhancement may take the form of longitudinal or helical fins or ridges, or both, or modifications thereto. **B 846, B05**

tube, heat exchanger with integral fins—a tube having a series of metallic ribs on the outside or inside surface either parallel to the longitudinal axis or circumferentially extended from the tube to increase the effective surface area for heat transfer applications. The fins may be mechanically applied, drawn, or integrally extended from the tube wall. **B 846, B05**

tube horn—an integral part of the case to which the tube is attached (not used in all locks). **F 471, F12**

tuberculation—the formation of localized corrosion products that appear on a surface as knoblike prominences (tubercules). **G 15, G01**

tube, refrigeration service—a seamless copper tube conforming to a standard series of sizes, and to special internal cleanliness and dehydration requirements, normally furnished to soft temper coils and with ends capped or sealed. **B 846, B05**

tube, seamless—a tube produced with a continuous periphery in all stages of the operations. **B 846, B05**

tube, seamless water—a tube conforming to the particular dimensions of tube commercially known as copper water tube and designated as Types K, L, and M in inch-pound units and Types A, B, and C in SI units. **B 846, B05**

tube terminal staple—staple designed for use as a wiring terminal in electronic assembly. **F 592, F16**

tube/tubing—hollow section of metal or other material having a round, square, rectangular, or other cross-sectional form, its size being designated by outside dimension(s) and wall thickness, in inches (millimeters). **E 1481, E06**

tube, waveguide—a tube used as a transmission line to electronic equipment. **B 846, B05**

tube, welded—tube made by processing strip into a tubular shape and welding the edges to make a longitudinal seam. **B 846, B05**

tube, welded water—a tube conforming to the particular dimensions

- of tube commercially known as copper water tube and designated as Types WK, WL, and WM in inch-pound units, and Types WA, WB, and WC in SI units. **B 846, B05**
- tubing, n**—braided, knitted, or woven fabric of cylindrical form having a width of 4 in. or more (circumference of 8 in. or more). (See also **sleeving**.) **D 123, D13**
- tubing, n**—braided, knitted, or woven fabric of cylindrical form having a width of 100 mm (4 in.) or more (circumference of 200 mm (8 in.) or more). **D 7018, D13**
- tubing, n**—a system of tubes. **E 631, E06**
- tubing nail**—See **conduit nail**. **F 547, F16**
- tuck, n**—**in rope**, a free strand of the rope placed between the rope strands during splicing. **D 123, D13**
- tucked seam, n**—a complex seam formed on the inside of the object with neither raw edge enclosed, having one visible line of topstitching on the face side and a visible free folded edge (tuck). (Compare **lapped seam**.) **D 123, D13**
- tucked seam, n**—**in home sewing**, a complex seam formed on the inside of the product with neither cut edge enclosed and having one visible line of topstitching on the face side and a visible free folded edge (tuck). (Compare **lapped seam**.) **D 4965, D13**
- tucking defect, n**—**in knitted fabrics**, one or more unwanted tuck loops. **D 123, D13**
- tucking defect, n**—**in knitted fabrics**, one or more unwanted tuck loops. **D 3990, D13**
- tuck point, v**—(1)(*historical*) to point masonry with a flush mortar joint that approximates the color of the masonry units and then add a mortar strip of contrasting color such that a narrow mortar joint width is simulated. (2) regional term for repoint. **C 1180, C12**
- tuckstone**—blocks placed on top of flux blocks to protect them from flame and gases and as a seal between them and the supported side and end walls. **C 162, C14**
- tuck wall**—the series of tuckstones or a wall serving the same purpose made of courses of brick. **C 162, C14**
- tuft, n**—**in pile yarn floor coverings**, those cut or uncut loops which form part of the fabric face that are attached or bound to the backing fabric at binding sites. **D 123, D13**
- tuft, n**—**in pile yarn floor coverings**, those cut or uncut loops which form part of the fabric face that are attached or bound to the backing fabric at binding sites. **D 5684, D13**
- tuft bind, n**—**in pile fabrics**, the force required to pull a tuft element from a pile yarn floor covering. **D 123, D13**
- tuft bind, n**—**in pile fabrics**, the force required to pull a tuft element from a pile yarn floor covering. **D 5684, D13**
- tufted, n**—buttoned or laced through the upholstery cover material and upholstery material. **E 176, E05**
- tufted fabric, n**—a fabric with a pile consisting of tufts or loops formed by inserting yarn into a previously prepared backing fabric. **D 123, D13**
- tufted fabric, n**—a fabric with a pile consisting of tufts or loops formed by inserting yarn into a previously prepared backing fabric. **D 4850, D13**
- tufted fabric, n**—a fabric with a pile consisting of tufts or loops formed by inserting yarn into a previously prepared backing fabric. **D 5684, D13**
- tuft element, n**—**for pile yarn floor covering**, a segment of yarn bound to a backing fabric at a binding site with two portions (legs) of the yarn projecting above the backing fabric, one portion on each side of the binding site. **D 123, D13**
- tuft element, n**—**for pile yarn floor covering**, a segment of yarn bound to a backing fabric at a binding site with two portions (legs) of the yarn projecting above the backing fabric, one portion on each side of the binding site. **D 5684, D13**
- tuft height, n**—**for pile yarn floor covering**, the length of a tuft leg. **D 123, D13**
- tuft height, n**—**or cut pile yarn floor covering**, the length of a tuft leg. **D 5684, D13**
- tufting, n**—**in upholstered furniture**, localized indentation of upholstered furniture surfaces and cushions, by the use of or appearance of buttons, providing an aesthetic treatment. **D 123, D13**
- tufting, n**—**in upholstered furniture**, localized indentation of upholstered furniture surfaces and cushions, by the use of or appearance of buttons, providing an aesthetic treatment. **D 7023, D13**
- tuft leg, n**—**for pile yarn floor covering**, one of the two portions of a tuft element that projects above the backing fabric on the pile side of the floor covering. **D 123, D13**
- tuft leg, n**—**for pile yarn floor covering**, one of the two portions of a tuft element that projects above the backing fabric on the pile side of the floor covering. **D 5684, D13**
- tuft length, n**—**for pile yarn floor covering**, the length of a tuft element measured while extended in a straight line under zero tension. **D 123, D13**
- tuft length, n**—**for pile yarn floor covering**, the length of a tuft element measured while extended in a straight line under zero tension. **D 5684, D13**
- tumbled**—a worn surface produced by rotating stone objects (like tiles) in a drum, sometimes with sand or aggregate stone, until the faces and edges become eroded. **C 119, C18**
- tumbled**—cleaned and polished by agitation in rotating drum containing polishing compound, such as sawdust or other burnishing media. **F 547, F16**
- tumbler-galvanized**—See **hot-galvanized**. **F 547, F16**
- tumbler, hand change**—an assembly, usually in the form of a circular disk, with a gate designed to accept a fence. When released by hand, the position of the gate may be set in order to change the combination. **F 471, F12**
- tumbler, hole change**—a component, usually in the form of a circular disk, into which a drive pin may be inserted at a selected position, to change the combination. **F 471, F12**
- tumbler, key change**—an assembly, usually in the form of a circular disk, with a gate designed to accept a fence. When released by a key, the position of the gate may be set to change the combination. **F 471, F12**
- tumbler pack**—an assembly of tumblers and components for assembly on a tumbler post. **F 471, F12**
- tumbler post**—a component upon which the tumbler pack is assembled and about which the tumblers rotate. **F 471, F12**
- tumbler, screw change**—an assembly, usually in the form of a circular disk, with threaded perforations into which a screw serving as a drive pin may be inserted at selected positions for change of combination. **F 471, F12**
- tumbler, wheel**—an assembly, usually in the form of a circular disk, with a gate and drive pin, the locations of which may be set to selected positions for changing the combination. **F 471, F12**
- tumbling**—See **barrel finishing**. **B 374, B08**
- tundra**—treeless terrain with a continuous cover of vegetation, found at both high latitudes and high altitudes. **D 7099, D18**
- tundra**—the vast, treeless, nearly level plains of the arctic regions. **F 1600, F20**
- tunnel**—a man-made underground passage constructed without removing the overlying rock or soil. Generally nearly horizontal as opposed to a shaft, which is nearly vertical. (ISRM) **D 653, D18**
- turbel**—a suborder of gelsol that displays evidence of extensive mixing due to the action of frost (cryoturbation). **D 7099, D18**
- turbic cryosol**—a mineral soil showing marked evidence of cryoturbation, as evidenced by broke horizons and displaced material. **D 7099, D18**
- turbidity, n**—reduction of transparency of a sample due to the presence of particulate matter. **D 1129, D19**
- turbidity**—an expression of the optical properties of a sample which causes light rays to be scattered and absorbed rather than transmitted in straight lines through the sample. Turbidity of water is caused by the presence of suspended and dissolved matter such as clay, silt, finely divided organic matter, plankton, other microscopic organisms, organic acids, and dyes. **D 4410, D19**

turbidity

turbidity—reduction of transparency of a sample due to the presence of particulate matter. **D 5681, D34**

turbidity—an expression of the optical properties of a sample that causes light rays to be scattered and absorbed rather than transmitted in straight lines through the sample. Turbidity of water is caused by the presence of matter such as clay, silt, finely divided organic matter, plankton other microscopic organisms, organic acids and dyes. **D 6161, D19**

turbidity, *n*—reduction of transparency of a specimen due to the presence of particulate matter. **E 284, E12**

turbidity, absolute, *n*—the fractional decrease of incident monochromatic light through the sample, integrating both scattering and transmitted light. **D 1129, D19**

turbidity current—See **densitycurrent**. **D 4410, D19**

turbidity, Jackson candle, *n*—an empirical measure of turbidity in special apparatus, based on the measurement of the depth of a column of water sample that is just sufficient to extinguish the image of a burning standard candle observed vertically through the sample. **D 1129, D19**

turbidity, jackson candle (JTU)—an empirical measure of turbidity in special apparatus, based on the measurement of the depth of a column of water sample that is just sufficient to extinguish the image of a burning standard candle observed vertically through the sample. **D 6161, D19**

turbidity, nephelometric, *n*—an empirical measure of turbidity based on a measurement of the light-scattering characteristics (Tyndall effect) of the particulate matter in the sample. **D 1129, D19**

turbidity, nephelometric (NTU)—an empirical measure of turbidity based on a measurement of the light-scattering characteristics (tyndall effect) of the particulate matter in the sample. **D 6161, D19**

turbine power nozzle, *n*—an attachment for a vacuum cleaner containing a turbine driven agitator that assists in dirt removal from a floor surface. **F 395, F11**

turbulence—the irregular motion of a flowing fluid. **D 4410, D19**

turbulent flow—that type of flow in which any water particle may move in any direction with respect to any other particle, and in which the head loss is approximately proportional to the second power of the velocity. **D 653, D18**

turbulent flow, *n*—that type of flow in which any water particle may move in any direction with respect to any other particle, and in which the head loss is approximately proportional to the second power of the velocity. **D 4439, D35**

turf-banked (solifluction) lobe—a solifluction lobe with its front covered by a vegetation mat. **D 7099, D18**

turf-banked (solifluction) terrace—a solifluction terrace with its front covered by a vegetation mat. **D 7099, D18**

turf hummock—a hummock consisting of organic and vegetation matter with or without a core of mineral soil or stones. **D 7099, D18**

turnaround document—a form produced by an electronic data processing system intended for future re-entry, possibly with added data, via an optical scanner. **F 149, F05**

turnbuckle—a tightening device with left hand and right hand threads at opposite ends, used with a truss rod. **F 552, F14**

turned and stitched seam finish, *n*—See **clean finished seam finish**. **D 4965, D13**

turned-over edge—See **curled selvage**. **D 3990, D13**

turn insulating paper, *n*—paper used to insulate conductors that will become coils in a transformer or other inductive apparatus. The conductors are commonly rectangular in cross section. **D 1711, D09**

turn point, *n*—point where a contour makes a sudden change in direction. **D 6963, D13**

turpentine, oil of—See **oil of turpentine**. **D 804, D01**

turpentine, spirits of—See **spirits of turpentine**. **D 804, D01**

turret or collar, *n*—a fitment that secures the body to the closure. **D 6655, D10**

tweak—to make a mechanical adjustment of a spring arm of an electrical contact assembly to adjust the force or position of the contact. **B 542, B02**

tweel, tuille—a counterweighted furnace door, opening vertically. **C 162, C14**

twelve-harness satin, *n*—a weave similar to eight-harness satin except in warp-faced fabrics warp yarns show on the face of the fabric eleven out of twelve adjacent yarns and in filling-faced fabrics filling yarns show on the face eleven out of twelve adjacent yarns. **D 123, D13**

twelve-harness satin, *n*—a weave similar to eight-harness satin except in warp-faced fabrics warp yarns show on the face of the fabric eleven out of twelve adjacent yarns and in filling-faced fabrics filling yarns show on the face of the fabric eleven out of twelve adjacent yarns. **D 7018, D13**

twill braid, *n*—in rope, a braided construction in which one strand of one direction of rotation about the axis passes over two strands of the opposite direction and it in turn passes under the next two strands of opposite direction. **D 123, D13**

twill weave, *n*—a weave characterized by diagonal lines produced by a series of floats staggered in the warp direction, which are normally formed by the filling (a filling-faced twill). (See also **warp-faced twill**.) **D 123, D13**

twill weave, *n*—a weave characterized by diagonal lines produced by a series of floats staggered in the warp or filling direction. (See also **warp-faced twill** and **filling-faced twill**.) **D 123, D13**

twill weave, *n*—a weave characterized by diagonal lines produced by a series of floats staggered in the warp or filling direction. (See also **warp-faced twill** and **filling-faced twill**.) **D 4850, D13**

twin bands—bands across a crystal grain, observed on a polished and etched section, the crystallographic orientations of which have a mirror image relationship to the orientation of the matrix grain across a composition plane which usually is parallel to the sides of the band.

(1) **annealingtwin**—twin bands which are produced during annealing following cold work.

(2) **mechanicaltwins**—twin bands which are produced by cold work.

(3) **Neumann bands**—mechanical twins in ferrite. **E 7, E04**

twine, *n*—(1) a term applied loosely to a variety of textile strands used for tying such articles as parcels, bundles, or bales.

(2) an aggregate of fibers or yarns compacted into a partially or completely balanced twisted structure of indefinite length, generally used for tying or binding. **D 123, D13**

twin-fluid atomizer—see **pneumatic atomizer**. **E 1620, E29**

twist—a distortion caused by the turning or winding of the edges of a board so that the four corners or any face are no longer in the same plane. **D 9, D07**

twist, *n*—in textilestrands, the helical or spiral configurations induced by turning a strand about its longitudinal axis. **D 123, D13**

twist, *n*—in fibrouscomposites, a measure of the number of turns per unit length a fiber bundle makes around its axis. **D 3878, D30**

twist—a condition of longitudinal progressive rotation found in pultruded parts.

NOTE—This term describes a condition that can be easily detected for a noncircular cross section by placing the pultrusion on a plane surface, holding one end flat with the surface, and observing if one edge or side of the other end does not lie parallel with that surface. **D 3918, D20**

twist, *n*—in textile strands, the helical or spiral configurations induced by turning a strand about its longitudinal axis. **D 4849, D13**

twist—the type of selvage obtained by twisting adjacent pairs of wire

ends together in a close helix of 1½ machine turns, which is equivalent to three full twists. **F 552, F14**

twist (amount of), *n*—the number of turns per unit length of yarn or textile strand (or of a product such as cable or hose) around its axis. **D 1566, D11**

twist balance, *n*—in glass fiber cord and sewing thread, the relationship of primary and final twist to each other and to the cord size such that residual torsional effects are nullified. **D 123, D13**

twist balance, *n*—in glass fiber cord and sewing thread, the relationship of primary and final twist to each other and to the cord size such that residual torsional effects are nullified. **D 7018, D13**

twisted—provided with four or more continuous, symmetrical, helical deformations; resulting from twisting of square nail wire about its own longitudinal axis prior to heading and pointing of nail. Helical deformations resulting from this manufacturing process extend all the way from head to point, thus preventing inclusion of clearance between head and thread. **F 547, F16**

twisted nail—helically twisted, squarewire, ½ by 0.072 to 6 by 0.250-in. drivescrew nails, usually of tempered stiff-stock, with flat or countersunk head and medium diamond point, with crest diameter being referred to as diameter. **F 547, F16**

twisted or laid rope, *n*—rope made from three or more strands which are laid or twisted together in a twist direction opposite to the twist direction in the strands. **D 123, D13**

twist factor, *n*—the product obtained when the twist expressed in turns per centimetre is multiplied by the square root of the yarn number expressed in tex.

$$\text{Twist factor (TF)} = \text{tpcm} \times \sqrt{T}$$

where:

T = yarn number expressed in tex.

D 123, D13

twist factor, TF, *n*—the product obtained when the twist expressed in turns per centimetre is multiplied by the square root of the yarn number expressed in tex.

$$\text{Twist factor (TF)} = \text{tpcm} \times \sqrt{T^{1/2}}$$

where:

$\sqrt{L^{1/2}}$ = yarn number expressed in tex.

Twist multiplier and twist factor are a measure of the twist "hardness" of yarn because they are approximately proportional to the tangent of the angle between fibers on the outer yarn surface and the axis of the yarn; the larger this angle, the harder the twist. Furthermore, this angle is a function of both the twist content (turns per unit length) and the number of fibers per yarn cross section (yarn number). Hence, twist content alone cannot provide a measure of the twist hardness of a yarn. Twist multiplier and twist factor are proportional to each other and differ only in the units used. The two are related by the following equations.

$$TF = k \times TM$$

$$k = 277.29/\sqrt{L^{1/2}}$$

Where:

$\sqrt{L^{1/2}}$ = length in yards of the hank used to define the indirect yarn number of the type,

N = hanks/lb. In particular for cotton system,

k = 9.567 and Eq 168 becomes:

$$TF = 9.567 \times TM$$

D 4849, D13

twist multiplier, TM, *n*—the quotient of the twist expressed in turns per inch and the square root of the yarn number in an indirect system.

$$\text{Twist multiplier (TM)} = \text{tpi}/\sqrt{N}$$

where:

N = yarn number in an indirect system, the cotton system unless otherwise specified.

D 123, D13

twist multiplier, (TM), *n*—the quotient of the twist expressed in turns per inch and the square root of the yarn number in an indirect system.

$$\text{Twist multiplier (TM)} = \text{tpi}/\sqrt{N^{1/2}}$$

where:

$\sqrt{N^{1/2}}$ = yarn number in an indirect system, the cotton system, unless otherwise specified.

D 4849, D13

twist nail—slender, copper or aluminum nails with flat head and medium needle point for twist clinching, that is, for having part of nail shank twisted to form a clinched point. **F 547, F16**

twist take-up, *n*—the change in length of a yarn or other textile strand caused by twisting, expressed as a percent of the original untwisted length. **D 123, D13**

twist take-up, *n*—the change in length of a yarn or other textile strand caused by twisting, expressed as a percent of the original untwisted length. **D 4849, D13**

twist, yarn, *n*—the number of turns, about its axis, per unit of length, observed in a yarn or other textile strand. **D 1566, D11**

two-body abrasive wear, *n*—a form of abrasive wear in which the hard particles or protuberances which produce the wear of one body are fixed on the surface of the opposing body. **G 40, G02**

two coat-one fire—the application of two different coats of enamel followed by a single firing step. **C 286, B08**

two-dimensional symbology—see **2D symbol**. **F 1294, F05**

two-fluid atomizer—see **pneumatic atomizer**. **E 1620, E29**

two-front button, *n*—a button in which the face and back shape are identical. **D 5497, D13**

two-layer permafrost—ground in which two layers of permafrost are separated by a layer of unfrozen ground. **D 7099, D18**

two-of-five test, *n*—a method of discrimination testing comprised of five samples: two are identical samples of one product and three are identical samples of a second product. The assessor's task is to determine which two samples are different from the other three. **E 253, E18**

two-phase system—a vapor phase and a single liquid phase, usually containing dissolved propellant, inside the container. **D 3064, D10**

two-phase thermosyphon—a passive heat transfer device, filled with a temperature-dependent liquid/vapor combination, installed to remove heat from the ground. **D 7099, D18**

two-point threshold (touch), *n*—the minimum normal distance between two objects such that they are perceived as two a specified percent of the time. **E 253, E18**

two-side structural sealant glazing, *n*—in building construction, a glazing system wherein two sides of a rectangular-shaped lite or panel, usually opposing, are structural sealant glazed. **C 717, C24**

two-way sort—an electromagnetic sort based on a signal response from the material under test above or below a level established by two or more calibration standards. **E 1316, E07**

T-X diagram—a two-dimensional, graphical representation of the isobaric phase relationships in a binary system; the coordinates of the graph are temperature and concentration. **E 7, E04**

tympanic temperature, *t_{ty}*, *n*—temperature of either tympanic membrane as measured by a contact thermometer. **E 344, E20**

tyndall effect—the path of light through a heterogeneous medium made visible by the solid particles. **D 6161, D19**

type—the designation of plywood as a function of veneer grade and adhesive durability. **D 1038, D07**

type

type—the descriptive term for designating a penetrant as either fluorescent (type 1) or visible (type 2). **E 1316, E07**

Type A operating characteristic curve, *n*—an operating characteristic curve which describes the operation of a sampling plan where the size of the lot being sampled is taken into consideration. **D 123, D13**

type bar—a bar, mounted on an impact printer, that holds type slugs. **F 909, F05**

Type B operating characteristic curve, *n*—an operating characteristic curve which describes the operation of a sampling plan where items are drawn at random from a theoretically infinite process. **D 123, D13**

Type F (flexible) flat sheets—asbestos-cement flat sheet suitable for exterior or interior use, where a board having higher strength and density, smoother surface, greater flexibility, and lower moisture absorption is desired. **D 2946, C17**

type font—type of a given size and style, for example, 10-point Bodoni Modern. **F 909, F05**

Type I—exhaust hood designed for removal of grease and smoke. It includes both listed grease filter, baffles, or extractors for removal of the grease and fire suppression equipment. See **exhaust hood**. **F 1827, F26**

Type I apparel—apparel designed for general heavy work; it may be subjected to breaking and tearing stresses indoors or out. **D 123, D13**

Type I apparel, *n*—apparel designed for general heavy work; it may be subjected to breaking and tearing stresses indoors or out. **D 7022, D13**

Type II—exhaust hood designed for collection and removal of steam, vapor, heat, and odors where grease is not present. It may or may not have filters or baffles and typically does not have a fire suppression system. **F 1827, F26**

Type II apparel—apparel designed for light work or leisure activities; it will not be expected to undergo severe physical stresses. **D 123, D13**

Type II apparel, *n*—apparel designed for light work or leisure activities; it will not be expected to undergo severe physical stresses. **D 7022, D13**

Type II mineral oils, *n*—oils for steam and gas turbine lubricating

systems where the machinery requires enhanced load carrying capacity. These oils are similar to Type I and are typically used in gas turbines with a load carrying gear marine turbines. Such oils contain rust and oxidation inhibitors, plus mild extreme pressure (EP) additives and other additives as needed to meet the specified performance characteristics. Type II oils usually are available in ISO-VG 32, 46, 68, 100, and 150. **D 4175, D02**

Type I mineral oils, *n*—oils for steam and gas turbine lubricating systems where the machinery does *not* require lubricants with enhanced load carrying capacity. Such oils normally contain rust and oxidation inhibitors plus other additives as needed to meet the specified performance characteristics. Type I oils usually are available in ISO-VG 32, 46, 68, and 100 (see Classification D 2422). **D 4175, D02**

type of thermocouple—the type of a thermocouple is represented by a letter designation as defined in accordance with Specification E 230. **E 344, E20**

Type U (utility) flat sheets—asbestos-cement flat sheet suitable for exterior or interior use, having sufficient strength for general utility and construction purposes, and where a board having maximum flexibility, highest density, smoother surface, and lower moisture absorption is not essential. **D 2946, C17**

typewriter—a machine for writing in characters similar to those produced by printers' type by means of keyboard-operated types striking through an inked ribbon. **F 909, F05**

typical metal connector plate—metal connector plate representative of single shipment of plate to be tested; with plate manufacturing procedure simulating actual production conditions anticipated during plate fabrication as well as during member and component assembly. **E 631, E06**

typical serviceability score—See **serviceability score**. **E 1480, E06**

typical value, *n*—for *geosynthetics*, the mean value calculated from documented manufacturing quality control test results for a defined population obtained from one test method associated with on specific property. **D 4439, D35**

typp, *n*—an obsolete indirect yarn numbering system equal to the number of 1000-yd lengths per pound. **D 123, D13**

typp, *n*—an obsolete indirect yarn numbering system equal to the number of 1000-yd lengths per pound. **D 4849, D13**

U

UCC/EAN, *n*—a consortium of UCC and EAN that promulgates international standards. **F 1294**, F05

UCL—a generic term to represent the aggregate quantity of material that causes an incident light beam to be scattered. The value can be correlated to either turbidity or to specific particle count levels of a defined size. **D 6161**, D19

“U” configuration (aka catenary configuration)—boom positioned in a “U” shape. **F 818**, F20

ulcer, *n*—a local defect, or excavation of the surface of an organ or tissue, which is produced by the sloughing of inflammatory necrotic tissue. **F 2312**, F04

ullage, *n*—that volume of a closed system or container which is filled with vapor. **D 4175**, D02

ULPA filter—ultra-low-penetration air filter.
ultimate strength—See **strength**. **E 631**, E06

ultimate analysis, *n*—*in the case of coal and coke*, the determination of carbon and hydrogen in the material, as found in the gaseous products of its complete combustion, the determinations of sulfur, nitrogen, and ash in the material as a whole, and the calculation of oxygen by difference. **D 121**, D05

ultimate analysis, *n*—in analysis of combustible materials, the determination of the percentages of carbon, hydrogen, sulfur, nitrogen, chlorine, ash, and oxygen in a moisture-free sample; the percentage of oxygen is usually determined by difference. **D 5681**, D34

ultimate analysis—the determination of the percentages of carbon, hydrogen, sulfur, nitrogen, chlorine, ash, and oxygen in a dry refuse-derived fuel sample. The percentage of oxygen may be obtained by difference between 100 % and the sum of the other determined elemental analyses. **E 856**, D34

ultimate analysis—the determination of carbon and hydrogen in the material, as found in the gaseous products of its complete combustion, the determination of sulfur, nitrogen, and ash in the material as a whole, and the calculation of oxygen by difference. **E 1705**, E48

ultimate analysis—the determination of the elemental composition of the organic portion of carbonaceous materials as well as the total ash and moisture. Determined by prescribed methods. **E 1705**, E48

ultimate bearing capacity, q_e , q_{ult} (FL^{-2})—the average load per unit of area required to produce failure by rupture of a supporting soil or rock mass. **D 653**, D18

ultimate biodegradation, *n*—degradation achieved when the test substance is totally utilized by microorganisms resulting in the production of CO_2 , (and possibly methane in the case of anaerobic biodegradation), water, inorganic compounds, and new microbial cellular constituents (biomass or secretions, or both). **D 4175**, D02

ultimate biodegradation, *n*—degradation achieved when the test material is totally utilized by microorganisms, resulting in the production of carbon dioxide (and possibly methane, in the case of anaerobic biodegradation), water, inorganic compounds, and new microbial cellular constituents (biomass or secretions, or both). **D 6384**, D02

ultimate biodegradation test, *n*—a test that estimates the extent to which the carbon in a product has been converted to CO_2 or methane, either directly, by measuring the production of CO_2 or methane, or indirectly, by measuring the consumption of O_2 . **D 4175**, D02

ultimate biodegradation test, *n*—a test which estimates the extent to which the carbon in a material is converted to carbon dioxide or methane, either directly by measuring the production of carbon dioxide O_2 or methane, or indirectly by measuring the consumption of oxygen. **D 6384**, D02

ultimate capacity, *n*—as applied to loadbearing elements, the actual maximum load carrying capacity of an element based on properties specific to the material constituting the element. **E 176**, E05

ultimate fiber, *n*—*in flax*, an individual bast fiber. **D 123**, D13

ultimate fiber, *n*—*in flax*, an individual bast fiber. **D 6798**, D13

ultimate resilience, R_u [FL^{-2}], *n*—a material parameter defined by the equation:

$$R_u = S_u^2/2E$$

where:

S_u = ultimate tensile strength, and

E = elastic modulus, as determined from a conventional tension test.

G 40, G02

ultimate strength—the maximum three edge bearing test load supported by a pipe. **C 822**, C13

ultimate strength—maximum resistance to external force, load, or generation of internal strain of a material, member, connection, component, or assembly at which failure occurs; expressed in terms of units of force, newtons (pound-force); as compared to ultimate stress which is expressed in units of force per unit of area. Often referred to as *maximum load*, *ultimate load*, *maximum strength*, or *nominal strength*, and incorrectly referred to as ultimate stress. **E 631**, E06

ultimate strength, *n*—the maximum force sustained as defined by a standard test method. **F 1773**, F08

ultimate tensile load—maximum tensile-applied load or force a fastener can support prior to or coincidental with its fracture, and normally expressed in terms of pounds or Newtons. **F 1789**, F16

ultimate tensile strength, *n*—the highest load attained during a tensile test, converted to unit stress based on the original cross-section area of the tensile test specimen. **C 709**, D02

ultimate tensile strength, *n*—the highest load attained during a tensile test, converted to unit stress based on the original cross-section area of the tensile test specimen. **D 4175**, D02

ultra accelerator, *n*—a highly active accelerator for fast vulcanization and often used for low-temperature vulcanization.

D 1566, D11

ultrafiltration, *n*—a process employing semipermeable membrane under a hydraulic pressure gradient for the separation of components in a solution. The pores of the membrane are of a size which allow passage of the solvent(s) but will retain non-ionic solutes based primarily on physical size, not chemical potential.

D 1129, D19

ultrafiltration (UF)—a pressure driven process employing semipermeable membrane under a hydraulic pressure gradient for the separation of components in a solution. The pores of the membrane are of a size smaller than $0.1\mu m$, which allows passage of the solvent(s) but will retain non-ionic solutes based primarily on physical size, not chemical potential. **D 6161**, D19

ultra-low penetration air (ULPA) filter—filter capable of separating out particles of $0.13\mu m$ or greater from a body of air at 99.9995 % efficiency or greater. See also **HEPA filter**. **E 631**, E06

ultramicroscopic—below the resolution of the microscope. **E 7**, E04

ultra pure water—water generally used in semiconductor industry having specifications (chemical, physical and biological) for extremely low contaminant levels. **D 6161**, D19

ultrasonic—pertaining to mechanical vibrations having a frequency greater than approximately 20 000 Hz. **E 1316**, E07

ultrasonic cavitation test device, *n*—a vibratory cavitation test device whose driving frequency is in the ultrasonic range, about 20 kHz or greater. (For lower frequencies, the term *vibratory cavitation test device* is preferred.) **G 40**, G02

ultrasonic leak detector—an instrument that detects ultrasonic energy produced by molecular turbulence that occurs in the transition from laminar to turbulent flow of a gas through an orifice and that converts this energy to a usable signal. **E 1316**, E07

ultrasonic noise level—the large number of unresolved indications resulting from structure or possibly from numerous small discontinuities, or both. (E 127) **E 1316**, E07

ultrasonic nozzle

ultrasonic nozzle—a pneumatic or vibratory atomizer in which energy is imparted, at high frequency, to the liquid.

NOTE—Common usage refers to frequencies within or above the human auditory range, but recommended practice should be restricted to frequencies above 20 kHz.

NOTE—For frequencies below 20 kHz, see **sonic atomizer**.

E 1620, E29

ultrasonic precipitation—See **precipitation**. D 1356, D22

ultrasonic spectroscopy—analysis of the frequency spectrum of an ultrasonic wave. E 1316, E07

ultraviolet—invisible light radiation, adjacent to the violet end of the visible spectrum, with wavelengths from about 200 to 400 nm (nanometres). E 7, E04

ultraviolet—pertaining to the region of the electromagnetic spectrum from approximately 10 to 380 nm. The term ultraviolet without further qualification usually refers to the region from 200 to 380 nm. E 131, E13

ultraviolet, adj—referring to radiant flux having wavelengths shorter than the visible wavelengths about 10 to 380 nm. E 284, E12

ultraviolet-activated fluorescence, n—fluorescence resulting from the absorption of ultraviolet radiant flux, that is, flux with wavelengths shorter than 380 nm. (See also **visible-activated fluorescence**.) E 284, E12

ultraviolet radiation, n—radiation for which the wavelengths of the monochromatic components are smaller than those for visible radiation and more than about 1 nm.

NOTE—The limits of the spectral range of ultraviolet radiation are not well defined and may vary according to the user. Committee E-2.1.2 of the CIE distinguishes in the spectral range between 100 and 400 nm:

UV-A	315 to 400 nm
UV-B	280 to 315 nm
UV-C	100 to 280 nm

E 349, E21

ultraviolet response—a particular type of optics system used in some optical scanners. As a general rule, nonscan inks for this response will be in the violet portion of the color spectrum. F 149, F05

ultraviolet (UV) radiation—wave lengths between 200 to 300 nm. These wave lengths have a strong germicidal effect. The maximum effect is at 253.7 nm. D 6161, D19

umami, n—a basic taste sensation stimulated by substances such as monosodium glutamate, and nucleotides. E 253, E18

umbilical, n—in surface-supplied diving, diver's gas and a communication and safety line all in one bundle. F 1549, F32

umbrella head—extra-large cupped oval head, provided with slight projection of nail shank above head to provide striking surface during driving. F 547, F16

unadjusted mode, n—an output of *IR thermometer* that displays temperature measured and calculated from a *subject* or object, without any corrections for variations in *operating temperature*, *subject temperature*, *emissivity*, etc. E 344, E20

unaided eye—visual inspection, without the use of special equipment or enhancement excepting the use of corrective lenses. B 846, B05

unaided eye—visual inspection, without the use of special equipment or enhancement excepting the use of corrective lenses. C 896, C04

unary system—composed of one component. E 7, E04

unassigned blankets—blankets that are in storage prior to being issued for use. F 819, F18

unbacked exposure, n—a technique of weathering in which the test specimens are exposed such that the portion of the specimen being evaluated is open to the effects of the weather on all sides. G 113, G03

unbalanced design, n—a statistical study where replication in some or all of the levels of ANOVA is not identical. D 5681, D34

unbiased gun—(zero biased gun) an electron gun in which the cathode cap is at the same potential as the filament (see **self-biased**

gun). This type of gun provides a low-intensity illumination with large angular aperture. E 7, E04

unbiased sample—See **unbiased sample** under **sample**. D 121, D05

unbonded, adj—in describing a test specimen, one in which the elastomer is molded or cut to shape, but that otherwise demands that forces be applied directly to the elastomer. D 1566, D11

unbonded batting, n—a textile filling material which is neither needle-punched, resin bonded, or thermal bonded. (See also **needle-punched batting**, **resin bonded batting**, and **thermal bonded batting**.) D 123, D13

unbonded batting, n—a textile filling material which is neither needle-punched, resin bonded, or thermal bonded. (See also **needle-punched batting**, **resin bonded batting**, and **thermal bonded batting**.) D 7022, D13

unburned brick, n—brick manufactured by processes that do not involve firing of the finished product. C 71, C08

unburned carbon (UBC) in ash, n—the unburned carbon in fly ash includes both carbon carried over as uncombusted “inertinite” and chars or cokes resulting from the incomplete combustion of the thermoplastic, largely vitrinite-derived phases. The latter include “isotropic coke” and “anisotropic coke.” E 2201, E50

uncertainty, n—(of measurement) parameter, associated with the result of a measurement that characterizes the dispersion of values that could reasonably be attributed to the measurand. D 1129, D19

uncertainty—a parameter associated with the result of a measurement, that characterizes the dispersion of the values that could reasonably be attributed to the measurand or derived quantity. E 170, E10

uncertainty, n—of a temperature measurement, parameter, derived from an analysis of a measurement and its result, that characterizes the range in which the true value of temperature is estimated to lie, generally with a given confidence. E 344, E20

uncertainty, n—an indication of the variability associated with a measured value that takes into account two major components of error: (1) bias, and (2) the random error attributed to the imprecision of the measurement process. E 456, E11

uncertainty—lack of certain, deterministic, values for the variable inputs used in an economic analysis of a building or building system. E 631, E06

uncertainty, n—lack of certain, deterministic, values for the variable inputs used in an economic analysis of a building or building system. E 833, E06

uncertainty—measure of the combination of the bias and precision error in specified instrumentation, or the measure of the repeatability of a reported test result. F 1827, F26

uncertainty (of measurement), n—parameter, associated with the result of a measurement, that characterizes the dispersion of the values that could be reasonably attributed to the measurand. G 113, G03

uncombined calcium hydroxide, n—the content of unreacted calcium hydroxide that remains in the sample of cured product when tested. C 1154, C17

uncombined calcium hydroxide, n—for *asbestos-cement*, the content of unreacted calcium hydroxide that remains in the sample of cured product when tested. D 2946, C17

unconditioned space—any space that is not intentionally heated or cooled for human occupancy, including attics, crawlspaces, unfinished basements, attached structures (such as a garage), or any space completely outside the building envelope (for example, rooftop ductwork on small commercial buildings).

underlayment—See **floor**. E 631, E06

unconfined aquifer, n—an aquifer that has a water table. D 653, D18

unconfined compressive strength—the load per unit area at which an unconfined prismatic or cylindrical specimen of material will fail in a simple compression test without lateral support. D 653, D18

unconfined compressive strength—see **compressive strength**.

D 653, D18

unconfined test, *n*—a test in which the test sample is placed directly upon the anvil with no lateral confinement.

E 1445, E27

unconfined yield strength, f_c —the major principal stress of the Mohr stress circle being tangential to the yield locus with the minor principal stress being zero. A synonym for **compressive strength**.

D 653, D18

unconsolidated—for solid material, the characteristic of being uncemented or uncompacted, or both, and separated easily into smaller particles.

D 5681, D34

unconsolidated geologic material (geomedia)—a loosely aggregated solid natural material of geologic origin (for example, soil, sediment, till, etc.).

D 5681, D34

unconsolidated-undrained test (quick test)—a soil test in which the water content of the test specimen remains practically unchanged during the application of the confining pressure and the additional axial (or shearing) force.

D 653, D18

uncontrollability, *n*—any deviation of the vehicle from the intended trajectory (TGL) during or at the end of a test, or both.

F 538, F09

undamped natural frequency—of a mechanical system, the frequency of free vibration resulting from only elastic and inertial forces of the system.

D 653, D18

underarm length, *n*—in body measurements, with the arm down, the distance from the armpit to the inner wrist bone.

D 123, D13

underarm length, *n*—the distance from the mid-underarm point of the armscye to the inner wrist bone, taken with the arm down.

D 5219, D13

under-bust girth (missy special case), *n*—the horizontal circumference around the body under the arms and bust.

D 5219, D13

underconsolidated soil deposit—a deposit that is not fully consolidated under the existing overburden pressure.

D 653, D18

undercool, *n*—the temperature depression below the freezing point of reference material in the supercooled state.

E 344, E20

under-cooling—a decrease in temperature below that at which an equilibrium phase change exists, without the occurrence of the transformation.

E 7, E04

under cooling—see **supercooling**.

E 1142, E37

undercure, *n*—a state of vulcanization between the onset of vulcanization and the state of optimum cure.

D 1566, D11

undercut anchor—a post-installed anchor that derives its holding strength by the mechanical interlock provided by undercutting of the concrete, achieved either by a special tool or by the anchor itself during installation.

E 2265, E06

underdamped-well response—response characterized by the water level oscillating about the static water level following a sudden change in water level. (See for comparison **overdamped wellresponse**.)

D 653, D18

underdrain, *n*—a type of pipe having a multiplicity of perforations along its length, intended for use in surface or below-surface drainage.

C 1154, C17

underdrain—a type of asbestos-cement pipe having a multiplicity of perforations along its length, intended for use in surface or below-surface drainage.

D 2946, C17

underglaze decoration—See *underglaze decoration* under **decoration**.

C 242, C21

underground storage tank (UST)—any tank, including underground piping connected to the tank that is or has been used to contain hazardous substances or petroleum products and the volume of which is 10 % or more beneath the surface of the ground.

D 5681, D34

underlay, *n*—a resilient layer of material placed under rugs or carpets to increase comfort and improve service life of the carpet.

D 123, D13

underlay, *n*—a resilient layer of material placed under rugs or carpets to increase comfort and improve service life of the carpet.

D 5684, D13

underlayment, *n*—in flooring, a layer of material usually placed upon

the sub-floor that provides a smooth, even base for flooring.

floor area:

E 631, E06

underlayment, *n*—a material placed under resilient flooring, or other finished flooring, to provide a suitable installation surface.

F 141, F06

underlay nail, underlayment nail—bright, regular-stock-steel, stiff-stock or hardened-steel, annularly threaded, 1 by 0.080 to 3 by 0.148-in. nails with flat or slightly countersunk $\frac{3}{16}$ to $\frac{5}{16}$ -in. head and medium diamond point.

F 547, F16

underlying layer—in a surface-micromachining process, the layer of material directly beneath the layer of interest. This layer could be the substrate.

E 2444, E08

under-retting, *v*—in flax, indicates that decomposition is insufficient to allow fiber bundles to be easily removed from the non-fibrous parts of the stem. (See **retting** and **over-retting**.)

D 6798, D13

under-the-cap filling—a process for adding the propellant to the container by sealing off the head of the container and injecting the propellant at ambient temperature and high pressure, under the valve cap before crimping. This process is usually used where the propellant content is large and cold filling is not desired.

D 3064, D10

undertone, *n*—the color of a thin layer of pigment-vehicle mixture applied on a white background.

D 16, D01

underwear, *n*—clothing worn next to the skin under outer clothes.

D 123, D13

underwear, *n*—clothing worn next to the skin under outer clothes.

D 7022, D13

undisturbed sample—any plastic mortar test sample molded immediately after mixing and sampling that is allowed to set on a vibration-free surface until tested.

C 1180, C12

undisturbed sample—a soil sample that has been obtained by methods in which every precaution has been taken to minimize disturbance to the sample.

D 653, D18

undisturbed sample—a sample of frozen ground which has been maintained at a constant temperature in the frozen state, as close as possible to that which existed in-situ when the sample was obtained, for purposes of performing mechanical and other tests.

D 7099, D18

undulated staple—staple with curves in crown for better driving stability.

F 592, F16

UN/EDIFACT—abbreviation for United Nations, Electronic Data Interchange for Administration, Commerce and Transport, an international group dedicated to standards for electronic interchange.

F 1294, F05

uneven dyeing, *n*—cloth which shows variations in shade due either to incorrect dyeing methods or faulty materials.

D 123, D13

uneven dyeing, *n*—cloth which shows variations in shade due either to incorrect dyeing methods or faulty materials.

D 3990, D13

unevenness, *n*—in *intextiles*, variation in the linear density of a continuous strand or of a portion of a strand. (See also **coefficient of variationunevenness, mean deviation unevenness**.)

D 123, D13

unevenness, *n*—in *textiles*, variation in the linear density of a continuous strand or of a portion of a strand. (See also **coefficient of variation unevenness, mean deviation unevenness**.)

D 4849, D13

unfading (slate)—a slate that shows no significant color change within the first year of exposure.

C 119, C18

unfrozen ground—ground that does not contain any ice.

D 7099, D18

unfrozen water content—the ratio, expressed as a percentage, of either (1) the weight of unfrozen water to the weight of dry soil, or (2) the volume of the unfrozen water to the total volume of the sample.

D 7099, D18

unglazed tile—a hard, dense tile of homogeneous composition throughout, deriving color and texture from the materials of which the body is made. The colors and characteristics of the tile are determined by the materials used in the body, the method of manufacture, and the thermal treatment.

C 242, C21

uniaxial state of stress

uniaxial state of stress—state of stress in which two of the three principal stresses are zero. (ISRM) **D 653, D18**

uniaxial (unconfined) compression—compression caused by the application of normal stress in a single direction. (ISRM)

D 653, D18

unicellular rubber, n—See **expanded rubber**.

C 717, C24

unidirectional conductor—see **concentric-lay conductor**.

B 354, B01

uniform-chromaticity-scale diagram, n—chromaticity diagram on which all pairs of just-perceptibly different colors of equal luminance are represented by pairs of points separated by nearly equal distances.

E 284, E12

Uniform Code Council, Inc., U.C.C., n—a standard setting organization originally chartered by the National Grocer's Association; it supervises the standards for the Universal Product Code, UPC.

F 1294, F05

uniform color space, n—schematic arrangement of colors in space in which spatial intervals between points correspond to visual differences between colors represented by those points.

E 284, E12

uniform corrosion—corrosion that proceeds at about the same rate over a metal surface.

G 15, G01

uniform diffuser, n—see **Lambertian diffuser**.

E 284, E12

uniform diffuse reflection, n—diffuse reflection in which the spatial distribution of the reflected radiation is such that the radiance or luminance is the same in all directions in which the radiation is reflected.

E 349, E21

uniform diffuse transmission, n—diffuse transmission in which the spatial distribution of the transmitted radiation is such that the radiance or luminance is the same in all directions in which the radiation is transmitted.

E 349, E21

uniform elongation, El_u [%], n—the elongation determined at the maximum force sustained by the test piece just prior to necking, or fracture, or both.

E 6, E28

uniform flow in hydraulics, n—the condition of flow where the rate of energy loss due to frictional and form resistance is equal to the bed slope of the channel.

D 653, D18

uniformity coefficient—the ratio of the particle diameter corresponding to 60 % finer on the cumulative particle size distribution curve to the particle diameter corresponding to 10 % finer on the same distribution curve.

D 2652, D28

uniformity index, n—*in fiber length testing of cotton*, the ratio between the mean length and the upper-half-mean length expressed as a percentage of the upper-half-mean length.

D 123, D13

uniformity index, n—*in fiber length testing of cotton*, the ratio between the mean length and the upper-half-mean length expressed as a percentage of the upper-half-mean length.

D 7139, D13

uniformity ratio, n—*in cotton length testing with the Fibrograph*, the ratio between two span lengths expressed as a percentage of the longer length.

D 123, D13

uniformity ratio, n—*in cotton length testing with the Fibrograph*, the ratio between two span lengths expressed as a percentage of the longer length.

D 7139, D13

uniformly graded—a quantitative definition of the particle size distribution of a soil which consists of a majority of particles being of the same approximate diameter. A granular material is considered uniformly graded when the uniformity coefficient is less than about five (see Test Method D 2487). Comparable to the geologic term well sorted.

D 653, D18

uniform wear, n—a type of treadwear characterized by equal tread loss both from projection to projection and from point to point on a given projection, resulting in a smooth appearance of all parts of the tread pattern.

F 538, F09

unilateral arrangement—recognition arrangement that covers the acceptance of one party's results by another party, (ISO Guide 2).

E 1187, E36

unilaterally punched metal connector plate—metal connector plate

with integral teeth projecting from plate in single direction perpendicular to plate surface area.

unit—see **dwelling unit**.

E 631, E06

unilateral specifications—specifications that have only maximum or minimum values.

F 1789, F16

uniplanar, adj—descriptor for illuminating and viewing geometry in which the axes of the illuminator and the receiver and the normal to the specimen surface are in the same plane; thus directional illumination or viewing is provided by one beam, or by two beams spaced 180° apart in azimuth. The number and angular distribution of the beams should be specified.

E 284, E12

unique hue, n—perceived hue that cannot be described by a hue name other than its own.

E 284, E12

unit—measurement, a precisely specified quantity in terms of which the magnitudes of other quantities of the same kind can be stated.

C 634, E33

unit, n—an object on which a measurement or observation may be made.

E 456, E11

unit—reference value of a given quantity as defined by CGPM Resolution or ISO Standards. There is *only one* unit for each quantity in SI.

E 631, E06

unit—the smallest single portion of material received in any one lot (for example, a single roll of material).

unsupported film adhesive—See **adhesive, unsupported film**.

E 631, E06

unit—see **dwelling unit**.

E 1605, E06

unit—the smallest single portion of material received in any one lot (for example, a single roll of material).

E 1749, E06

unit, n—a single object (for example, a vacuum cleaner) from the total population of like objects on which a measurement or observation may be made.

F 395, F11

unitary hue, n—see **unique hue**.

E 284, E12

unit bed-load discharge—bed-load discharge per unit width of river bed. Units are reported in mass of discharge per unit time per unit width, such as tons per day per foot.

D 4410, D19

unit cell—a parallelepiped element of crystal structure, containing a certain number of atoms, the repetition of which through space will build up the complete crystal.

D 1695, D01

unit cell—the smallest area into which a grid can be divided so that these areas have the same shape, size and orientation. For a triangular grid, the unit cell is a 60°/120° rhombus comprised of two equilateral triangles with a common side.

D 5681, D34

unit cell—a parallelepiped element of crystal structure, containing a certain number of atoms, the repetition of which through space will build up the complete crystal. (See **lattice**.)

E 7, E04

united millimetres (or united inches)—the sum of the dimensions in millimetres (or inches) of the length and width of a light of glass or panel.

C 717, C24

unitization, n—the assembled group of containers or items in a single load that can be handled as a unit throughout the distribution system.

D 996, D10

unitized load—See **load**.

D 996, D10

unit length of instrument, L_c , n—*in textile unevenness testing*, the length of strand being measured between the sensing elements at any moment.

D 123, D13

unit length of instrument, L_c , n—*in textile unevenness testing*, the length of strand being measured between the sensing elements at any moment.

D 4849, D13

unit load—See **load**.

D 996, D10

unit magnetic rating (1 MR), n—a calibrating standard with an MR of one is defined as containing 0.18 g of U.S. Institute of Standards and Technology standard sample No. 29 (a) or iron ore (magnetite) uniformly distributed over the space specified for a 10-g test specimen [14 mm (0.75 in.) diameter by 73 mm (2.875 in.) long], by dispersion in a magnetically inert material.

D 2946, C17

unit of product—a piece of leather in the form in which it is purchased, such as a single hide, side, skin or part thereof; or a

- single fabricated-leather article in the form in which it is purchased, such as a counter, a pair of shoes, gasket, etc. **D 1517**, D31
- unit of product, *n***—an entity of electrical insulating material or product for inspection to determine its classification as conforming or non-conforming. **D 1711**, D09
- unit of structure (in crystals)**—the unit cell, or the group of atoms associated with a unit cell. **E 7**, E04
- unit package**—See **package**. **D 996**, D10
- unit sample, *n***—for *asbestos*, a sample drawn from one bag. **D 2946**, C17
- units placed in usage**—manufactured masonry units that have been installed in masonry. **C 1232**, C15
- unit weight, *n***—of *aggregate*, mass per unit volume. (Deprecated term—use preferred term **bulk density**). **C 125**, C09
- unit weight, *n***—as applied to concrete, weight per unit volume. **E 176**, E05
- unit weight, γ (FL⁻³)**—weight per unit volume (with this, and all subsequent unit-weight definitions, the use of the term weight means force).
- dry unit weight (unitdry weight), γ_d , γ_e (FL⁻³)**—the weight of soil or rock solids per unit of total volume of soil or rock mass.
- effective unit weight, γ_e (FL⁻³)**—that unit weight of a soil or rock which, when multiplied by the height of the overlying column of soil or rock, yields the effective pressure due to the weight of the overburden.
- maximum unit weight, γ_{max} (FL⁻³)**—the dry unit weight defined by the peak of a compaction curve.
- saturated unit weight, γ_G , γ_{sat} (FL⁻³)**—the wet unit weight of a soil mass when saturated.
- submerged unit weight (buoyant unit weight), γ_m , γ' , γ_{sub} (FL⁻³)**—the weight of the solids in air minus the weight of water displaced by the solids per unit of volume of soil or rock mass; the saturated unit weight minus the unit weight of water.
- unit weight of water, γ_w (FL⁻³)**—the weight per unit volume of water; nominally equal to 62.4 lb/ft³ or 1 g/cm³.
- wet unit weight (massunit weight), γ_m , γ_{wet} (FL⁻³)**—the weight (solids plus water) per unit of total volume of soil or rock mass, irrespective of the degree of saturation.
- zero air voids unit weight, γ_z , γ_s (FL⁻³)**—the weight of solids per unit volume of a saturated soil or rock mass. **D 653**, D18
- univariant equilibrium**—a stable state among a number of phases equal to one more than the number of components, that is, having one degree of freedom. **E 7**, E04
- Universal Product Code, UPC, *n***—a bar code symbology specified by the Uniform Code Council. **F 1294**, F05
- universe (population), *n***—the totality of the set of items, units, or measurements, etc., real or conceptual, that is under consideration. **NOTE**—This definition of universe is being revised to incorporate the concept of including one or more populations. *Use with caution.* **E 456**, E11
- unloaded condition**—equipment not doing processing work (for example, moving, changing the characteristics of, or separating materials), but operating in a freewheeling, or idling, condition. **D 5681**, D34
- unloading modulus**—slope of the tangent to the unloading stress-strain curve at a given stress value. (ISRM) **D 653**, D18
- unmanned air vehicle, UAV, *n***—airplane, airship, powered lift, or rotorcraft that operates with the pilot in command off-board, for purposes other than sport or recreation, also known as unmanned aerial vehicle. UAVs are designed to be recovered and reused. A UAV system includes all parts of the system (data-link, control station, and so forth) required to operate the vehicle. See R-103-2004. **F 2395**, F38
- unmated mechanical transfer paper**—a sheet that has a clean pigmented coating that is physically transferred to a second sheet upon the application of pressure. **F 549**, F05
- unmeasured-sediment discharge**—the difference between the total sediment discharge and the measured suspended-sediment discharge. **D 4410**, D19
- unpiloted ignition, *n***—ignition caused by one or more sources of energy without the presence of a pilot source of ignition (compare **piloted ignition, spontaneous ignition**). **E 176**, E05
- unprocessed municipal solid waste, *n***—municipal solid waste in its as-discarded form and that has not been size-reduced, separated, or otherwise processed. **D 5681**, D34
- unprocessed municipal solid waste**—solid waste in its discarded form, that is, waste that has not been size reduced or otherwise processed. **D 5681**, D34
- unrelated color, *n***—color perceived to belong to an area seen in isolation from other colors. **E 284**, E12
- unsampled depth**—the unsampled part of the sampling vertical; usually within 0.8 to 0.15 m of the stream bed, depending on the kind of suspended-sediment sampler used. **D 4410**, D19
- unsampled zone**—the unsampled part of the sampling vertical, usually assumed to be 90 to 150 mm above the stream bed, depending on the kind of sampler used. **D 4410**, D19
- unsaponifiable matter**—see **fatty matter, unsaponifiable**. **D 459**, D12
- unsaponifiable matter, *n***—the total amount of non-acidic organic material, both free and combined, present in naval stores products such as rosin, tall oil, and their derivatives after saponification. Unsaponifiable matter is composed primarily of alcohols, sterols, aldehydes, and hydrocarbons. For example, it is material that will not form a soluble soap when refluxed with alcoholic potassium hydroxide. **D 804**, D01
- unsaponifiable matter, *n***—in *lubricating grease*, organic materials, either added or found with fatty materials, which do not react during saponification. **D 4175**, D02
- unsaponified matter**—see **fatty matter, unsaponified**. **D 459**, D12
- unscheduled cessation**—a rare, unusual, or irregular stopping of an amusement ride operation, intentional or otherwise, that is considered abnormal or potentially hazardous in nature, or both, due to its cause, method, or result. **F 747**, F24
- unsharp, *adj***—characteristic of an image lacking in sharpness. **E 284**, E12
- unspecified element, *n***—in *steel*, an element not controlled to a specified minimum, maximum, or range, in accordance with the requirements of the applicable product specification. **A 941**, A01
- unstable brittle crack extension [L]**—an abrupt crack extension occurring with or without prior stable crack extension in a standard fracture test specimen under crosshead or clip gage displacement control. **E 1823**, E08
- unsulfonated residue, *n***—in *oils*, that portion of an oil remaining unsulfonated after treatment with concentrated sulfuric acid. **D 4175**, D02
- unsupported film adhesive**—See **adhesive, unsupported film**. **E 1749**, E06
- unsupported gasket member**—a gasket member joining infill materials without being held in place by a supporting frame member. **C 717**, C24
- unsupported needled felt, *n***—a needled felt that is composed entirely of fibers physically interlocked and reoriented with, and of themselves without an interlay, scrim, or foundation of knitted, stitched, bonded, or extruded structure. **D 123**, D13
- unsupported needled felt, *n***—a needled felt that is composed entirely of fibers physically interlocked and reoriented with, and of themselves without an interlay, scrim, or foundation of knitted, stitched, bonded, or extruded structure. **D 4845**, D13
- untreated, *n***—a descriptive term for glass fiber yarns having no applied chemicals or coatings, other than the minimal lubricant or binder used to control intra-fiber abrasion. **D 123**, D13

untreated, *adj*

untreated, *adj*—a descriptive term for glass fiber yarns having no applied chemicals or coatings, other than the minimal lubricant or binder used to control intra-fiber abrasion. **D 7018**, D13

updraw—the process of continuously drawing glass of various cross sections, such as cane or tubing, by a method similar to the Fourcault process. **C 162**, C14

upholstered, *adj*—covered with material (as fabric or padding) to provide a soft surface. **E 176**, E05

upholstered, *n*—covered with material (as fabric or padding) to provide a soft surface. **E 176**, E05

upholstered furniture, *n*—furniture covered with such materials as textiles or leather, and generally with padding or cushions, or both. **D 123**, D13

upholstered furniture, *n*—furniture covered with such materials as textiles or leather, and generally with padding or cushions, or both. **D 7023**, D13

upholstered furniture, *n*—a unit of interior furnishing that (1) contains any surface that is covered, in whole or in part, with a fabric or related upholstery cover material, (2) contains upholstery material, and (3) is intended or promoted for sitting or reclining upon. **E 176**, E05

upholstered seating furniture, *n*—a unit of interior furnishing that (1) contains any surface that is covered, in whole or in part, with a fabric or other upholstery cover material, (2) contains upholstery material, and (3) is intended or promoted for sitting upon. **E 176**, E05

upholstery cleaning instructions, *n*—any of the various letter codes supplied by the fabric manufacturer to provide acceptable cleaning methods. **D 123**, D13

upholstery cleaning instructions, *n*—any of the various letter codes supplied by the fabric manufacturer to provide acceptable cleaning methods. **D 5253**, D13

upholstery cover material, *n*—the outermost layer of fabric or related material used to enclose the main support system or upholstery materials, or both, used in the furniture unit. **E 176**, E05

upholstery cover material, *n*—the outermost layer of fabric or related material used to enclose the main support system or upholstery materials, or both, used in the furniture item. **E 176**, E05

upholstery cover material, *n*—the outermost layer of fabric or related material used to enclose the main support system or upholstery materials, or both, used in the furniture item. **E 176**, E05

upholstery fabric, *n*—the exterior fabric covering applied to a furniture unit. **D 123**, D13

upholstery fabric, *n*—the exterior fabric covering applied to a furniture unit. **D 7023**, D13

upholstery leather—a general term for leathers processed for use in furniture, airplanes, buses, and automobiles. The staple raw material in this country consists of spready cattlehides, split at least once and in many cases two or three times. The top or grain cuts go into the higher grades and the splits into the lower grades. **D 1517**, D31

upholstery material, *n*—the padding, stuffing, or filling material used in a furniture item, which may be either loose or attached, enclosed by an upholstery cover material, or located between the upholstery cover material and support system, if present. **E 176**, E05

upholstery nail—bright, regular-stock-steel, two-piece nails with extra-large specially formed head and medium diamond or needle point. **F 547**, F16

uplift—the upward water pressure on a structure.

	Symbol	Unit
unit symbol	<i>u</i>	FL ⁻²
total symbol	<i>U</i>	F or FL ⁻¹

uplift—the hydrostatic force of water exerted on or underneath a structure, tending to cause a displacement of the structure. (ISRM) **D 653**, D18

uplift—*in grouting*, vertical displacement of a formation due to grout injection. **D 653**, D18

uplift—the vertical displacement measured at the loaded end stud with respect to the test apparatus. **E 631**, E06

upper—all of the upper parts of a shoe stitched together and ready for lasting and bottoming. It includes both the outside and lining of the shoe. **F 869**, F08

upper, *n*—that area of the footwear above the sole. **F 1494**, F23

upper, *n*—the parts of a shoe or boot that are above the sole. **F 1646**, F13

upper-arm girth, *n*—*in body measurements*, the maximum circumference of the arm usually midway between the elbow and the shoulder joint. **D 123**, D13

upper-arm girth, *n*—the maximum circumference of the arm, taken midway between the elbow and the shoulder joints with the arm bent 1.57 rad (90°). **D 5219**, D13

upper-arm length, *n*—*in body measurements*, with the arm bent, the distance from the shoulder joint along the outside of the arm to the prominence of the elbow. **D 123**, D13

upper capability index (CPU), *n*—the difference between the upper specification limit and the sample mean divided by three times the sample standard deviation.

$$CPU = \frac{(USL - \bar{x})}{3 \times s}$$

A 644, A04

upper-chest girth, *n*—the horizontal circumference around the body, taken under the arms and above the fullest part of the chest/bust including the lower portion of the shoulder blades. **D 5219**, D13

upper control limit (UCL), *n*—control limit for points above the central line. **E 456**, E11

upper critical point—in a phase diagram, a specific value of composition, temperature and pressure, or combinations thereof, occurring as a maximum in temperature, or pressure, for the coexistence of two or more conjugate phases and at which the conjugate phases become identical. **E 7**, E04

upper cut zone, *n*—*in the testing of foot protective devices*, the area starting at the top of the area of protection on the footwear and extending downward to include the entire upper, excluding the toe area cut zone. **F 1494**, F23

upper-half-mean length, *n*—*in fiber length testing of cotton*, the mean length by number, of the longer one half of the fibers by weight. **D 123**, D13

upper-half-mean length, *n*—*in fiber length testing of cotton*, the mean length by number, of the longer one half of the fibers by weight. **D 7139**, D13

upper leather—the shoe leather that covers the upper part of the foot. It is made principally from calfskins, goatskins, cattlehides, horsehides, and other classes of animal skins. **D 1517**, D31

upper limit log normal distribution (ULLN)—drop size distribution described by the following equation:

$$f_v(D) = \{1/\sqrt{\pi}\} \int_{-\infty}^{del \times \log [A \times D(D_{max} - D)]} \exp(-t^2) dt$$

where:

$f_v(D)$ = the volume fraction of liquid in drops of diameter less than D ,

D_{max} = the upper bound of drop diameters, and

del and A = ULLN parameters determining dispersion and skewness.

E 1620, E29

upper limit of flammability or upper flammable limit (UFL), *n*—the maximum concentration of a combustible substance that is capable of propagating a flame through a homogeneous mixture of

D 653, D18

the combustible and a gaseous oxidizer under the specified conditions of test. **E 1445, E27**

upper process capability index, C_{pk} , *n*—index describing process capability in relation to the upper specification limit. **E 456, E11**

upper process performance index (P_{pk}), *n*—index describing process performance in relation to the upper specification limit. **E 456, E11**

upper quartile length, *n*—in testing of cotton fibers, that length which is exceeded by 25 % of the fibers, by weight, in the test specimen. **D 123, D13**

upper quartile length, *n*—in testing of cotton fibers, that length which is exceeded by 25 % of the fibers, by weight, in the test specimen. **D 7139, D13**

upper range-value, *n*—the highest quantity that an instrument is adjusted to measure. **E 344, E20**

upper specification limit (USL), *n*—the highest specified value. **A 644, A04**

upper tolerance limit (UTL) (upper specification limit), *n*—a tolerance limit applicable to the upper conformance boundary for an individual unit of a manufacturing or service operation. **E 456, E11**

upper valve or poppet, *n*—a valve that controls the flow of product out the exit orifice during the pressurization stage of the liquid and restricts the flow of product so that negative pressure may be created during the filling stage. **D 6655, D10**

upper yield strength, UYS [FL^{-2}], *n*—the first stress maximum (stress at first zero slope) associated with discontinuous yielding. **E 6, E28**

upright broiler—a heavy duty freestanding piece of equipment with a high input rate and production capacity among overfired broilers. See **broiler, overfired**. **F 1827, F26**

upright vacuum cleaner, *n*—a self-standing, floor-supported, portable vacuum cleaner which has the floor nozzle directly connected to the cleaner and is designed for normal-duty cleaning of household dirt. In use, the cleaner is guided over the floor by means of a handle attached to the cleaner housing. The cleaner contains a driven agitator to assist in dirt removal on floor surfaces. The cleaner may have attachments or provisions, or both, for both floor and above-the-floor cleaning. **F 395, F11**

upset head—metal slightly upset, with deformed portion serving as head. **F 547, F16**

upstream—side of a membrane into which penetrants enter from the feed stream. **D 6161, D19**

uptake—acquisition of a substance from the environment by an organism as a result of any active or passive process. **E 943, E47**

upward freezing—the advance of the freezing front upwards from the permafrost table during annual freezing of the active layer. **D 7099, D18**

urban heat island, *n*—an urban area that, due to denuded landscape, impermeable surfaces, surfaces with low albedo, massive buildings, heat-generating cars and machines, and pollutants, is measurably hotter than surrounding rural areas. **E 2114, E06**

urea-formaldehyde adhesive, *n*—(1) an aqueous colloidal dispersion of urea-formaldehyde polymer which may contain modifiers and secondary binders to provide specific adhesive properties, (2) a type of adhesive, based on a dry urea-formaldehyde polymer and water. **D 907, D14**

urea plastics—plastics based on resins made by the condensation of urea and aldehydes. **D 883, D20**

urea resin—under **resin, synthetic**, see **urea resin**. **D 16, D01**

urethane coatings, *n*—coatings based upon vehicles containing a minimum of 10 percent by weight (nonvolatile vehicle basis) of a polyisocyanate monomer reacted in such a manner as to yield polymers containing any ratio, proportion or combination of urethane linkages, active isocyanate groups, or polyisocyanate monomer. The reaction products may contain excess isocyanate

groups available for further reaction at time of application or may contain essentially no free isocyanate as supplied.

Type I, one-package prereacted—urethane coatings characterized by the absence of any significant quantity of free isocyanate groups. They are usually the reaction product of a polyisocyanate and a polyhydric alcohol ester of vegetable oil acids and are hardened with the aid of metallic soap driers.

Type II, one-package moisture cured—urethane coatings characterized by the presence of free isocyanate groups and capable of conversion to useful films by the reaction of these isocyanate groups with ambient moisture.

Type III, one-package heat cured—urethane coatings that dry on cure by thermal release of blocking agents and regeneration of active isocyanate groups that subsequently react with substances containing active hydrogen groups.

Type IV, two-package catalyst—urethane coatings that comprise systems wherein one package contains a prepolymer or adduct having free isocyanate groups capable of forming useful films by combining with a relatively small quantity of catalyst, accelerator, or crosslinking agent such as a monomeric polyol or polyamine contained in a second package. This type has limited pot-life after the two components are mixed.

Type V, two-package polyol—urethane coatings that comprise systems wherein one package contains a prepolymer or adduct or other polyisocyanate capable of forming useful films by combining with a substantial quantity of a second package containing a resin having active hydrogen groups with or without the benefit of catalyst. This type has limited pot-life after the two components are mixed.

Type VI, one-package nonreactive lacquer—urethane solution coatings characterized by the absence of any significant quantity of free isocyanate or other functional groups. Such coatings convert to solid films primarily by solvent evaporation. **D 16, D01**

urethane foam, (flexible), *n*—an open cell, elastomeric material made by the addition reaction of a polyol with a polyisocyanate. **D 1566, D11**

urethane plastic—a plastic based on polymers in which the repeated structural units in the chains are of the urethane type, or on copolymers in which urethane and other types of repeated structural units are present in the chains. **F 1251, F04**

urethane plastics—plastics based on polymers in which the repeated structural units in the chains are of the urethane type, or on copolymers in which urethane and other types of repeated structural units are present in the chains. (ISO) **D 883, D20**

urn, *n*—an ornamental vase used as a finial. **E 631, E06**

urn, *n*—an ornamental vase used as a finial. **E 1481, E06**

uronic acids—oxidation products of the sugars in which a primary alcohol group has been oxidized to a carboxyl without changing the reducing functional group. **D 1695, D01**

usable area—See **space categories**. **E 1480, E06**

use—of a facility—See **facility use**. **E 1480, E06**

use—when applied to material and property, engaging the asset or material into the business process for value. **E 2135, E53**

used oil, *n*—in petroleumproduct recycling, oil whose characteristics have changed since being originally manufactured, and which is suitable for recycling (see also **waste oil**). **D 4175, D02**

used oil, *n*—any oil that has been in a piece of equipment (for example, an engine, gearbox, transformer, or turbine), whether operated or not (see also **used oil, in petroleum product recycling**). **D 4175, D02**

used oil, *n*—in petroleumproduct recycling, oil whose characteristics have changed since being originally manufactured, and that is suitable for recycling. **D 4175, D02**

used oil, *n*—any oil that has been in a piece of equipment (for

used oil, n

- example, an engine, gearbox, transformer or turbine) whether operated or not. **D 4175, D02**
- used tire, n**—a tire removed from a vehicle's rim, which cannot be described legally as new, but which is structurally intact and has a tread depth greater than the legal limit. This tire can be remounted onto another vehicle's rim without repair. **D 5681, D34**
- useful ion yield**—*SIMS*, the ratio of the number of ions of a particular isotope detected to the total number of atoms and ions of the same element sputtered. **E 673, E42**
- useful life**—the period of time over which an investment is considered to meet its original objective.
utility core—Use **core module**. **E 631, E06**
- useful life, n**—the period of time over which an investment is considered to meet its original objective. **E 833, E06**
- USEPA**—U.S. Environmental Protection Agency. **D 6161, D19**
- user, n**—one who actively, physically occupies, conducts business, provides service for uses of the product within facility/project. **E 833, E06**
- user**—see *end user*. **F 1789, F16**
- user service, n**—the National ITS Architecture defines various user services that are groups of ITS related functions that generally meet the need and requirements of a group of stakeholders for a particular type of service—the archived data user service was the thirty-first user service to be defined in the National ITS Architecture following a set process and period of interaction of the architecture team with the stakeholder community and the development and approval of a set of documentation of the need and characteristics of that user service. **E 867, E17**
- use-surface, n**—*for pile yarn floor covering*, that part of a textile floor covering directly exposed to traffic. **D 123, D13**
- use-surface, n**—*for pile yarn floor covering*, that part of a textile floor covering directly exposed to traffic. **D 5684, D13**

- USGS 7.5 Minute Topographic Map**—the map (if any) available from or produced by the United States Geological Survey, entitled "USGS 7.5 Minute Topographic Map" and showing the property. **D 5681, D34**
- utility function**—a function that shows how utility (that is, satisfaction) varies with money or income. **E 631, E06**
- utility function, n**—a function that shows how utility (that is, satisfaction) varies with money or income. **E 833, E06**
- utility vacuum cleaner, n**—a portable, floor-supported vacuum cleaner having a nozzle separated from the cleaner housing by a hose. The cleaner is designed to be used in places other than normal living areas such as utility rooms, basements, workshops, and garages. Besides household dirt, it is designed to pick up various types of larger debris and may be designed for liquid pickup. In use, only the nozzle is guided over the surface area to be cleaned. The cleaner may have detachable nozzles, attachments, and wands for both floor and above-the-floor cleaning. **F 395, F11**
- utilization**—the use of material or an asset in the business process. **E 2135, E53**
- U-type furnace**—a continuous furnace wherein the ware travels in a U-shaped path. **C 286, B08**
- UV absorber, n**—a compounding material that, through its ability to absorb ultraviolet radiation and render it harmless, retards the deterioration caused by sunlight and other UV light sources. **D 1566, D11**
- U-value**—the total heat transfer coefficient of a window at steady state and standardized conditions. **C 162, C14**
- UV fading**—the reduction of brightness of a fluorescent penetrant indication caused by excessive exposure to ultraviolet radiation. **E 1316, E07**
- U.V. protectant**—a material that prevents or reduces degradation due to ultraviolet radiation. **E 609, E35**

V

vacuum, *v*—to clean using an electrically powered machine to create suction in order to remove loose, particulate soil and lint.
D 123, D13

vacuum—a degree of rarefaction below atmospheric pressure: negative pressure.
D 653, D18

vacuum, *n*—pressure below atmospheric pressure. **D 3053**, D24

vacuum, *v*—to clean using an electrically powered machine to create suction in order to remove loose, particulate soil and lint.
D 7023, D13

vacuum—in vacuum technology a given space filled with gas at pressures below atmospheric pressure.
E 1316, E07

vacuum-and-blow process—a bottle manufacturing process whereby glass is gathered by vacuum and subsequently blown. **C 162**, C14

vacuum bag molding—a process in which an adhesive or composite assembly is cured under pressure generated by drawing a vacuum in the space between the lay-up and a flexible sheet placed over it and sealed at the edge. (Compare with **bag molding**.) **E 631**, E06

vacuum bag molding—a process in which an adhesive or composite assembly is cured under pressure generated by drawing a vacuum in the space between the lay-up and a flexible sheet placed over it and sealed at the edge. (Compare with **bag molding**.) **E 1749**, E06

vacuum cassette—a flexible light-tight container that, when operated under a vacuum, holds film and screen in intimate contact during a radiographic exposure.
E 1316, E07

vacuum cassette—a light-tight device having a flexible entrance window, which when operated under a vacuum, holds the film and conversion screen in intimate contact during exposure.
E 1316, E07

vacuum chamber, *n*—a device that allows a vacuum to be applied to a surface.
D 4439, D35

vacuum clean, *vt*—to remove loose particulate soil, lint, and embedded soil by suction using an electrically powered machine.
D 5253, D13

vacuum cleaner, *n*—a system or device that removes foreign material from surfaces by means of the air flow caused by subatmospheric pressure, having an intake intended to be moved in proximity to the surface, a means of separating the material from the air, and a receptacle for collecting the separated material. The inlet may be fixed or attached to other equipment and provision is made for removing collected material.
F 395, F11

vacuum distillation—to affect separation of two or more liquids under reduced pressure operation of a distillation column. Vacuum reduces the boiling points of the liquids being separated.
E 1705, E48

vacuum distillation—the separation of two or more liquids under reduced vapor pressure; reduces the boiling points of liquids being separate.
E 1705, E48

vacuum forming—a forming process in which a heated plastic sheet is drawn against the mold surface by evacuating the air between it and the mold.
D 883, D20

vacuum forming, *n*—a process in which an adherend is brought in intimate contact with a substrate to form an assembly by the evacuation of the surrounding air.
D 907, D14

vacuum level—the potential of the vacuum space at a sufficiently large distance outside the specimen such that electric fields caused by different work functions of different parts of the surface are zero or extremely small.
E 673, E42

vacuum level referencing—*XPS*, a method of establishing the binding energy scale for a particular specimen by assigning the kinetic energy corresponding to the vacuum level as the point of zero binding energy. See also **vacuum level**.
E 673, E42

vacuum lock—See **air lock**.
E 7, E04

vacuum packaging—See **packaging**.
D 996, D10

vacuum plated button, *n*—a button that is flash metal coated in vacuum chambers and subsequently colored to simulate other metal finishes.
D 123, D13

vacuum plated button, *n*—a button that is flash metal coated in

vacuum chambers and subsequently colored to simulate other metal finishes.
D 5497, D13

vacuum testing—(1) a method of testing for leaks in which the object under test is evacuated and the tracer gas applied to the outside surface of the object; (2) a leak-testing procedure in which the enclosure under examination is evacuated, the tracer gas applied to the outside surface of the enclosure, and the gas detected after entering the enclosure.
E 1316, E07

vadose zone—the hydrogeological region extending from the soil surface to the top of the principle water table; commonly referred to as the “unsaturated zone” or “zone of aeration”. These alternate names are inadequate as they do not take into account locally saturated regions above the principle water table (for example, perched water zones).
D 653, D18

vadose zone—the region between the ground surface and underlying groundwater aquifers. It is the region through which pollutants and contaminants travel before entering the groundwater. **D 18**

valence band spectrum—*XPS*, photoelectron energy distribution arising from the less tightly bound electrons involved in the chemical bonds of the specimen material.
E 673, E42

validation, *n*—of an analytical method, the process by which a measurement method is shown to be useful for a specified purpose.
E 135, E01

validation—the quality assurance evaluation of an item of equipment or overall process wherein the equipment or process, or both, is challenged to perform under the “worst case” conditions of process variables and applicable micro-organism contamination to meet preestablished acceptance criteria.
E 1705, E48

validation, *n*—confirmation by examination and provision of objective evidence that the particular requirements for a specific intended use are fulfilled.
E 1732, E30

validation—the process of providing documented evidence that something does what it is intended to do.
E 2161, E37

validation curve, *n*—a set of points that represent the original curve in the exporting CAD system within curve tolerance of the original curve.
D 6963, D13

validation protocol, *n*—a written plan stating how validation will be conducted and defining acceptance criteria.
E 2363, E55

valley—in fatigue loading, the occurrence where the first derivative of the force-time history changes from negative to positive sign; (also known as *trough*); the point of minimum force in constant amplitude loading.
E 1823, E08

valleys—edge irregularities which result in an indentation in the side of a strike.
F 149, F05

valley trenching—gully erosion occurring in flood plains.
D 4410, D19

valuation—the act of estimating the value or worth; assigning a value to an item.
E 2135, E53

value, *n*—see **Munsell value**.
E 284, E12

value analysis team leader (VATL)—the individual who facilitates the value analysis.
E 631, E06

value analysis team leader (VATL), *n*—the individual who facilitates the value analysis.
E 833, E06

value analysis (VA), *n*—the procedure for developing and evaluating alternatives to a proposed economical design that best fulfills the needs and requirements of the user/owner of the building. (Also referred to as *value engineering*.)
E 833, E06

value analysis (VA)—the procedure for developing and evaluating alternatives to a proposed economical design that best fulfills the needs and requirements of the user/owner of the building. (Also referred to as *value engineering*.)
E 631, E06

value, commerce, *n*—measure of economic worth in commerce.
F 2463, F10

valve—a mechanism for discharging products from aerosol-type dispensers.
D 3064, D10

valve leather—see **hydraulic leathers**.

D 1517, D31

vamp—the lower part of a shoe upper which is attached to the sole or welting.

F 869, F08

van der Waals adsorption—see **physical adsorption**.

D 2652, D28

vane, *n*—in feathers, the section that consists of a solid, stiff collection of barbs, as distinguished from the section near the quill point that has soft, fluffy barbs.

D 123, D13

vane, *n*—in feathers, the section that consists of a solid, stiff collection of barbs, as distinguished from the section near the quill point that has soft, fluffy barbs.

D 7022, D13

vane shear test—an in-place shear test in which a rod with thin radial vanes at the end is forced into the soil and the resistance to rotation of the rod is determined.

D 653, D18

Vant Hoff's law—equilibrium shifts with increasing temperature so as to absorb heat, or with decreasing temperature so as to liberate heat.

E 7, E04

vapor, *n*—the gaseous phase of matter that normally exists in a liquid or solid state.

vapor concentration—See **concentration**.

vapor pressure of moist air (e), *n*—the product of the mole fraction of water vapor x_v and the total pressure p at temperature t :

$$e = p x_v$$

D 1356, D22

vapor—the gaseous form of substances that are normally in the solid or liquid state, and that can be changed to these states either by increasing the pressure or decreasing the temperature.

E 41, G03

vapor barrier—See **water vapor retarder (barrier)**.

C 168, C16

vapor barrier—See **vaporretarder**.

D 1079, D08

vapor-deposited replica—See **replica**.

E 7, E04

vapor deposition:

chemical—ion, induced by heat or gaseous reduction of a vapor condensing on the substrate.

physical—a process for depositing a coating by evaporating and subsequently condensing an element or compound, usually in a high vacuum.

B 374, B08

vapor drift—the dispersion of vaporized chemical to the atmosphere and areas surrounding the target area during and following application.

E 1102, E35

vapor fixing—the act of making a developed electrostatic image permanent by submitting the image-forming toner to the vapor of a solvent for the toner.

F 335, F05

vaporization curve—in a P-T diagram the locus of pressure and temperature values at which a congruent liquid is in equilibrium with its vapor.

E 7, E04

vaporization point—at a stated pressure, the temperature at which a congruent liquid is in equilibrium with its vapor, or, at a stated temperature, the pressure at which the same event occurs.

E 7, E04

vaporization point—at a given pressure, the temperature at which the vapor pressure of the liquid is equal to the external pressure or at a stated temperature the external pressure on the liquid that is equal to its vapor pressure.

E 1142, E37

vaporization temperature—at a given pressure, the temperature at which the vapor pressure of the liquid is equal to the external pressure.

E 1142, E37

vapor-liquid ratio, *n*—of a liquid, the ratio, at a specified temperature and pressure, of the volume of vapor in equilibrium with liquid to the volume of liquid sample charged, at 32°F (0°C).

D 4175, D02

vapor migration—the movement of water vapor from a region of high vapor pressure to a region of lower vapor pressure.

D 1079, D08

vapor pressure, *n*—the pressure exerted by the vapor of a liquid when in equilibrium with the liquid.

D 4175, D02

vapor pressure—in a binary system, that pressure at which a liquid and its vapor are in equilibrium at a definite temperature and total pressure.

E 1142, E37

vapor pressure—the pressure exerted by the vapor of a solid or liquid when in equilibrium with the solid or liquid.

E 1316, E07

vapor retarder—a layer of material or a laminate used to appreciably reduce the flow of water vapor into the roofing system.

D 1079, D08

vapor retarder—a material or system that adequately impedes the transmission of water vapor under specified conditions.

E 631, E06

var—the unit of reactive (quadrature) power. One var is the product of one volt and one ampere in phase quadrature.

A 340, A06

variability—also called "variance"; the number of degrees of freedom of a heterogeneous phase equilibrium.

E 7, E04

variable, *n*—a quantity to which any of the values in a given set may be assigned. (See **parameter** and **variate**)

D 123, D13

variable amplitude loading—See **spectrum loading**.

E 1823, E08

variable-angle internal reflection element—an internal reflection element which can be operated over a range of angles of incidence.

E 131, E13

variable-area nozzle—a pressure atomizer in which the open area of one or more liquid flow passages may be varied so as to control the discharge characteristics.

E 1620, E29

variable data, *n*—measurements that vary and may take any of a specified set of numerical values.

F 1773, F08

variable-orifice pintle nozzle—see **variable-orifice poppet nozzle**.

E 1620, E29

variable-orifice poppet nozzle—a variable-area nozzle in which a moveable poppet determines the annular orifice area.

E 1620, E29

variables data, *n*—measurements which vary and may take any of a specified set of numerical values.

D 123, D13

variables data, *n*—measurements which vary and may take any of a specified set of numerical values.

E 456, E11

variables, method of, *n*—measurement of quality by the method of variables consists of measuring and recording the numerical magnitude of a quality characteristic for each of the units in the group under consideration.

NOTE—This involves reference to a continuous scale of some kind.

E 456, E11

variance, *n*—the mean square of deviations (or errors) of a set of observations; the sum of squared deviations (or errors) of individual observations with respect to their arithmetic mean divided by the number of observations less one (degrees of freedom); the square of the standard deviation (or standard error).

random variance of increment collection (unit variance), S_r^2 , *n*—the theoretical variance calculated for a uniformly mixed lot and extrapolated to 0.5-kg (1-lb) increment size.

segregation variance of increment collection, S_s^2 , *n*—the variance caused by nonrandom distribution of ash content or other constituent in the lot. For a method of estimating this variance, see Annex A1 of Test Methods D 2234.

total variance, S_o^2 , *n*—the overall variance resulting from collecting single increments and including division and analysis of the single increments.

variance of analysis, S_a^2 , *n*—the variance caused by chance errors (deviations) of analysis.

variance of division, S_d^2 , *n*—the variance caused by chance errors (deviations) of sample division.

variance of division and analysis, S_{da}^2 , *n*—the variance caused by the combined chance errors of division and analysis.

D 121, D05

variance, σ^2 , *n*—of population, a measure of the dispersion of members of the population expressed as a function of the sum of the squared deviations from the population mean.

D 123, D13

variance, *n*—a measure of the dispersion of a series of accepted results about their average. It is equal to the sum of the squares of the deviation of each result from the average, divided by the number of degrees of freedom.

D 4175, D02

variance—See **variability**.

E 7, E04

variance, *n*—a measure of the squared dispersion of observed values or measurements expressed as a function of the sum of the squared deviations from the population mean or sample average.

NOTE—The sample variance, or variance of a sample of *n* observed values, is computed as $s^2 = [1/(n-1)][\sum(y_i - \bar{y})^2]$. The sample standard deviation *s* is the positive square root of the sample variance. The population variance $\sigma^2 = \int_R (y - \mu)^2 f(y) dy$, where *R* is the region over which the random variable *y* is defined, and where *f*(*y*) is the probability density function and μ is the population mean of *y*. The population standard deviation (σ) is the positive square root of the population variance.

E 456, E11

variance—the mean square of deviations (or errors) of a set of observations; the sum of square deviations (or errors) of individual observations with respect to their arithmetic mean divided by the number of observations less one (degrees of freedom); the square of the standard deviation (or standard error).

E 856, D34

variance—a measure of the dispersion of a series of results around their average. It is the sum of the squares of the individual deviations from the average of the results, divided by the number of results minus one.

E 1547, E15

variance, between-laboratory, *n*—that component of the overall variance due to the difference in the mean values obtained by different laboratories.

D 4175, D02

variance, *s*, *n*—of a sample, a measure of the dispersion of variates observed in a sample expressed as a function of the squared deviations from the sample average.

D 123, D13

variate, *n*—a measured value that includes a random error of measurement; a variable with which a probability distribution is associated. (See also **variable** and **attribute data**.)

D 123, D13

variation in sawing—a deviation from the anticipated line of cut in sawing rough lumber or other rough wood surfaces.

D 9, D07

varistor, *n*—a material having an electrical resistance that is sensitive to changes in applied voltage.

C 1145, C28

varnish, *n*—a liquid composition that is converted to a transparent or translucent solid film after application as a thin layer.

bituminous varnish—a dark-colored varnish containing bituminous ingredients. The varnish may be either of the oil or spirit type.

oil varnish—a varnish that contains resin and drying oil as the basic film-forming ingredients and is converted to a solid film primarily by chemical reaction.

spar varnish—a varnish for exterior surfaces. The name originated from its use on spars of ships.

spirit varnish—a varnish that is converted to a solid film primarily by solvent evaporation.

D 16, D01

varnish, *n*—*in internal combustion engines*, a hard, dry, generally lustrous deposit that can be removed by solvents but not by wiping with a cloth.

D 4175, D02

varnish, *n*—*in manual transmissions and final drive axles*, a hard, dry, generally lustrous deposit that can be removed by solvents but not by wiping with a cloth.

D 4175, D02

varnish, electrical insulating, *n*—a liquid resin system that is applied to and cured on electrical components providing electrical, mechanical, and environmental protection.

D 1711, D09

varved clay—alternating thin layers of silt (or fine sand) and clay formed by variations in sedimentation during the various seasons of the year, often exhibiting contrasting colors when partially dried.

D 653, D18

vat dyeing—see **drum dyeing**.

D 1517, D31

V-board—see **corrugated fiberboard**.

D 996, D10

“V” configuration—boom positioned in a “V” shape.

F 818, F20

“V”-crown—staple crown with inverted “V” cross section on staple; used in spring-up work in furniture and bedding.

F 592, F16

V-cuts, *n*—*in mica*, edge cuts in the form of a “V” with an included angle of 120° or less.

D 1711, D09

1/v detector—a detector made of a nuclide whose cross section for a particular reaction of interest (for example, (*n*, γ), (*n*, *p*), (*n*, α))

varies as the reciprocal of the velocity of the impinging neutrons. The 1/*v* property of the detector is valid only over a restricted energy range and usually below 10 keV (see **2200 m/s cross section**).

E 170, E10

veal—a large calfskin, almost as large as a kip.

D 1517, D31

vector—a fragment of DNA usually containing an origin of replication that is engineered to accept a foreign piece of DNA.

E 1705, E48

vee path—the angle-beam path in materials starting at the search-unit examination surface, through the material to the reflecting surface, continuing to the examination surface in front of the search unit, and reflection back along the same path to the search unit. The path is usually shaped like the letter V.

E 1316, E07

vegetable matter, *n*—*in wool top*, the pieces of burrs, seeds, shive, leaves, twigs, and grasses which have escaped removal in processing, also foreign vegetable fibers such as hemp, sisal, etc., if present.

D 123, D13

vegetable matter, *n*—*in wool top*, the pieces of burrs, seeds, shive, leaves, twigs, and grasses which have escaped removal in processing, also foreign vegetable fibers such as hemp, sisal, etc., if present.

D 4845, D13

vegetable matter base, *n*—*in raw wool*, oven-dried scoured burrs, seeds, twigs, leaves, and grasses, free of mineral matter and alcohol-extractable matter.

D 123, D13

vegetable matter base, *n*—*in raw wool*, oven-dried scoured burrs, seeds, twigs, leaves, and grasses, free of mineral matter and alcohol-extractable matter.

D 4845, D13

vegetable matter present, *n*—*in raw wool*, the weight of vegetable matter base present in the raw wool, adjusted to a moisture content of 12%, an alcohol-extractives content of 1.5%, and a mineral matter content of 0.5%.

D 123, D13

vegetable matter present, *n*—*in raw wool*, the weight of vegetable matter base present in the raw wool, adjusted to a moisture content of 12%, an alcohol-extractives content of 1.5%, and a mineral matter content of 0.5%.

D 4845, D13

vegetable oil—oil extracted from seeds; typically those of corn, cotton, peanut, rapeseed, sunflower, canola, or soybean.

E 1519, E35

vegetable oil concentrate—an emulsifiable vegetable oil product containing 5 to 20% w/w surfactant and a minimum of 80% w/w vegetable oil.

E 1519, E35

vegetable peeling machine, electric—machine consisting of the following: a cylinder having an abrasive or ribbed wall; an abrasive disk with lobes; a peel trap (when waste disposer is not specified); a waste outlet, a water inlet and air-gap type sprayer; and a cylinder cover.

F 1827, F26

vegetable tanning—the conversion of rawhides into leather by treating with water solutions of tannin extracted from materials of vegetable origin.

D 1517, D31

vehicle, *n*—the liquid portion of a paint or printing ink. Anything that is dissolved in the liquid portion of a paint or printing ink is a part of the vehicle.

D 16, D01

vehicle—a liquid medium for the suspension of magnetic particles.

E 1316, E07

vehicle operation mode—the manner of operation of an emergency medical vehicle, involving the use of warning devices and the exercise of driving privileges legally allowed for emergency vehicles.

F 1177, F30

vehicular gate—a structure used to close a gate opening through which vehicles are intended to pass. See Specifications F 654, F 900, and F 1184.

F 552, F14

veiling reflection, *n*—the reflection of light by an image-bearing surface, that reduces the apparent contrast of the image.

E 284, E12

vein ice—(1) a comprehensive term for ice formed along cracks, where it occurs in bodies of various shapes, including tabular

vein ice

forms and wedges; (2) a seam or vein of ice occupying a crack that cuts across rock or soil layers. **D 7099**, D18

veining—the presence in an otherwise homogeneous stone of bands, streaks or irregular bodies of a contrasting color or appearance, and frequently having a different mineralogical composition to the predominant material. “Veining” does not apply to gneiss, commercial granite types, and slate (see *ribbon*). **C 119**, C18

veiny—appearance of leather characterized by many clearly visible blood vessels, either closed or cut open by buffing or shaving operations. **D 1517**, D31

Vello process—a process for continuously drawing glass tubing (or cane) in which glass is fed downward to the draw through an annular orifice. **C 162**, C14

vellum—see **parchment**. **D 1517**, D31

vellum glaze—See *vellum glaze* under **glaze**. **C 242**, C21

velocity, *n*—time rate of linear motion in a given direction. **D 653**, D18

velocity head—the square of the average velocity divided by twice the acceleration due to gravity. **D 4410**, D19

velocity pressure—See **pressure**. **D 1356**, D22

velveteen, *n*—a woven fabric in twill or plain weave made with a short closely packed filling pile in imitation of velvet. **D 123**, D13

velveteen, *n*—a woven fabric in twill or plain weave made with a short closely packed filling pile in imitation of velvet. **D 4850**, D13

vener—a nonload-bearing facing of stone attached to a backing for the purpose of ornamentation, protection, or insulation. **C 119**, C18

vener, *n*—the decorative surface of a shingle or sheet, usually pigmented or granuled for color. **C 1154**, C17

vener, *n*—thin sheets of wood, produced on a rotary lathe, or by slicing, or sawing. **D 996**, D10

vener—thin sheets of wood from which plywood is made; also referred to as plies in the glued panel.

figured veneer—veneer containing irregular grain formations that add to its value for furniture panel faces and other decorative uses. Various figures are referred to as rift-cut, comb-grained, stripe, rope, mottle, fiddle-back, cross-fire, quartered, crossbar, curley, blister, birds’ eye, feather, crotch, ribbon, stump, burl, etc.

half-round veneer—a manner of cutting veneer to bring out a certain beauty of figure. The flitch is mounted on a stay log and is cut on a lathe. It differs from rotary-cut veneer in that the flitch is cut with a wider sweep than when mounted at the lathe center, and the center of the tree is not near the center of rotation.

plain sliced veneer—veneer sliced approximately tangent to the growth rings; also termed “flat cut.”

quartered veneer—veneer produced by slicing or sawing a log on a plane approximately perpendicular to the growth rings. This may bring out a certain figure resulting from the presence of rays which are especially conspicuous in oak.

rift cut veneer—veneer cut at approximately 45 deg to the rays.

rotary-cut veneer—veneer cut in a continuous ribbon by centering the entire log or bolt in a lathe and rotating it against a knife.

sawn veneer—veneer produced by sawing.

sliced veneer—veneer that is sliced off by moving a log, bolt, or flitch laterally against a knife or vice versa. **D 1038**, D07

vener—the decorative surface of an asbestos-cement shingle or sheet, usually pigmented or granuled for enhanced appearance. **D 2946**, C17

vener, *n*—a thin layer of rubber covering the surface of the tire sidewall. **F 538**, F09

vener-box nail—coated, regular-stock-steel, 1½ by 0.080-in. nail with flat 1¼ or ¼-in. head and medium needle point. **F 547**, F16

vener plaster, *n*—a calcined gypsum plaster formulated to be applied in thin coats. **C 11**, C11

venetian blind effect, *n*—the change in appearance of a specimen as it is rotated in its own plane, under fixed conditions of illumination and viewing, resulting from preferential orientation of flake within the specimen. **E 284**, E12

venetian-blind effect, *n*—*in surface coatings*, uniform change in an appearance attribute such as lightness as a directionally-illuminated specimen is rotated in its own plane. **E 284**, E12

vent—an opening designed to convey water vapor or other gas from inside a building or a building component to the atmosphere. **D 1079**, D08

vented cap—a cap with a small hole that is installed on top of the riser. **D 653**, D18

vent hole—*in grouting*, a hole drilled to allow the escape of air and water and also used to monitor the flow of grout. **D 653**, D18

vent hole—an opening for the escape of gases of relief of pressure, often required in fabricated, immersion-coated, or hot-dip galvanized steel members. Compare **drainage hole**, **weephole**.

ventilator—See **windows and doors**.

verification—see **calibrate**. **E 631**, E06

ventilator—see **exhaust hood**. **F 1827**, F26

vent pipe—*in grouting*, a small-diameter pipe used to permit the escape of air, water, or diluted grout from a formation. **D 653**, D18

verification, *n*—the act or process of verifying. **D 123**, D13

verification, *n*—checking or testing to assure conformance with the specification. **E 6**, E28

verification—confirmation by examination and provision of evidence that an instrument, material, reference, or standard is in conformance with a specification. **E 7**, E04

verification, *n*—confirmation that the calibration or standardization of an instrument is acceptable. **E 135**, E01

verification, *n*—the process of testing a thermometer for compliance with specifications. **E 344**, E20

verification—checking or testing to assure conformance with the specification, (Test Method E 384, Committee E04; Test Method E 10, Committee E28; Test method E 18, Committee E28; Test Method E 92, Committee E28). **E 1187**, E36

verification—see **calibrate**. **E 1605**, E06

verification, *n*—a technical process used to evaluate whether or not a specific symbol meets a standard specification. **F 1294**, F05

verification—act of confirming, substantiating, and assuring that an activity or condition has been implemented in conformance with the specified requirements. **F 1789**, F16

verification, AE system (performance check, AE system)—the process of testing an AE system to assure conformance to a specified level of performance or measurement accuracy. (This is usually carried out prior to, during and/or after an AE examination with the AE system connected to the examination object, using a simulated or artificial acoustic emission source.) **E 1316**, E07

verification of conformity—confirmation by examination of evidence, that a product, process or service fulfills specified requirements, (ISO Guide 2). **E 1187**, E36

verification standard, *n*—calibrated physical standard used to verify the accuracy of calibration of measurement scales, operating characteristics, or systems responses of color-measuring instruments. **E 284**, E12

verification temperatures, *n*—the specified temperatures at which thermometers are tested for compliance with scale error limits. **E 344**, E20

verifier, *n*—*in emission spectrometry*, a material used to determine whether standardization is required. **E 135**, E01

verifier, *n*—a device that measures bars, images, spaces, quiet zones, locator points and optical characters of a symbol to determine whether or not a standard specification is met. **F 1294**, F05

verify, *v*—*specific-intextile testing*, to determine whether a previously calibrated instrument, standard solution, or other standard is still properly calibrated. **D 123**, D13

verify, *v*—*general*, to establish that an operation has been completed correctly. **D 123, D13**

verify, *v*—to assess the overall reliability and accuracy of an instrument or method of measurement by use of material standards for which the measurable quantities have accepted values. See **verification standard**. **E 284, E12**

vermiculite, *n*—insulation composed of natural vermiculite ore expanded to form an exfoliated structure. **C 168, C16**

vermiculite—an aggregate used in lightweight insulating concrete, formed by heating and expanding a micaceous mineral. **D 1079, D08**

vernonia oil, *n*—a low-viscosity epoxidized drying oil from the seed of an African plant, *Vernonia galamensis*, containing three reactive epoxy groups and three carbon—carbon double bonds per triglyceride molecule and is characterized by its very low viscosity and melting point. **D 16, D01**

version A, *n*—when applied to *UPC codes*, the standard 12-digit symbol. **F 1294, F05**

version E, *n*—when applied to *UPC codes*, a 6-digit symbol formed by zero suppression. **F 1294, F05**

vertebral body replacement device, *n*—a structure which is designed to restore anatomic position and support to a section of spine lacking one or more vertebral bodies and intervening disc(s). **F 1582, F04**

vertebral span, *n*—the number of vertebra that are spanned by the longitudinal element, including the vertebrae containing anchor components. **F 1582, F04**

vertical—an approximately vertical path from water surface to stream bed along which one or more samples are taken to define sediment concentration or distribution. May also be referred to as *sampling vertical*. **D 4410, D19**

vertical accretion deposits—flood-plain deposits formed by deposition of suspended sediment from overbank flood waters. **D 4410, D19**

vertical bar code, *n*—a symbol oriented so that the bars are parallel to the horizon; also termed ladder or step ladder bar code. **F 1294, F05**

vertical field separators—(1) A vertical line separating data fields.
(2) See **field separator**. **F 149, F05**

vertical grain—See **grain**. **D 9, D07**

vertical illumination—light incident on an object from the objective side such that smooth planes perpendicular to the optical axis of the objective appear bright. **E 7, E04**

vertical ladder gasket—a ladder gasket installed in a vertical plane in such a way that the intermediate cross members (muntins) are horizontal members. **C 717, C24**

vertical limit—the maximum readable level of vertical indications determined either by an electrical or a physical limit of an A-scan presentation. **E 1316, E07**

vertical load, *n*—the normal reaction of the tire on the road which is equal to the negative of normal force. **F 538, F09**

vertical load (F_v)—the downward vertical component of force between the tire and the road. **E 867, E17**

vertical load (load)—force acting in a vertical axis through the wheel transducer; that is, weight. **E 867, E17**

vertically oscillating arm type—See **pot, pan, and utensils washing machine**. **F 1827, F26**

vertical redundancy, *n*—the availability of more than a single scan path through the elements of a bar code symbol. **F 1294, F05**

vertical strip drain, *n*—a geocomposite consisting of a geotextile cover and drainage core installed vertically into soil to provide drainage for accelerating consolidation of soils. **D 4439, D35**

vertical thread—misnomer for longitudinal thread. **F 547, F16**

vessels—wood cells of comparatively large diameter that have open ends and are set one above the other so as to form continuous tubes. The openings of the vessels on the surface of a piece of wood are usually referred to as pores. **D 9, D07**

viability—the ability to grow and reproduce. **F 1600, F20**

viable—ability to live or grow. For example, bacteria, plants. **D 6161, D19**

viable titer, *n*—the number of living microbes present per unit volume, mass, or area. **D 4175, D02**

vial, *n*—a small, usually cylindrical, vessel capable of closure, such as for medications, perfumes, essences, and samples. **D 996, D10**

vibrated beam wall (injection beam wall)—barrier formed by driving an H-beam in an overlapping pattern of prints and filling the print of the beam with cement-bentonite slurry or other materials as it is withdrawn. **D 653, D18**

vibrating needle atomizer—a vibratory atomizer in which liquid under pressure is supplied through a hollow vibrating needle. **E 1620, E29**

vibrating reed atomizer—a vibratory atomizer in which individual drops are produced from a liquid reservoir by an oscillating reed. **E 1620, E29**

vibration—an oscillation wherein the quantity is a parameter that defines the motion of a mechanical system (see **oscillation**). **D 653, D18**

vibration isolation—a reduction, attained by the use of a resilient coupling, in the capacity of a system to vibrate in response to mechanical excitation. **C 634, E33**

vibrative atomizer—see **vibratory atomizer**. **E 1620, E29**

vibratory atomizer—a device wherein an oscillating solid surface is the primary source of energy. **E 1620, E29**

vibratory cavitation, *n*—cavitation caused by the pressure fluctuations within a liquid, induced by the vibration of a solid surface immersed in the liquid. **G 40, G02**

vibratory cavitation test device, *n*—a device used to generate cavitation in a liquid through the vibrations of a solid surface in contact with the liquid. Usually such devices are driven at a frequency roughly in the range from 10 to 30 kHz by a magnetostrictive or a piezo-electric transducer. **G 40, G02**

vibratory finishing—a process for deburring and surface finishing in which the product and an abrasive mixture are placed in a container and vibrated. **B 374, B08**

virothermography—a thermographic technique for examining an object in which temperature differences are produced by excitation. **E 1316, E07**

Vickers—See **micro penetration tester**. In a more restricted sense, the 136° diamond pyramid indenter used in microindentation hardness tests. **E 7, E04**

Vickers Hardness Number (HV), *n*—an expression of hardness obtained by dividing the force applied to a Vickers indenter by the surface area of the permanent impression made by the indenter. **C 1145, C28**

Vickers hardness number, HV, *n*—a number related to the applied force and the surface area of the permanent impression made by a square-based pyramidal diamond indenter having included face angles of 136°, computed from the equation:

$$HV = 2P \sin (\alpha/2)/d^2 = 1.8544P/d^2$$

where:

P = applied force, kgf,
d = mean diagonal of the impression, mm, and
 α = face angle of diamond = 136°.

E 6, E28

Vickers hardness test, *n*—an indentation hardness test using calibrated machines to force a square-based pyramidal diamond indenter having specified face angles, under a predetermined force, into the surface of the material under test and to measure the diagonals of the resulting impression after removal of the force. **E 6, E28**

Vickers hardness test—standard method for measuring the hardness of metals, particularly those with extremely hard surfaces; the surface is subjected to a standard pressure for a standard length of time by means of a pyramid-shaped diamond. The diagonal of the

Vickers hardness test

resulting indentation is measured under a microscope and the Vickers hardness value is then read from a conversion table.

F 1789, F16

Vickers indenter, *n*—a square-based pyramidal-shaped diamond indenter with face angles of $136^{\circ} 00'$.

C 1145, C28

video data, *n*—a signal sent to the image output terminal by the electronic subsystem that turns the laser on and off to create an image on the photoreceptor.

F 1457, F05

video presentation—display of the rectified, and usually filtered, r-f signal.

E 1316, E07

viewing angle, *v*, *n*—*in retroreflection*, the angle between the retroreflector axis and the observation axis.

E 284, E12

viewing conditions, *n*—the conditions under which a visual observation is made, including the angular substance of the specimen at the eye; the geometric relationship of source, specimen and eye; the photometric and spectral character of the field of view surrounding the specimen; and the state of adaptation of the eye.

C 1154, C17

viewing conditions, *n*—the conditions under which a visual observation is made, including the angular substance of the specimen at the eye; the geometric relationship of source, specimen and eye; the photometric and spectral character of the field of view surrounding the specimen; and the state of adaptation of the eye.

D 2946, C17

viewing conditions, *n*—the conditions under which a visual observation is made, including the angular subtense of the specimen at the eye, the geometric relationship of source, specimen, and eye, the photometric and spectral character of the source, the photometric and spectral character of the field of view surrounding the specimen, and the state of adaptation of the eye.

E 284, E12

viewing rakes, *n*—a set of bars with wires spaced at 50-mm intervals for the purpose of increasing the precision of timing the flame front progress along the specimen.

E 176, E05

viewing screen—feature of microwave equipment, usually part of the door assembly, that is opaque to microwave energy, but visually transparent to provide viewing of the oven contents.

F 1827, F26

vignetting, *n*—loss of light rays at stops of an optical instrument, other than the aperture stop.

E 284, E12

vinyl—a manufactured fiber in which the fiber-forming substance is any long-chain synthetic polymer composed of at least 50 % by weight of vinyl alcohol units ($(\text{C}_2\text{H}_4\text{O})_n$), and in which the total of the vinyl alcohol units and any one or more of the various acetal units is at least 85 % by weight of the fiber.

D 123, D13

vinyl acetate plastics—plastics based on polymers of vinyl acetate or copolymers of vinyl acetate with other monomers, the vinyl acetate being in greatest amount by mass. (ISO)

D 883, D20

vinyl asbestos tile (VAT), *n*—an obsolete form of resilient tile composed of vinyl plastic binders, crysotile asbestos fibers, mineral fillers and pigments.

F 141, F06

vinyl chloride copolymer—a polymer prepared by the polymerization of vinyl chloride and other monomers, the vinyl chloride content being a minimum 51 % of the mass of the polymer.

D 883, D20

vinyl chloride plastics—plastics based on polymers of vinyl chloride or copolymers of vinyl chloride with other monomers, the vinyl chloride being in greatest amount by mass. (ISO)

D 883, D20

vinyl chloride plastics—plastics based on polymers of vinyl chloride or copolymers of vinyl chloride with other monomers, the vinyl chloride being in the greatest amount by mass. (ISO, D20)

F 412, F17

vinyl-coated glass yarn, *n*—glass continuous filament yarn, coated with a pigment and plasticized vinyl chloride resin.

D 123, D13

vinyl-coated glass yarn, *n*—glass continuous filament yarn, coated with a pigment and plasticized vinyl chloride resin.

D 7018, D13

vinyl composition tile, *n*—a resilient floor covering composed of binder, fillers, and pigments. The binder consists of one or more resins of poly(vinyl chloride), or vinyl chloride copolymers, or

both, compounded with suitable plasticizers and stabilizers. Other polymeric resins may be incorporated as part of the binder.

E 1605, E06

vinyl composition tile (VCT), *n*—a resilient floor covering composed of binder, fillers, and pigments. The binder shall consist of one or more resins of poly (vinyl chloride), or vinyl chloride copolymers, or both, compounded with suitable plasticizers and stabilizers. Other polymeric resins may be incorporated as part of the binder.

F 141, F06

vinyl ester resin—a thermosetting reaction product of epoxy resin with a polymerizable unsaturated acid usually methacrylic acid, which is then diluted with a reactive monomer—usually styrene.

C 904, C03

vinylidene chloride plastics—plastics based on polymer resins made by the polymerization of vinylidene chloride or copolymerization of vinylidene chloride with other unsaturated compounds, the vinylidene chloride being in the greatest amount by weight.

D 883, D20

vinylidene chloride plastics—plastics based on polymer resins made by the polymerization of vinylidene chloride or copolymerization of vinylidene chloride with other unsaturated compounds, the vinylidene chloride being in the greatest amount by weight. (D20)

F 412, F17

vinyl resin—under **resin, synthetic**, see *vinyl resin*.

D 16, D01

vinyl wall covering, *n*—a wall covering produced by applying a poly(vinyl chloride) (PVC, vinyl) based coating, or laminating a preformed vinyl film, onto a woven or nonwoven fabric substrate or paper.

E 176, E05

vinylon—a manufactured fiber in which the fiber-forming substance is any long-chain synthetic polymer composed of at least 85 % by weight of vinyl chloride units ($(\text{C}_2\text{H}_2\text{Cl})_n$).

D 123, D13

viral penetration, *n*—the penetration of a material by a virus.

F 1494, F23

viral resistant, *adj*—referring to materials which impede viral penetration under specified laboratory test conditions and detection methods.

F 1494, F23

virgin compression curve—see **compression curve**.

D 653, D18

virgin fiber, *n*—*in paper*, fiber that has been derived from sources other than paper or textile materials that have been recovered.

D 1968, D06

virgin glycol, *n*—glycol that has not been used previously.

D 4725, D15

virgin plastic—a plastic material in the form of pellets, granules, powder, floc, or liquid that has not been subjected to use or processing other than that required for its initial manufacture.

D 883, D20

virgin plastic—a plastic material in the form of pellets, granules, powder, floc, or liquid that has not been subjected to use or processing other than that required for its initial manufacture. (D20)

F 412, F17

virgin wool, *n*—*as defined in the Wool Products Labeling Act*, “the terms ‘virgin’ or ‘new’ as descriptive of a wool product, or any fiber or part thereof, shall not be used when the product or part so described is not composed wholly of new or virgin fiber which has never been reclaimed from any spun, woven, knitted, felted, braided, bonded, or otherwise manufactured or used product.”

D 123, D13

virgin wool, *n*—*as defined in the Wool Products Labeling Act*, “the terms ‘virgin’ or ‘new’ as descriptive of a wool product, or any fiber or part thereof, shall not be used when the product or part so described is not composed wholly or new or virgin fiber which has never been reclaimed from any spun, woven, knitted, felted, braided, bonded, or otherwise manufactured or used product.”

D 4845, D13

virtual data warehouse, *n*—a National ITS Architecture market package in which physically distributed ITS archives exchange multiple transportation-related data even though the warehouse is not a center that directly collects its own ITS-related data, and it is

- analogous to a library whose collection is acquired from other libraries or from a central library system. **E 867, E17**
- virtual-front time (of an impulse-voltage wave), n** —a time equal to 1.67 times the interval t_f between the instants when the voltage is 0.3 and 0.9 times the peak value. **D 1711, D09**
- virtual image**—a reproduction of an object by an optical system which gathers light from an object point and transforms it into a beam that appears to diverge from another point. **E 1316, E07**
- virtual leak**—(1) the semblance of a leak in a vacuum system caused by slow release of trapped gas.
(2) during a rate-of-rise test, the semblance of a leak in a vacuum system caused by slow release of sorbed or occluded gas or gases on or in the surfaces and pores of all materials in a system which has been exposed to atmospheric pressure prior to evacuation. **E 1316, E07**
- virtual metamer, n** —set of spectral radiance factors, not based on physical samples, which provide a metameric match for a specific illuminant-observer combination. **E 284, E12**
- virtual origin (of an impulse voltage wave), n** —the point of intersection (o_1) with the line of zero voltage of a line drawn through the points of 0.3 and 0.9 times the peak voltage on the front of an impulse voltage wave. **D 1711, D09**
- virtual-peak value (of an impulse-voltage wave), n** —a value derived from a recording of an impulse wave on which high-frequency oscillations or overshoot of limited magnitude may be present. **D 1711, D09**
- virtual temperature**—See **temperature**. **D 1356, D22**
- virtual time to half-value (of an impulse-voltage wave), n** —the time interval (t_2) between the virtual origin (o_1) and the instant on the tail when the voltage has decreased to half the peak value. **D 1711, D09**
- virus, n** —a *minuteinfectious agent*, which lacks independent metabolism and is only able to replicate within a living host cell. **F 1494, F23**
- viscoelasticity**—property of materials that strain under stress partly elastically and partly viscously, that is, whose strain is partly dependent on time and magnitude of stress. (ISRM) **D 653, D18**
- viscoelasticity**—a combination of viscous and elastic properties in a material, with the relative contribution of each dependent upon time, temperature, stress, and strain rate. **D 1079, D08**
- viscoelasticity, n** —a combination of viscous and elastic properties in a material with the relative contribution of each being dependent on time, temperature, stress, and strain rate. **D 1566, D11**
- viscoelasticity**—the property exhibited by a material which possesses both elastic and viscous properties that vary with strain, strain rate and frequency. **E 1142, E37**
- viscose**—a solution of sodium cellulose xanthate prepared by dissolving the reaction product formed by the interaction of carbon disulfide and alkali cellulose in an aqueous solution of sodium hydroxide. Viscose is used mainly in the manufacture of rayon or cellophane, where it is extruded through fine openings of the proper shape into a coagulating bath. **D 1695, D01**
- viscosity**—the property of fluids that opposes the relative motion of adjacent portions of a given fluid producing a type of internal friction and exhibiting a resistance to flow. **C 242, C21**
- viscosity**—the internal fluid resistance of a substance which makes it resist a tendency to flow. **D 653, D18**
- viscosity**—the property of resistance of flow exhibited within the body of a material. **D 883, D20**
- viscosity, n** —of a liquid, the resistance to flow expressed as the ratio of the applied shear stress to the resulting rate of shearing strain. (See **Newtonian behavior, non-Newtonian behavior, and thixotropy**.) (Compare **consistency**.) **D 907, D14**
- viscosity, n** —the resistance of a material to flow under stress. **D 1566, D11**
- viscosity**—in general, the resistance of a fluid to flow or motion within itself. As applied to cellulose or its derivatives, the viscosity of a solution of the substance. **D 1695, D01**
- viscosity**—same as **viscosity, absolute**. **D 2864, D27**
- viscosity**—the internal resistance to flow of a solid (powder), liquid, or gas at a specified temperature. Viscosity is a definite measurement for the consistency of a material. **D 3064, D10**
- viscosity, η** —the property of resistance to steady flow exhibited within the body of the material. **D 4092, D20**
- viscosity, n** —the ratio between the applied shear stress and rate of shear. It is sometimes called the coefficient of dynamic viscosity. This value is thus a measure of the resistance to flow of the liquid. The SI unit of viscosity is the pascal second (Pa.s). The centipoise (cP) is one millipascal second (mPa.s) and is often used. **D 4175, D02**
- viscosity, η** —the property of resistance to steady flow exhibited within the body of the material, (D4092, D20). **E 1142, E37**
- viscosity**—the property of a fluid that presents a resistance to shearing flow. **E 1316, E07**
- viscosity**—the property of resistance to flow exhibited within the body of a material. **F 412, F17**
- viscosity, n** —the property of resistance of flow exhibited with the body of a material. **F 1251, F04**
- viscosity, absolute, η** —the ratio of shear stress to shear rate. It is the property of internal resistance of a fluid that opposes the relative motion of adjacent layers. The unit most commonly used for insulating fluids is the centipoise. **D 2864, D27**
- viscosity coefficient**—the shearing stress necessary to induce a unit velocity flow gradient in a material. **D 883, D20**
- viscosity coefficient, n** —the shearing stress tangentially applied that will induce a velocity gradient. A material has a viscosity of one poise when a shearing stress of one dyne per square centimetre produces a velocity gradient of (1 cm/s)/cm. (See also **viscosity**.) **D 907, D14**
- viscosity coefficient**—the shearing stress necessary to induce a unit velocity gradient in a material. **D 4092, D20**
- viscosity coefficient**—the shearing stress necessary to induce a unit velocity flow gradient in a material. **F 412, F17**
- viscosity, coefficient of**—same as **viscosity, absolute**. **D 2864, D27**
- viscosity, cuprammonium**—the viscosity of a solution or dispersion of cellulose or pulp in cuprammonium hydroxide under standardized conditions. **D 1695, D01**
- viscosity, cupriethylenediamine**—the viscosity of a solution or dispersion of cellulose or pulp under standard conditions when dissolved in a solution of copper hydroxide in ethylenediamine. **D 1695, D01**
- viscosity, dynamic**—same as **viscosity, absolute**. **D 2864, D27**
- viscosity in absolute units, CGS poises**—the force in dynes required to move, at a velocity of 1 cm/s, one surface having an area of 1 cm² past another parallel-like surface 1 cm away, overcoming the resistance to shear of the material filling the space between. **D 1695, D01**
- viscosity index**—the ratio of the viscosity of a highly concentrated solution to that of a dilute solution. It is a measure of solvent power and, in derivatives, of uniformity of substitution. **D 1695, D01**
- viscosity index (VI), n** —an arbitrary number used to characterize the variation of the kinematic viscosity of a fluid with temperature. **D 4175, D02**
- viscosity, inherent**—the quotient of the natural logarithm of relative viscosity by the concentration, that is, $\ln \eta_{rel}/c$. The concentration should be specified. **D 1695, D01**
- viscosity, intrinsic**—the limiting value of reduced viscosity, η_{sp}/c , as c (concentration) approaches zero. In the cellulosic field the concentration is generally expressed as grams per decilitre. The IUPAC Committee of Nomenclature has recommended the expression "Limiting viscosity number" for this and the concentration is generally expressed as grams per millilitre. **D 1695, D01**
- viscosity, kinematic**—the quotient of the absolute (dynamic) viscosity divided by the density, η/ρ , both at the same temperature. For insulating liquids the unit most commonly used is the centistokes (100 cSt = 1 St). **D 2864, D27**

viscosity loss (VL), n

viscosity loss (VL), n—a measure of the decrease in an oil's viscosity.

D 4175, D02

viscosity, Mooney, n—a measure of the viscosity of a rubber or rubber compound determined in a Mooney shearing disk viscometer (see Test Methods D 1646).

D 1566, D11

viscosity, Newtonian—the property exhibited by a material in which the coefficient of viscosity is independent of strain rate and time (at a given temperature and density).

E 1142, E37

viscosity, non-Newtonian—the property exhibited by a material in which the coefficient of viscosity is dependent on strain rate and/or time (at a given temperature and density).

E 1142, E37

viscosity number—see **viscosity, reduced**.

D 1695, D01

viscosity ratio—see **viscosity, relative**.

D 1695, D01

viscosity, reduced—the specific viscosity divided by the concentration. In the cellulosic field the concentration is generally expressed as grams per decilitre. The IUPAC Committee on Nomenclature has recommended the expression "viscosity number" for this, in which case the preferred expression of concentration is grams per millilitre.

D 1695, D01

viscosity, relative—the ratio of the viscosity of a solution to that of the pure solvent. The IUPAC Committee on Nomenclature has recommended the expression "Viscosity ratio" for this.

D 1695, D01

viscosity, Saybolt Universal—the efflux time in seconds of 60 mL of sample flowing through a calibrated Saybolt Universal orifice under specified conditions.

D 2864, D27

viscosity, specific—the difference between the viscosity of a solution and that of a solvent, divided by the latter.

D 1695, D01

viscosity, xanthate—for a cellulosic pulp, the viscosity of the viscose that will be obtained as a result of a specified series of processes.

D 1695, D01

viscous, adj—as a modifier of *damping*, descriptive of that type of damping in which the damping force is proportional to the velocity of motion across the damping element, so named because of its derivation from an oil-filled dashpot damper.

viscous damping—the dissipation of energy that occurs when a particle in a vibrating system is resisted by a force that has a magnitude proportional to the magnitude of the velocity of the particle and direction opposite to the direction of the particle.

D 653, D18

viscous flow—see **laminar flow**.

D 653, D18

viscous flow—flow, usually at low velocity, in which fluid elements flow in a straight line parallel to the direction of flow of the liquid in the absence of turbulence.

D 1695, D01

viscous flow—the flow of gas through a duct under conditions such that the mean free path is very small in comparison with the smallest dimension of a transverse section of the duct. This flow may be either laminar or turbulent.

E 1316, E07

viscous hydroplaning, n—hydroplaning of pneumatic tires with separation caused by a thin fluid film due principally to the generation of fluid viscous forces.

E 867, E17

viscous leak—a leak of such geometric configuration that gas flow through it is viscous in nature; that is, the flow obeys Poiseuille's Law. The flow rate is proportional to the difference of the squares of the end pressures, and inversely proportional to the gaseous viscosity.

E 1316, E07

visibility, n—the properties and behavior of light waves and objects interacting in the environment to produce light signals capable of evoking visual sensation.

E 284, E12

visibility—the quality or state of being perceived by the eye. In many outdoor applications, visibility is defined in terms of the distance at which an object can be reliably resolved from its surroundings. In outdoor applications it usually is defined in terms of contrast or size of a standard test object, observed under standardized viewing conditions, having the same threshold as the given object.

E 1316, E07

visibility distance, n—the greatest distance at which an object can be seen.

E 284, E12

visible—pertaining to radiant energy in the electromagnetic spectral range visible to the normal human eye (approximately 380 to 780 nm).

E 131, E13

visible, adj—pertaining to that portion of the electromagnetic spectrum to which the eye is sensitive, approximately 380 to 780 nm in wavelength.

E 284, E12

visible-activated fluorescence, n—fluorescence resulting from the absorption of visible radiant flux, that is, flux with wavelengths 380 to 780 nm. (See also **ultra-violet-activated fluorescence**.)

E 284, E12

visible laser diode, VLD, n—a light source operating in the human visible light spectrum.

F 1294, F05

visible light—electromagnetic radiation in the 400–700 (4000–7000 Å) wavelength range.

E 1316, E07

visible light—radiant energy generated in 400 to 700 nm (4000 to 7000 Å) wavelength range.

E 1316, E07

visible radiation, n—any radiation capable of causing a visual sensation.

NOTE—The limits of the spectral range of visible radiation are not well defined and may vary according to the user. The lower limit is generally taken between 380 and 400 nm and the upper limit between 760 and 790 nm (1 nanometer, nm = 10⁻⁹ m).

E 349, E21

visible response—a particular type of optical response system used in some scanners. There are very few reflective inks for this type of system.

F 149, F05

visible start (VS), n—that temperature at which the liquid crystal first begins to reflect visible light.

E 344, E20

visible waste, n—in *cotton testing*, foreign matter deposited in the waste boxes of the machine during the test.

D 123, D13

visible waste, n—in *cotton testing*, foreign matter deposited in the waste boxes of the machine during the test.

D 7139, D13

vision, n—the sense of sight.

E 253, E18

visitor (visitor)—(in a facility) person present who is not an occupant of that facility.

E 1480, E06

visual adaptation—the adjustment of the eyes when one passes from a bright to a darkened place.

E 1316, E07

visual colorimeter, n—an instrument, using the eye as detector, that measures color stimuli produced by mixing one or more of at least three primary colors.

E 284, E12

visual field—point or points in space that can be perceived when the head and eyes are kept fixed. The field may be monocular or binocular.

E 1316, E07

visual inspection—a visual check made to detect constructional defects.

F 819, F18

visual inspection for clearance testing—the visual examination of a residential dwelling or a child-occupied facility following an abatement to determine whether or not the abatement has been successfully completed.

E 1605, E06

visual inspection for risk assessment—the visual examination of a residential dwelling or a child-occupied facility to determine the existence of deteriorated lead-based paint or other potential sources of lead-based paint hazards.

E 1605, E06

visual perception, n—the visual experience resulting from stimulation of the retina and the resulting activity of associated neural systems.

E 284, E12

visual range, n—distance that unaided (except for normal prescription eyewear) human vision can provide deconfliction during a UAV operation, and can effectively monitor the UAV.

F 2395, F38

vitrain—See **vitrain** under **coal**.

D 121, D05

vitreous enamel—see **porcelain enamel**.

C 286, B08

vitreous silica—a generic term for vitreous silicon dioxide. See related terms **fused quartz** and **fused silica**.

C 162, C14

vitreous slip—a slip coating matured on a ceramic body producing a vitrified surface.

C 242, C21

vitreous (vitrified)—that degree of vitrification evidenced by low water absorption. (See also **impervious; nonvitreous; semivitreous**.)

C 242, C21

vitrification—the progressive reduction and elimination of porosity of a ceramic composition, with the formation of a glass phase, as a result of heat treatment. C 242, C21

vitrification—solidification of an aqueous suspension at low temperatures without the formation of ice crystals. E 1705, E48

vitrification range—the maturing range of a vitreous body. C 242, C21

vitrified bond, n—a bond created by the fusion of ceramic materials, principally clays and feldspar. C 1145, C28

vitrified clay pipe—a pipe made from various clays or combinations thereof which are shaped, dried, and fired to a point where the glass-forming components fuse to form a bond between the crystalline grains. C 896, C04

vitrinite—See *vitrinite* under **maceral**. D 121, D05

vitrinite type, n—as used in *Test Method D 5061*, reflectance classes of vitrinite which span 0.1 % reflectance intervals. D 121, D05

VL—in *viscometry*, abbreviation for viscosity loss. D 4175, D02

“V” nail—headless nails with central V-shaped slot at head end. F 547, F16

VOC—an abbreviation for *volatile organic compound*; an organic compound with the tendency to become vapor at specified conditions of temperature and pressure. E 631, E06

VOC—an abbreviation for *volatile organic compound*; an organic compound with the tendency to become vapor at specified conditions of temperature and pressure. E 1749, E06

vocabulary—See **repertoire**. F 149, F05

vocational career apparel, n—career apparel which is generally subject to abusive wear and for which durability is a more important attribute than appearance. (See also **career apparel** and **dress career apparel**) D 123, D13

vocational career apparel, n—career apparel which is generally subject to abusive wear and for which durability is a more important attribute than appearance. (See also **career apparel** and **dress career apparel**.) D 7022, D13

VOC (viable organism count)—a measure of biological activity (living or growing) in water. D 6161, D19

VOC (volatile organic compound)—an organic compound with a vapor pressure higher than water. D 6161, D19

void—a defective area in which a part of the basis material or underlayer is visible after final coating. B 374, B08

void, n—an unfilled space enclosed within an apparently solid carbon or graphite body. C 709, D02

void—space in a soil or rock mass not occupied by solid mineral matter. This space may be occupied by air, water, or other gaseous or liquid material. D 653, D18

void, n—(1) in a solid plastic, an unfilled space of such size that it scatters radiant energy such as light.
(2) a cavity unintentionally formed in a cellular material and substantially larger than the characteristic individual cells. (ISO) D 883, D20

void—any pocket of enclosed gas or air within a composite. D 3878, D30

void—any pocket of gas entrapment within or between the plies of reinforcement (see **blister** and **porosity**). D 3918, D20

void, n—an unfilled space enclosed within an apparently solid carbon or graphite body. D 4175, D02

void—*in structural members*, any opening, small crack, or crevice occurring at the juncture of structural members (such as chambers, reliefs, joggles, butt joints, or fasteners). E 631, E06

void—*in structural members*, any opening, small crack, or crevice occurring at the juncture of structural members (such as chambers, reliefs, joggles, butt joints, or fasteners). E 1749, E06

void—the absence of ink, or an area of significantly lower density of ink, within the confines of a character. F 149, F05

void, n—(1) in a solid plastic, an unfilled space of such size that it scatters radiant energy such as light.

(2) a cavity unintentionally formed in a cellular material and

substantially larger than the characteristic individual cells. (D20, ISO) F 412, F17

void, n—a volume (in the tread band) defined by the lack of rubber; the depth dimension of this volume may vary from point to point in (on) the tread band. F 538, F09

void, n—(1) in a solid plastic, an unfilled space of such size that it scatters radiant energy such as light, (2) a cavity unintentionally formed in a cellular material and substantially larger than the characteristic individual cells. F 1251, F04

void—shallow pocket or hollow on the surface of a fastener because of nonfilling of metal during forging. F 1789, F16

void, cellular material, n—a cavity unintentionally formed in a cellular material and substantially larger than the characteristic individual cells. D 1566, D11

void content, n—the volume percentage of voids in a composite. D 3878, D30

void ratio, e (D)—the ratio of: (1) the volume of void space, to (2) the volume of solid particles in a given soil mass.
critical void ratio, e_c (D)—the void ratio corresponding to the critical density. D 653, D18

void ratio (e, (D)), n—the ratio of the volume of void space to the volume of solids. D 4439, D35

void(s), n—in bar code standards, unwanted light areas contained within the dark elements of a positive bar. F 1294, F05

void space—ratio of the volume of voids in a powder bed to that of the overall volume of the powder bed. C 242, C21

void volume—the volume between the solid particles in a bed of granular material. Also called the interstitial volume. D 5681, D34

volatile, adj—a relative term expressing the tendency to form vapor; that is, at room temperature or in some other temperature domain. C 1145, C28

volatile corrosion inhibitor (VCI)—See **corrosion**. D 996, D10

volatile extractables—for purposes of the *ASTM tests for volatile extractables and nonvolatile extractables*, volatiles shall be defined as those compounds that give more than 50 % recovery in studies using the applicable volatile extractables method. F 17, F02

volatile extractables—those chemical species which are released in the vapor state from microwave food packaging under simulated use conditions and are detected using an applicable volatile extractables method. F 1479, F02

volatile fatty acid (VFA) number (of latex), n—the number of grams of potassium hydroxide equivalent to the volatile fatty acids in a latex sample containing 100 g of total solids. D 1566, D11

volatile fuels—relatively wide boiling range volatile distillate. D 4175, D02

volatile ingredients—the components of an aerosol formulation with a vapor pressure greater than atmospheric pressure (14.7 psia (101 kPa)) at 105°F (40.6°C). D 3064, D10

volatile materials—materials, particularly chemicals such as organic solvents that are readily vaporized at room temperature.
volatile organic compound—See **VOC**. E 631, E06

volatile matter, n—those products, exclusive of moisture, given off by a material such as gas or vapor, determined by definite prescribed methods which may vary according to the nature of the material. D 121, D05

volatile matter, n—that matter that is changed under conditions of the test to the gaseous state. D 1129, D19

volatile matter, n—those products, exclusive of moisture, given off by a material as gas or vapor as determined by definite prescribed methods. D 5681, D34

volatile matter—that matter that is changed under conditions of the test to the gaseous state. D 5681, D34

volatile matter—those products, exclusive of moisture, given off by a material as gas or vapor, determined by definite prescribed methods. E 856, D34

volatile matter—those products, exclusive of moisture, given off by

volatile matter

a material as gas or vapor, determined by definite prescribed methods that may vary according to the nature of the material.

E 1705, E48

volatile organic chemical—See **organic chemical**.

D 1356, D22

volatile organic compound—See **VOC**.

E 1749, E06

volatiles, n—materials readily vaporizable at relatively low temperatures.

D 123, D13

volatiles, n—materials readily vaporizable at relatively low temperatures.

D4920, D13

volatile solvent—a nonaqueous liquid that evaporates readily at room temperature and atmospheric pressure.

D 2825, D21

volatile thinner—see **thinner**.

D 16, D01

volatility—the capability of evaporating into a gas.

volute—See **railing systems**.

E 631, E06

volatility—the tendency of a solid or liquid material to pass into the vapor state at ordinary temperature.

E 1142, E37

volatility—the capability of evaporating into a gas.

E 1749, E06

volcanoes, n—printing imperfection resembling the crater of a volcano with a ring of heavy ink surrounding an area of no or very little ink.

D 6488, D01

voltage alignment—See **alignment**.

E 7, E04

voltage efficiency—the ratio, usually expressed as a percentage, of the equilibrium reaction potential in a given electrochemical process to the bath voltage.

B 374, B08

voltage, induced secondary, E_2 —the rms value of the open

circuit voltage induced in the secondary winding N_2 of an inductor as a result of cyclic variations of the flux linkages with N_1 .

A 340, A06

voltage, maximum retest—voltage, either ac rms or dc average, that is equal to the proof test voltage for new protective equipment.

F 819, F18

voltage, maximum use—the ac voltage (rms) classification of the protective equipment that designates the maximum nominal design voltage of the energized system that may be safely worked. The nominal design voltage is equal to phase-to-phase voltage on multiphase circuits.

NOTE—If there is no multiphase exposure in a system area, and the voltage exposure is limited to phase (polarity on dc systems) to ground potential, the phase (polarity on dc systems) to ground potential shall be considered to be the nominal design voltage.

NOTE—If electrical equipment and devices are insulated, or isolated, or both, such that the multiphase exposure on a grounded wye circuit is removed, then the nominal design voltage may be considered as the phase-to-ground voltage on that circuit.

F 819, F18

voltage, nominal design—a nominal value consistent with the latest revision of ANSI C84.1, assigned to the circuit or system for the purpose of conveniently designating its voltage class.

F 819, F18

voltage, retest—voltage, either ac rms or dc average, that used protective equipment must be capable of withstanding for a specific test period without breakdown.

F 819, F18

voltage threshold—a voltage level on an electronic comparator such that signals with amplitudes larger than this level will be recognized. The voltage threshold may be user adjustable, fixed, or automatic floating. (E 750)

E 1316, E07

volt-ampere, P_a —the unit of apparent power.

A 340, A06

volume concentration—See **concentration**.

D 1356, D22

volume concentration—the volume of the liquid or solid particles per unit volume of mixture.

G 40, G02

volume concentration—See **particle concentration**.

G 40, G02

volume count, n—the product of the area under a peak and a response factor.

D 4175, D02

volume density—See **concentration**.

D 1356, D22

volume percent solids, n—the portion of a coating that remains as part of the dry film expressed as percent by volume.

D 16, D01

volume resistivity—the resistance in ohms of a body of unit length and unit cross-sectional area.

B 354, B01

volume resistivity, n—of paper, the resistance to electric current along a current path between electrodes placed on opposite sides of a sheet of paper when a defined dc voltage is applied and the thickness of the paper between the electrodes is specified.

D 1968, D06

volume resistivity—the volume resistance (in ohm-centimetres) between opposite faces of a centimetre cube of the material. A practical relative value for paper is obtained by the measure of resistance to electrical current electrodes placed in contact with the opposing surfaces of the sample.

F 335, F05

volume resistivity, ρ_v —the volume resistivity of a material is the ratio of the potential gradient parallel to the current in the material to the current density.

D 5077, D10

volumetric flame spread, n—flame propagation through the volume of a gaseous mixture.

E 176, E05

volumetric glassware—See **graduated glassware**.

C 162, C14

volumetric heat capacity—the amount of heat required to raise the temperature of a unit volume of a substance by one degree.

D 7099, D18

volumetric latent heat of fusion—the amount of heat required to melt all of the ice (or to freeze all of the pore water) in a unit volume of soil or rock.

D 7099, D18

volumetric shrinkage (volumetric change), V_s (D)—the decrease in volume, expressed as a percentage of the soil mass when dried, of a soil mass when the water content is reduced from a given percentage to the shrinkage limit.

D 653, D18

volumetric (total) water content—the ratio of the volume of the water and ice in a sample to the volume of the whole sample, expressed either as a fraction or as a percentage.

D 7099, D18

volume-weight—See **specificweight**.

D 4410, D19

volute, n—an ornamental spiral or scroll-shaped form serving, for example, as the handrail termination.

E 631, E06

volute, n—an ornamental spiral or scroll-shaped form serving, for example, as the handrail termination.

E 1481, E06

Von Mises yield theory—stated ratio between shear and tension yield stresses for an isotropic, solid material. Theoretical yielding in shear is assumed to occur at a stress equal to 0.577 of the yield stress in tension.

E 631, E06

von Post humification scale—a scale describing various stages of decomposition of peat ranging from H1, which is completely undecomposed, to H10, which is completely decomposed.

D 653, D18

vortex loss—oil escaping past a boom due to drainage vortices produced at the boom.

F 818, F20

votive candle, n—a candle produced for use fully within a candle accessory, specifically, a votive holder.

F 1972, F15

votive holder, n—a small open vessel designed to hold a votive candle during use; the votive holder shall be capable of containing the melted candle.

F 1972, F15

“V” thread—thread with leading flank of one thread intersecting with following flank of adjacent thread at thread root.

F 547, F16

vulcanizate, n—the product of vulcanization, a crosslinked rubber.

D 1566, D11

vulcanization, n—an irreversible chemical reaction during which a rubber compound's chemical structure is changed to make it less plastic, more resistant to solvents, and have improved physical and mechanical properties.

C 717, C24

vulcanization, n—an irreversible process, usually accomplished through the application of heat, during which a rubber compound through a change in its chemical structure (for example, crosslinking) becomes less plastic and more resistant to swelling by organic liquids while elastic properties are conferred, improved, or extended over a greater range of temperatures.

D 123, D13

vulcanization, n—an irreversible process during which a rubber compound, through a change in its chemical structure (for example, cross-linking), becomes less plastic and more resistant to

swelling by organic liquids and elastic properties are conferred, improved, or extended over a greater range of temperature.

D 883, D20

vulcanization, *n*—an irreversible chemical change (for example, cross-linking) in which a rubber compound becomes less plastic with greater elasticity, strength, stability, and chemical resistance over a greater range of temperatures.

D 907, D14

vulcanization, *n*—an irreversible process during which a rubber compound, through a change in its chemical structure (for example, crosslinking), becomes less plastic and more resistant to swelling by organic liquids, while elastic properties are conferred, improved, or extended over a greater range of temperature.

D 1566, D11

vulcanization, *n*—an irreversible process, usually accomplished through the application of heat, during which a rubber compound, through a change in its chemical structure (for example, cross linking) becomes less plastic and more resistant to swelling by organic liquids while elastic properties are conferred, improved, or extended over a greater range of temperatures.

D 6477, D13

vulcanization, *n*—an irreversible process during which a rubber compound, through a change in its chemical structure (for example, cross-linking), becomes less plastic and more resistant to swelling by organic liquids and elastic properties are conferred, improved, or extended over a greater range of temperature. (D20)

F 412, F17

vulcanize, *v*—to subject to vulcanization.

D 907, D14

vulcanized vegetable oil, *n*—a compounding material made by heating unsaturated vegetable oil with cross-linking agents; it is used as a processing aid or extender.

D 1566, D11

vulcanizing agent, *n*—compounding material that produces crosslinking in rubber.

D 1566, D11

vulcanizing system, *n*—the combination of vulcanizing agent and, as required, accelerators, activators, and retarders used to produce the desired vulcanization characteristics or vulcanizate characteristics.

D 1566, D11

V-X diagram—a graphical representation of the isothermal or isobaric phase relationships in a binary system, the coordinates of the graph being specific volume and concentration.

E 7, E04

W

“W”—clean only with water-based shampoo or foam upholstery cleaner. Do not saturate with the liquid. Do not use dry solvents to spot or clean. Pile fabrics may require brushing to restore appearance. Cushion covers should not be removed and laundered.

D 5253, D13

“W”—a letter code. See **upholstery cleaning instructions**.

D 5253, D13

w—uniform load, lbf/in. (or N/mm)

E 631, E06

WAD—See **worst area difference**.

F 149, F05

wadding—See **cushioning material**.

D 996, D10

wafer—a wood flake having a predetermined length of at least $1\frac{3}{16}$ in. (30 mm).

D 1554, D07

wagon nail—annealed, barbed, regular-stock-steel nails with round, oval, cone, flat countersunk, or steeple head and medium diamond point.

F 547, F16

waist, n—*in anatomy*, the part of the body at the location between the lowest rib and hip identified by bending the body to the side.

D 123, D13

waist, n—the part of the body at the location between the lowest rib and hip identified by bending the body to the side.

D 5219, D13

waist—the smallest part of the foot between the instep and the ball, also the corresponding part of a shoe last.

F 869, F08

waist, n—*in anatomy*, the part of the body at the location between the lowest rib and hip identified by bending the body to the side.

F 1494, F23

waist, b_M —the narrowest point of the ski body between the heel and shoulder.

F 472, F27

waist girth, n—*in body measurements*, the circumference of the waist immediately below the lowest rib.

D 123, D13

waist girth, n—the minimum horizontal circumference around the body at waist height.

D 5219, D13

waist girth, n—*in body measurements*, the circumference of the waist immediately below the lowest rib.

F 1494, F23

waist height, n—the distance from the waist level to the hip girth level along the side of the body (contour) then vertically to the floor, taken with subject standing and without shoes.

waist height (infant special case), n—the straight distance from the waist level to the soles of the feet along the side of the body, taken with subject lying down flat with legs extended and foot positioned at 1.57 rad (90°) to the leg.

D 5219, D13

waist (of the snowboard)—the narrowest point of the snowboard body between the heel and the shoulder.

F 1107, F27

waist to hip height, n—the distance from the waist level to the hip girth level, taken along the side of the body (contour).

waist to hip height (infant special case), n—the straight distance from the waist level to the hip girth level, taken along the side of the body with subject lying down flat with legs extended.

D 5219, D13

waist to knee height, n—the vertical distance from the waist level to a point level with the midpoint of the back of the knee (or crease), taken along the side of the body.

waist to knee height (infant special case), n—the straight distance from the waist level to a point level with the midpoint of the back of the knee (or crease), taken along the side of the body with subject lying down flat with legs extended.

D 5219, D13

wale, n—*in knitted fabrics*, a column of successive loops in the length direction of the fabric.

D 123, D13

wale, n—*in woven fabrics*, one of a series of raised portions or ribs lying warpwise in the fabric.

D 123, D13

wale, n—*in woven fabric*, one of a series of raised portions or ribs lying warpwise in the fabric.

D 4850, D13

wale, n—*in knitted fabrics*, a column of successive loops in the length direction of the fabric.

D 4850, D13

wale, n—*in woven fabrics*, one of a series of raised portions or ribs lying warpwise in the fabric.

D 5684, D13

walk in—to embed insulation panels in hot bitumen or adhesive by walking on them immediately after application.

D 1079, D08

walking off, n—the disappearance or weakening of image parts on the printing plate during the press run.

D 6488, D01

walking stick—long arm attached to tool allowing operator to use it without bending over.

F 592, F16

walkway surface—a structure intended to be used by a person attempting to walk.

F 1646, F13

wall, n—a part of a **building** that divides spaces vertically.

bearing wall—a **wall** supporting a vertical load in addition to its own weight.

curtain wall—a **nonbearing** exterior **wall**, secured to and supported by the structural members of the **building**.

nonbearing wall—a **wall** that does not support a vertical load other than its own weight.

retaining wall—a **wall** not enclosing portions of a **building**, designed to resist the lateral displacement of soil or other material.

E 631, E06

wallaby—leather from skins of the wallaby, small and medium-sized kangaroo.

D 1517, D31

wall and top material, n—any pliable planar structure used as a nonbase surface in camping tentage including roofs, sides, windows, screens, doors, awnings, flies, and canopies.

D 123, D13

wallboard—see **gypsum wallboard**.

C 11, C11

wallboard nail—slender, colored (baked-lacquer finished), regular-stock-steel or hardened-steel, smooth or annularly threaded, $1\frac{1}{8}$ by 0.062 to 2 by 0.083-in. nails with slightly countersunk 0.109 to 0.181-in. head and medium diamond or long needle point.

F 547, F16

wall bracket—a bracket used for anchoring the central portion of a handrail to a wall.

E 631, E06

wall bracket—a bracket used for anchoring the central portion of a handrail to a wall.

E 1481, E06

wall clip—a bracket used for anchoring the end of a handrail to a wall. (Syn. *wall flange*.)

E 631, E06

wall clip—See **railing systems**.

E 631, E06

wall clip—a bracket used for anchoring the end of a handrail to a wall. (Syn. *wall flange*.)

E 1481, E06

wall covering, n—*for purposes of this practice*, a paper- or vinyl-based product designed to be attached to a wall surface for decorative or acoustical purposes.

E 176, E05

wallcovering, n—a fabric, vinyl, or paper-based product designed to be attached to a vertical wall surface for decorative or acoustical purposes.

E 176, E05

wallcovering composite, n—an assembly of a wallcovering, adhesive (if used), and substrate used as a vertical wall treatment for decorative or acoustical purposes.

E 176, E05

wall covering system, n—*for purposes of this practice*, an assembly of a paper wall covering or a vinyl wall covering, adhesive (if used), and substrate (if it is part of the assembly) used as a wall treatment for decorative or acoustical purposes.

E 176, E05

wall flange—Synonym for **wall clip**.

E 631, E06

wall flange—See **railing systems**.

E 631, E06

wall flange—Synonym for **wall clip**.

E 1481, E06

wall friction, f' (FL^{-2})—frictional resistance mobilized between a wall and the soil or rock in contact with the wall.

D 653, D18

wall handrail—See **railing systems**.

E 631, E06

wall handrail—a handrail attached to a wall or other building element adjacent to a stair and along landings, walkways, ramps, and corridors. (Syn. *wall rail*.)

wall rail—Synonym for **wall handrail**.

E 631, E06

wall handrail—a handrail attached to a wall or other building element adjacent to a stair and along landings, walkways, ramps, and corridors. (Syn. *wall rail*.)

E 1481, E06

wall-mounted canopy—used for all types of cooking equipment located against a wall. See *canopy*. F 1827, F26

Wallner line—a fracture surface marking, having a wavelike profile in the fracture surface. Such marks frequently appear as a series of curved lines, indicating the direction of propagation of the fracture from the concave to the convex side of a given wallner line. Also known as ripple mark. C 162, C14

wall (pipe)—the structural element composed of concrete or concrete and steel between the inside and outside surfaces of a concrete pipe. C 822, C13

wall rail—Synonym for **wall handrail**. E 1481, E06

wall railing return—a bend at the end of a wall handrail, turning toward the wall to which the handrail is attached. E 631, E06

wall railing return—a bend at the end of a wall handrail, turning toward the wall to which the handrail is attached. E 1481, E06

walls—exterior vertical sides of vitrified clay filter block. C 896, C04

walls, veneered—See *veneer*. C 119, C18

wall yield locus—a plot of the wall shear stress versus wall normal stress. The angle of wall friction is obtained from the wall yield locus as the arctan of the ratio of the wall shear stress to wall normal stress. D 653, D18

walrus—leather from the hides of walrus. Walrus hide is very thick, and is used for buffing wheels. When split, it is used for bag leather. Split walrus and seal leather are practically indistinguishable, and “walrus leather” in the traveling-goods industry is used to refer to sealskin leather on which a simulated walrus grain is embossed. D 1517, D31

wand scanner—a hand-held optical scanner used in applications where it's impractical to transport data past a fixed read head. F 149, F05

wand scanner, n—a hand-held device used as a contact bar code or OCR reader. F 1294, F05

wane—bark or lack of wood from any cause on edge or corner of a piece. D 9, D07

warm heading or working—forming method in which material is heated to a given temperature to improve formability before heading. The temperature used is below the recrystallization point or transformation temperature of the metal being formed. F 1789, F16

warming-in—reheating glass to permit further working, also for striking. C 162, C14

warm, moist climate—subtropical climate distinguished as warm and humid year round, with frequent rain showers. G 113, G03

warm-setting adhesive, n—Synonym for **intermediate-temperature-setting adhesive**. D 907, D14

warm spring, n—thermal spring whose temperature is appreciably above the local mean annual temperature but below that of the human body. E 957, E44

warm-up (rubber processing), n—the reduction in viscosity of a rubber or rubber mix, by mechanical work and heat to render it suitable for further processing. D 1566, D11

warp—any variation from a true or plane surface. Warp includes **bow, crook, cup,** and **twist,** or any combination thereof. D 9, D07

warp, n—(1) the yarn running lengthwise in a woven fabric (2) a group of yarns in long lengths and approximately parallel, put on beams or warp reels for further textile processing including weaving, knitting, twisting, dyeing, etc. D 123, D13

warp, n—a significant variation from the original true, or plane surface. D 907, D14

warp, n—(1) the yarn running lengthwise in a woven fabric; (2) a group of yarns in long lengths and approximately parallel, put on beams or warp reels for further textile processing including weaving, knitting, twisting, dyeing, and so forth. D 3878, D30

warp, n—the yarn running lengthwise in a woven fabric. D 4439, D35

warp, n—(1) the yarn running lengthwise in a woven fabric; (2) a group of yarns in long lengths and approximately parallel, put on

beams or warp reels for further textile processing including weaving, knitting, twisting, dyeing, and so forth. D 4850, D13

warpage, n—distortion that may occur in a compact during sintering. B 243, B09

warpage—curvature of a flat specimen measured as deviation of the specimen surface from a true plane along the edges or the diagonals and at the mid-length of an edge or diagonal, expressed as a percent of the length of the edge or diagonal, and called convex or concave with respect to the face of the specimen. C 242, C21

warpage, n—distortion caused by nonuniform change of internal stresses. (See also **dome**.) D 883, D20

warp bands—See **section marks**. D 3990, D13

warp elongation and tension, n—stretch or tension measured in the warp direction of the fabric. D 123, D13

warp elongation and tension, n—stretch or tension measured in the warp direction of the fabric. D 4850, D13

warp-faced twill, n—a twill weave in which the warp yarns produce the diagonal effect. (See also **twill weave** and **filling faced twill**.) D 123, D13

warp-faced twill, n—a weave in which warp yarns float over filling yarns, to produce a diagonal effect in the resulting fabric. (See also **twill weave** and **filling-faced twill**.) D 4850, D13

warp-faced twill, n—a weave in which warp yarns float over filling yarns, to produce a diagonal effect in the resulting fabric. (See also **twill weave** and **filling-faced twill**.) D 4850, D13

warping, n—change or deformation in the original flatness of an asbestos-cement product. C 1154, C17

warping—deformation in the original flatness of an asbestos-cement flat product. D 2946, C17

warp nested, adj—laid up so that warp plies alternate in the pattern: warp surface up, warp surface down. D 3878, D30

warp streak, n—*in woven fabric*, a narrow band running lengthwise and characterized by apparent differences in color from adjoining ends. D 123, D13

warp streak, n—*in woven fabric*, a narrow band running lengthwise and characterized by apparent differences in color from adjoining ends. (Compare **barré**.) D 3990, D13

warp surface, n—the ply surface that shows the larger area of warp tows with respect to fill tows. D 3878, D30

warp test—see Test Method C 314. C 286, B08

warp tests, n—*infabric testing*, tests in which the warp yarns are torn. D 123, D13

warp tests, n—*infabric testing*, tests in which the warp yarns are torn. D 4850, D13

warp-to-filling seam, n—a sewn seam in which the warp yarns are perpendicular to the sewn seam on one side of the seam and parallel to the seam on the opposite side of that seam. D 123, D13

warp-to-filling seam, n—a sewn seam in which the warp yarns are perpendicular to the sewn seam on one side of the seam and parallel to the seam on the opposite side of that seam. D 4850, D13

warp-to-warp seam, n—a sewn seam in which the yarns in the warp direction on both sides of the seam are perpendicular to the seam. D 123, D13

warp-to-warp seam, n—a sewn seam in which the yarns in the warp direction on both sides of the seam are perpendicular to the seam. D 4850, D13

wash—same as **rinse**. E 1316, E07

washability analysis of coal, n—the analysis of the specific gravity distribution of chemical and physical characteristics of coal. D 121, D05

washable (as applied to a garment)—a term applied to a garment that will be restored to wearability (Discussion 1) by laundering according to an acceptable (Discussion 2) procedure in the absence of irreparable damage. D 459, D12

wash-and-wear, adj—a generic term applied to fabrics or garments

wash-and-wear, adj

which satisfactorily retain a neat appearance after repeated wearing and suitable home laundering with little or no pressing or ironing. (Compare **durable-press**.) **D 123, D13**

wash-and-wear, adj—a generic term applied to fabrics or garments which satisfactorily retain a neat appearance after repeated wearing and suitable home laundering with little or no pressing or ironing. (Compare **durable-press**.) **D 4850, D13**

washboard—an imperfection; ripples, waves, etc., on the surface of glassware. **C 162, C14**

washboard, n—*inhosiery*, a ridgy effect caused by uneven tension between feeds on the knitting machine. **D 123, D13**

washboard, n—*inhosiery*, a ridgy effect caused by uneven tension between feeds on the knitting machine. **D 3990, D13**

washed out solid, n—a decrease in the density of solids caused by ink taking on an excessive amount of water or by the insufficient transfer of ink. **D 6488, D01**

washer head—head with washer-like flange to serve as bearing surface for head. (See **nub head**.) **F 547, F16**

washer-retainer crack—opening in the lip or hub of metal used to retain a washer on a nut. **F 1789, F16**

washer-spacer—a component located between the tumblers and intended to prevent the transfer of movement by friction between adjacent tumblers. **F 471, F12**

washer-tension—a component used to apply tension to the tumbler pack. **F 471, F12**

washer wrinkles—See **crow'sfeet**. **D 3990, D13**

washing—*in grouting*, the physical act of cleaning the sides of a hole by circulating water, water and air, acid washes, or chemical substances through drill rods or tremie pipe in an open hole. **D 653, D18**

washing period—the period of time from the beginning of the dishwasher's wash cycle until the end of the final rinse. **F 1827, F26**

wash load—the portion of the stream sediment load composed of particles, usually finer than 0.062 mm in diameter which are found only in relatively small quantities in the bed. **D 4410, D19**

wash, v or n—a cleaning process carried out in an aqueous medium. **D 459, D12**

washout nozzle—a tubular extension with a check valve utilized at the end of a string of casing through which water can be injected to displace drilling fluids and cuttings from the annular space of a borehole. **D 653, D18**

waste, n—a material that is unwanted at its present location; that is no longer useful for its original purpose; that has been disposed, or any combination thereof. **D 5681, D34**

waste, n—for waste sampling of building materials, material resulting from a demolition, renovation, or lead hazard control project that is or will be directed for disposal. **E 1605, E06**

waste component—a category of solid waste, composed of materials of similar physical properties and chemical composition, which is used to define the composition of solid waste, for example, ferrous, glass, newsprint, yard waste, aluminum, etc. **D 5681, D34**

waste composition, n—of a solid waste, characterization of multi-constituent waste by a breakdown into specified waste components on the basis of mass or volume fraction or percentage. (*Syn. solid waste composition*.) **D 5681, D34**

waste hopper—(also known as waste toner bin), an area of a cartridge that receives the waste toner removed from the photoreceptor by the cleaner blade. **F 335, F05**

waste oil, n—*in petroleum technology*, oil having characteristics making it unsuitable either for further use or for economic recycling. **D 4175, D02**

waste rock, n—rock produced by excavation from open pit or underground mining operations whose economic mineral content is less than a specified economic cutoff value. **D 5681, D34**

waste stream, n—the total flow of waste from a demolition, renovation, or lead abatement project. **E 1605, E06**

waste tire, n—a tire which is no longer capable of being used for its

original purpose but which has been disposed of in such a manner that it cannot be used for any other purpose. **D 5681, D34**

waste tire, n—a tire that is no longer capable of being used for its original purpose, but has been disposed of in such a manner that it can not be used for any other purpose. **D 5681, D34**

waste toner bin—a compartment or container on the cartridge which receives the waste toner removed by the cleaner blades from the photoreceptor or OPC by the wiper blades. (Test Method F 1531-94) **F 335, F05**

waste water, n—water discharged from a process as a result of its formation or use in that process. **D 1129, D19**

wastewater—water that (1) is or has been used in an industrial or manufacturing process, (2) conveys or has conveyed sewage, or (3) is directly related to manufacturing, processing, or raw materials storage areas at an industrial plant. Wastewater does not include water originating on or passing through or adjacent to a site, such as stormwater flows, that has not been used in industrial or manufacturing processes, has not been combined with sewage, or is not directly related to manufacturing, processing, or raw materials storage areas at an industrial plant. **D 5681, D34**

water, n—the chemical compound H₂O. **D 123, D13**

water, n—the chemical compound, H₂O. (*Syn. moisture*.) **D4920, D13**

water absorption, n—the amount of water absorbed by a material under specified test conditions commonly expressed as weight percent of the test specimen. **C 11, C11**

water absorption, n—the amount of water absorbed by a material under specified test conditions. **D 1566, D11**

water absorption—increase in mass of a product during immersion in water under specified conditions of duration and temperature, expressed as a percent of its dry mass. **D 2946, C17**

water accommodated fraction (WAF), n—the predominately aqueous portion of a mixture of water and a poorly water-soluble material which separates in a specified period of time after the mixture has undergone a specified degree of mixing and includes water, dissolved components, and dispersed droplets of the poorly water soluble material. **D 4175, D02**

water accommodated fraction (WAF), n—the predominantly aqueous portion of a mixture of water and a material poorly soluble in water which separates in a specified period of time after the mixture has undergone a specified degree of mixing and which includes water, dissolved components, and dispersed droplets of the poorly water soluble material. **D 6384, D02**

water-based coating, n—deprecated term. Use the preferred term, waterborne coating. **D 16, D01**

water beading—surface property that causes the formation of discrete water droplets on the polished surface. **D 2825, D21**

waterbody encircling a palsa—a water-filled depression surrounding a palsa. **D 7099, D18**

water boil efficiency—the energy (latent heat of vaporization) required to boil water from the cooking medium (see **cooking medium**), expressed as a percentage of the quantity of energy input to the equipment during the boil-off period, η *water boil*.

$$\eta_{\text{waterboil}}(\%) = \frac{W \times E_{\text{vap}} \times 100}{E_{\text{input}}}$$

where:

W = weight loss of water, lb (g),

E_{vap} = heat of vaporization of water, Btu/lb (J/kg),

= 970 Btu/lb (2256 kJ/kg) at standard pressure (29.921 in. Hg), and

E_{input} = energy consumed by the equipment, Btu.

F 1827, F26

waterborne coating, n—a coating in which the principal volatile constituent is water. See also **water-reducible coating**. **D 16, D01**

water break—the appearance of a discontinuous film of water on a surface signifying nonuniform wetting and usually associated with a surface contamination. **B 374, B08**

water-break—failure of water to maintain a continuous film on metallic, vitreous, or similar surfaces on withdrawing from clean water. **D 459, D12**

water break test—a quality control test of conditioned water. **E 1316, E07**

water-cementitious material ratio, n—the ratio of the mass of water, exclusive only of that absorbed by the aggregates, to the mass of cementitious material (*hydraulic*) in concrete, mortar, or grout, stated as a decimal (see also **water-cement ratio**). **C 125, C09**

water-cement ratio, n—the ratio of the mass of water, exclusive only of that absorbed by the aggregates, to the mass of portland cement in concrete, mortar, or grout, stated as a decimal. **C 125, C09**

water-cement ratio—the ratio of the weight of water to the weights of Portland cement in a cement grout or concrete mix. See also **grout mix**. **D 653, D18**

water conditioning agent—a material the reduces eliminates the antagonism between a pesticide formulation and ions present in the water that is utilized in a pesticide application. **E 1519, E35**

water consumption—the total amount of water consumed by the equipment during an event such as cooling water for condensing, cooking, or preheating. **F 1827, F26**

water content, n—the water content of a substance, as measured under specified conditions. (*Compilation of ASTM Standard Definitions*, 7th Edition.) **D 2864, D27**

water content, unfrozen—see **unfrozen water content**. **D 7099, D18**

water content, w (D)—the ratio of the mass of water contained in the pore spaces of soil or rock material, to the solid mass of particles in that material, expressed as a percentage. **D 653, D18**

water dam—synonymous with **water gate**. **C 162, C14**

water depth-nominal, n—the nominal thickness of the water layer, that is, the volume of water divided by the area of the wetted pavement surface. **E 867, E17**

water depth-positive, n—the distance from the water surface to the reference plane which is the top of the pavement asperities. **E 867, E17**

water dew point—(see **dew point**) **D 4150, D03**

water discharge—the quantity of water passing a stream cross section per unit of time. **D 4410, D19**

water-emulsion floor polish—an emulsion-based floor polish in which water is the continuous or external phase and falling into two categories:

(1) **polymer-emulsion floor polish**—a water-emulsion floor polish containing a predominance of synthetic emulsion polymers.

(2) **wax-emulsion floor polish**—a water-emulsion floor polish containing a predominance of natural or synthetic waxes, or both. **D 2825, D21**

water equivalent, n—Synonym for **energy equivalent**. **D 121, D05**

water-extractable material—substances dissolved from other substances by water under specified conditions. **D 2652, D28**

water filtration vacuum cleaner, n—a system or device that removes foreign material from surfaces by means of the air flow caused by subatmospheric pressure, having an intake intended to be moved in proximity to the surface, and a water reservoir which separates and collects the material from the air. The inlet may be fixed or attached to other equipment. It also may be designed for liquid pick up. **F 395, F11**

water finish, n—compact glossy finish produced on one or both surfaces of a paper or paper-board by wetting with water as the sheet is being calendered. **D 1711, D09**

water-formed deposits, n—any accumulation of insoluble material derived from water or formed by the reaction of water upon the surfaces in contact with the water. **D 1129, D19**

waterfowl feathers, n—feathers from ducks or geese, or both. **D 123, D13**

waterfowl feathers, n—feathers from ducks or geese, or both. **D 7022, D13**

water gain—see **bleeding**. **D 653, D18**

water-gate—See gate. Also known as a water-dam. **C 162, C14**

water glass—sodium silicate glass that is readily soluble in water. **C 162, C14**

water-hardened—quenched in water after heating to critical temperature. **F 547, F16**

water hardness—a term used to describe a quality of water arising from the presence of dissolved mineral salts, usually calcium (Ca) and magnesium (Mg) and sometimes iron and manganese. The degree of hardness is calculated in grains of calcium carbonate (CaCO₃) per gallon (gpg) or parts per million (ppm), sometimes expressed as milligrams per litre (mg/L). One grain per gpg of CaCO₃ equals 17.1 ppm or mg/L. The calcium/magnesium ratio of the hardness minerals is also expressed as calcium carbonate. Water essentially free of calcium and magnesium is described as soft; if appreciable amounts of both minerals are present, it is called hard. In the United States the categories of hardness, as defined by the U.S. Geological Survey, and the Ca/Mg ratio, are:

	Soft	Moderately Hard	Hard	Very Hard
Grains per gallon	0.0–3.5	3.6–7.0	7.1–10.5	10.6*
Parts per million or milligrams per litre	0.0–60	61–120	121–180	over 180
Ca/Mg ratio ^A	4:1	3:1	2:1	

^A Calculated from data in “Public Water Supplies of the 100 Largest Cities in the United States, 1962.”¹

See discussions in Test Method D 2960, Guide D 4265, and Guide D 5548. **D 459, D12**

water-holding capacity (D)—the smallest value to which the water content of a soil or rock can be reduced by gravity drainage. **D 653, D18**

water jet—a roughly textured surface produced by exposure to a high-pressure stream of water. **C 119, C18**

water jet barrier—barrier created by stream of pressurized water spray directed across the water surface. **F 818, F20**

water leakage—penetration of water onto the exterior plane of framing or cavity insulation under specified conditions of air pressure difference across the AR during a test period. **E 631, E06**

water mark, water spot—an appearance defect characterized by a depressed spot. **C 286, B08**

water migration resistance—the ability of either facing or core materials to prevent migration of water in sandwich panels.

wall rail—See **railing systems**.

wall railing return—See **railing systems**. **E 631, E06**

water migration resistance—the ability of either facing or core materials to prevent migration of water in sandwich panels. **E 1749, E06**

water of hydration or combined water—that water in a material that cannot be removed by drying at 110°C, as it is chemically bound, expressed as a percent of the weight of the material. **C 242, C21**

water paint—under **paint**, see **water paint**. **D 16, D01**

water path—the distance from the transducer to the test surface in immersion or water column testing. **E 1316, E07**

water-plasticity ratio (relative water content) (liquidity index)—see **liquidity index**. **D 653, D18**

water pollution—the harmful or objectionable material introduced into water in sufficient quantities to adversely affect its usefulness. **D 4410, D19**

waterpress—a device that de-waters the slurry generated in the pulper by use of a tapered compression cone and perforated screen, then discharges the pulp down a chute to a waste container. Water removed during this process is recirculated to the *pulper* tank in order to conserve fresh water use. **F 1827, F26**

waterproof, adj—deprecated term. **D 996, D10**

waterproof—as applied to plywood, the term is synonymous with **exterior type plywood**. **D 1038, D07**

waterproofing, n—in building construction, treatment of a surface or

waterproofing, *n*

structure to prevent the passage of liquid water under hydrostatic, dynamic, or static pressure. **C 717, C24**

waterproofing—treatment of a surface or structure to prevent the passage of water under hydrostatic pressure. **D 1079, D08**

waterproofness (coated fabric), *n*—the property of impenetrability by liquid water. **D 1566, D11**

water quality indicator parameters—refer to field monitoring parameters that include but are not limited to pH, specific conductance, dissolved oxygen, oxidation-reduction potential, temperature, and turbidity that are used to monitor the completeness of purging. **D 5681, D34**

water-reducible coating, *n*—a coating that can be reduced in viscosity by the addition of water. **D 16, D01**

water-repellant, *n*—a material or treatment for surfaces to provide resistance to penetration by water. **E 631, E06**

water repellent substances—materials such as waxes, soaps, or silicones that render the surface of shingles more water repellent. **D 2946, C17**

water repellent system, *n*—an exterior coating system for above grade concrete or masonry which temporarily repels water but which is not intended to prevent the passage of moisture under hydrostatic pressure.

(1) *film forming type*—latex or oil based paints or similar materials that may require repair or renewal because of climatic action;

(2) *pore penetrating type*—types that fill or coat the interior of the surface pores of concrete or masonry and are temporarily retained in these surface pores thus providing water repelling action; periodic repair or renewal may be required because of climatic action. **D 1079, D08**

water repellency (coated fabric), *n*—the property of being resistant to wetting by liquid water. **D 1566, D11**

water repellent, *n*—admixture incorporated into a masonry mortar to decrease the rate of water absorption of the hardened mortar. **C 1180, C12**

water-repellent leather—a leather that has been treated with any of a variety of chemicals to reduce the ability of water to spread on or wet the surface. Treatments can be for grain or suede leathers. **D 1517, D31**

water-repellent paper, *n*—gypsum board paper surfacing which has been formulated or treated to resist water penetration. **C 11, C11**

water-repellent substances, *n*—*in shingles*, materials such as waxes, soaps, or silicones which render the surface of shingles more water repellent. **C 1154, C17**

water-resistance, *n*—measured ability to retard both penetration and wetting by water in liquid form. **D 996, D10**

water resistance—the capability of a material or system to retard water leakage.

water vapor barrier—Use **water-vapor retarder**, the preferred term. **E 631, E06**

water resistance—ability of the image to resist deformation or change in color with immersion in water. **F 221, F05**

water resistance, *n* (also called water fastness)—ability of an image to resist water damage. **F 1857, F05**

water resistance (coated fabric), *n*—the property of retarding both penetration and wetting by liquid water. **D 1566, D11**

water resistant—a term frequently applied to plywood that is capable of withstanding limited exposure to water or to severe conditions without failure in the glue bonds. **D 1038, D07**

water-resistant barrier—See **barrier material**. **D 996, D10**

water-resistant core, *n*—a gypsum board specially formulated to resist water penetration. **C 11, C11**

water-resistant leather—a term formerly applied to leather heavily stuffed with oils, greases, and waxes, used primarily in work shoes and boots. Currently, the term may also, and more commonly, include upper leathers treated with any of a variety of chemicals to reduce the penetration or absorption of liquid water as measured in D 2098, Test for Dynamic Water Resistance of Shoe Upper Leather

by the Dow Corning Leather Tester, or D 2099, Test for Dynamic Water Resistance of Shoe Upper Leather by the Maeser Water Penetration Tester. **D 1517, D31**

water retained, *n*—*in textiles*, the amount of water absorbed by the fibers, adsorbed on the surface of the fibers, and held within the voids of the fabric after immersion, measured under specified conditions. **D 123, D13**

water retained, *n*—*in textiles*, the amount of water absorbed by the fibers, adsorbed on the surface of the fibers, and held within the voids of the fabric after immersion, measured under specified conditions. **D 4845, D13**

water retention, *n*—the moisture remaining in and on a material after a specified mechanical treatment. **D 123, D13**

water retention, *n*—the moisture remaining in and on a material after a specified mechanical treatment. **D 4849, D13**

water service—the pipe from the water main or other source of water supply to the building or other point of use or distribution. **F 412, F17**

watershed—all lands enclosed by a continuous hydrologic-surface drainage divide and lying upslope from a specified point on a stream. **D 4410, D19**

water softener—a vessel having a cation resin in the sodium form that removes cations such as calcium and magnesium from water and releases another ion such as sodium. The resin is usually regenerated. See **softener**. **D 6161, D19**

water solubility—the amount of material that is miscible or will dissolve in water at a given temperature. **D 4790, D16**

water soluble fraction (WSF), *n*—the filtrate or centrifugate of the water accommodated fraction which includes all parts of the WAF, except the dispersed droplets of the poorly soluble material. **D 4175, D02**

water soluble fraction (WSF), *n*—the filtrate or centrifugate of the water accommodated fraction which includes all parts of the WAF except the dispersed droplets of the poorly soluble material. **D 6384, D02**

water spotting—change in appearance of surface resulting solely from the action of cool water. **D 2825, D21**

water streak—a defect occurring in the bisque characterized by a washed-out pattern in the form of a streak. **C 286, B08**

water table—see **free water elevation**. **D 653, D18**

water table aquifer, *n*—see preferred term **unconfined aquifer**. **D 653, D18**

water table (ground-water table)—the surface of a ground-water body at which the water pressure equals atmospheric pressure. Earth material below the ground-water table is saturated with water. **D 653, D18**

watertight—will restrain the passage of water to not exceed a specified limit. **C 822, C13**

water tolerance—the amount of water that a penetrant or emulsifier can absorb before its effectiveness is impaired. **E 1316, E07**

water vapor diffusion, *n*—the process by which water vapor spreads or moves through permeable materials caused by a difference in water vapor pressure. **C 168, C16**

water vapor diffusion—the process by which water vapor spreads or moves through permeable materials caused by a difference in water vapor pressure. **E 631, E06**

water vapor permeability, *n*—the time rate of water vapor transmission through unit area of flat material of unit thickness induced by unit vapor pressure difference between two specific surfaces, under specified temperature and humidity conditions. **C 168, C16**

water vapor permeability—the rate of water vapor transmission per unit of thickness and per unit of vapor pressure differential. Test conditions must be specified. **D 1695, D01**

water vapor permeance, *n*—the time rate of water vapor transmission through unit area of flat material or construction induced by unit vapor pressure difference between two specific surfaces, under specified temperature and humidity conditions. **C 168, C16**

water-vapor permeance—time rate of water-vapor transmission through unit area of a flat material or construction induced by unit vapor-pressure difference between two specified surfaces, under specified temperature and humidity conditions. See **perm.**

E 631, E06

water vapor permeance (WVP), n —the steady state rate of water vapor movement through a free film induced by a vapor pressure difference (Δp) of one unit between the two surfaces of the film, where Δp is expressed in inches or millimetres of mercury. Thus: $WVP = WVT/\Delta p$. See **WVT**.

D 16, D01

water vapor pressure, n —the pressure of water vapor at a given temperature; also the component of atmospheric pressure contributed by the presence of water vapor.

C 168, C16

water vapor pressure, n —the pressure of water vapor at a given temperature.

C 1145, C28

water vapor resistance, n —the steady vapor pressure difference that induces unit time rate of vapor flow through unit area of a flat material (or construction that acts like a homogeneous body) for specific conditions of temperature and relative humidity at each surface.

C 168, C16

water-vapor-resistance—measured ability to retard penetration and permeation by water-vapor.

D 996, D10

water-vapor-resistant barrier—See **barrier material**.

D 996, D10

water vapor resistivity, n —the steady vapor pressure difference that induces unit time rate of vapor flow through unit area and unit thickness of a flat material (or construction that acts like a homogeneous body), for specific conditions of temperature and relative humidity at each surface.

C 168, C16

water-vapor retarder, n —material or system that impedes the transmission of water vapor under specified conditions.

E 631, E06

water vapor retarder (barrier), n —a material or system that adequately impedes the transmission of water vapor under specified conditions.

C 168, C16

water vapor transmission rate, n —the steady water vapor flow in unit time through unit area of a body, normal to specific parallel surfaces, under specific conditions of temperature and humidity at each surface.

C 168, C16

water vapor transmission (WVT), n —the rate of water vapor flow, under steady specified conditions, through a unit area of a material, between its two parallel surfaces and normal to the surfaces. Metric unit of measurement is 1 g/24 h·m². See **permeability, permeance, perm.**

C 11, C11

water vapor transmission (WVT) rate, n —the steady state rate of water vapor movement through a free film under specific conditions of temperature and humidity at each surface; customarily expressed in grains per square foot per hour (gr/ft²·h) or grams per square metre per day (g/m²·d).

D 16, D01

watt, W—the unit of active power. One watt is energy, work, or quantity of heat expended at a rate of one joule per second.

A 340, A06

wave—an optical effect due to uneven glass distribution or to striae.

C 162, C14

wave—disturbance propagated in medium in such a manner that at any point in medium the amplitude is a function of time, while at any instant the displacement at point is function of position of point.

D 653, D18

wave form—the shape of the peak-to-peak variation of a controlled mechanical test variable (for example, load, strain, displacement) as a function of time.

E 1823, E08

wave front—moving surface in a medium at which a propagated disturbance first occurs.

D 653, D18

wave front—(1) a continuous surface over which the phase of a wave that progresses in three dimensions is constant, or (2) a continuous line along which the phase of a surface wave is constant. (ISRM)

D 653, D18

wave front—a continuous surface drawn through the most forward points in a wave disturbance which have the same phase.

E 1316, E07

waveguide, acoustic emission—a device that couples elastic energy from a structure or other test object to a remotely mounted sensor during AE monitoring. An example of an acoustic emission waveguide would be a solid wire of rod that is coupled at one end to a monitored structure, and to a sensor at the other end.

E 1316, E07

wave length—normal distance between two wave fronts with periodic characteristics in which amplitudes have phase difference of one complete cycle.

D 653, D18

wavelength, λ —the distance, measured along the line of propagation, between two points that are in phase on adjacent waves.

E 131, E13

wavelength, λ, n —of an electromagnetic wave, the distance in the direction of propagation between nearest points at which the electric vector has the same phase. (See also **complementary wavelength, dominant wavelength**.)

E 284, E12

wavelength, n —distance in the direction of propagation of a periodic wave between two successive points at which the phase is the same (at the same time).

NOTE—The wavelength in a medium is equal to the wavelength in vacuo divided by the refractive index of the medium. Unless otherwise stated, values of wavelength are generally those in air. The refractive index of standard air (15°C, 101.325 N·m⁻²) lies between 1.000 27 and 1.000 29 for visible radiations.

VACUUM TERMS

NOTE—Vacuum terms are now being compiled. Test Method E 294, Test Method E 295, Practice E 296, and Method E 297 contain some approved terms. The Glossary of Terms Used in Vacuum Technology, published by The American Vacuum Society, is also being used where applicable.

E 349, E21

wavelength (X-rays)—the minimum distance between points at which the electric vector of an electromagnetic wave has the same value, measured along the direction of propagation of the wave. It is equal to the velocity divided by the frequency. (See also **electron wavelength**.)

E 7, E04

wavenumber, $\bar{\nu}$ —the number of waves per unit length.

E 131, E13

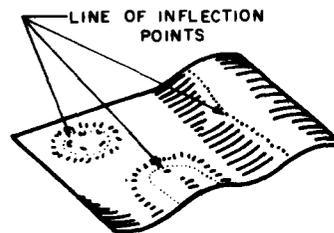
wave number, n —the inverse of wavelength.

E 867, E17

wave train—a succession of ultrasonic waves arising from the same source, having the same characteristics, and propagating along the same path.

E 1316, E07

waviness—a long-order departure from flatness as opposed to sharp discontinuities. Amplitude is in excess of specified surface finish. In general, waviness will exhibit a number of inflection points that, if connected, would form a line whose path may be open or closed (Syn. *warp*).



F 109, C21

wavy cloth, n —a cloth that will not lie flat on a cutting table. (Compare **tight pick**.)

D 123, D13

wavy cloth, n —a cloth that will not lie flat on a cutting table. (Syn. **baggy cloth**) (Compare **tight pick**)

D 3990, D13

wavy dressing—more pronounced imprints or markings made by machine knives in dressing than specified for knife marks.

D 9, D07

wavy edges (waves—edge wave)—a continuous pattern of waves or wrinkles along the edges of the strip, with a relatively flat center portion.

B 846, B05

wavy face, n

wavy face, n—a surface condition characterized by a considerable variation in yarn diameter. **D 123, D13**

wavy face, n—a surface condition characterized by a considerable variation in yarn diameter **D 3990, D13**

wavy selvage—See **slack selvage**. **D 3990, D13**

wax, n—a solid or semi-solid material consisting of a mixture of hydrocarbons or hydrocarbon derivatives, or both. **F 1972, F15**

wax appearance point—the temperature at which wax or other solid substances first begin to separate from the liquid oil when it is cooled under prescribed conditions (Refer to D 3117). **D 2864, D27**

wax blocking point, n—the lowest temperature at which film disruption occurs across 50 % of the waxed paper surface when the test strips are separated. **D 4175, D02**

wax candle, n—a candle that contains animal wax, insect wax, petroleum wax, synthetic wax, or vegetable wax as the primary fuel. **F 1972, F15**

wax content of insulating oil—the amount of solid material that separates from a mixture of liquid oil and a suitable wax antisolvent (methyl ethyl ketone, sec-butyl acetate, etc.) under prescribed test conditions. **D 2864, D27**

waxing—the practice of filling minor surface voids in stone with certain polyester compounds, cabinetmaker's wax, or melted shellac. (It does not refer to the application of paste wax to make the surface shinier.) **C 119, C18**

wax loading, n—the weight of wax present primarily as a surface film but including the minor part embedded in the surface fibers of corrugated board. It is expressed as weight per unit area, usually in grams per square metre or pounds per thousand square feet of board. **D 4175, D02**

wax picking point, n—the temperature at which the first film disruption occurs on the waxed paper when test strips are separated. **D 4175, D02**

W-board—See **corrugated fiberboard**. **D 996, D10**

"W" configuration (aka "3" configuration)—boom positioned in a "W" shape. **F 818, F20**

wear-galvanized—See **hot-galvanized**. **F 547, F16**

wear—the removal of material or impairment of surface finish through friction or impact. **C 119, C18**

wear—attrition of polish film resulting from normal use. **D 2825, D21**

wear, n—damage to a solid surface, generally involving progressive loss of material, due to relative motion between that surface and a contacting substance or substances. **D 4175, D02**

wear, n—the loss of material from, or relocation of material on, a surface. **D 4175, D02**

wear, n—the loss of material from two or more surfaces in relative motion. **D 4175, D02**

wear, n—the removal of metal from a rubbing surface by mechanical action, or by a combination of mechanical and chemical actions. **D 4175, D02**

wear, n—the removal of metal from the test pieces by a mechanical or chemical action, or by a combination of mechanical and chemical actions. **D 4175, D02**

wear, n—the accumulative and integrative action of all the deleterious mechanical influences encountered in use which tend to impair a material's serviceability. Such influences include, but are not limited to abrasion, scratching, gouging and scuffing. **F 141, F06**

wear, n—damage to a solid surface, usually involving progressive loss or displacement of material, due to relative motion between that surface and a contacting substance or substances. **G 40, G02**

wear coefficient, n—*in tribology*, a wear parameter that relates sliding wear measurements to tribosystem parameters. Most commonly, but not invariably, it is defined as the dimensionless coefficient *k* in the equation

$$\text{wear volume} = k \left(\frac{\text{load} \times \text{sliding distance}}{\text{hardness of the softer material}} \right)$$

See also **wear factor**.

G 40, G02

wear factor, n—*in tribology*, a wear parameter that relates sliding wear measurements to operating parameters. Most commonly, but not invariably, it is defined as the total wear volume divided by the normal force or load and also divided by the sliding distance; therefore, this term should always be fully defined in context. **G 40, G02**

wear in, v—See **run in**. **G 40, G02**

wear in, n—See **run in**. **G 40, G02**

wearing surface—See **trafficsurface**. **C 717, C24**

wearlayer, n—the portion of a resilient floor covering that contains or protects the pattern and design exclusive of temporary finishes or maintenance coatings. **F 141, F06**

wear level, n—the number of wear refurbishing cycles to which an item has been subjected. **D 123, D13**

wear map, n—a calculated or experimentally determined diagram that identifies regions within each of which the wear mechanism or wear rate remains substantially the same, the regions being separated by transition lines or bands that are functions of two or more parameters. **G 40, G02**

wear mechanism map, n—see **wear map**. **G 40, G02**

wear-out, n—a tire condition where any point on the tread is reduced to a depth equal to the height of treadwear indicator. **F 538, F09**

wear performance index, n—a calculated value that relates the wear performance of a candidate tire to that of a control tire tested in the same test; it may be calculated on the basis of either percent loss or rate of tread wear. **F 538, F09**

wear rate, n—the rate of material removal or dimensional change due to wear per unit of exposure parameter; for example, quantity of material removed (mass, volume, thickness) in unit distance of sliding or unit time. **D 4175, D02**

wear rate, n—the rate of material removal or dimensional change due to wear per unit of exposure parameter, for example, quantity of material removed (mass, volume, thickness) in unit distance of sliding or unit time. **G 40, G02**

wear rate map, n—see **wear map**. **G 40, G02**

wear-refurbishing cycle, n—*for a specific wear testing program*, one complete series of events that may be terminated by laundering or dry cleaning. **D 123, D13**

wear resistance—ability of the carbon or ribbon to retain its image-producing capacity after repeated use. **F 221, F05**

wear-service conditions, n—the specific conditions under which a textile is used (for example, at school, at work, at leisure, or at home). **D 123, D13**

wear test, n—a test in which textiles are subjected to wear-service conditions and evaluated for performance. **D 123, D13**

weatherability—the ability of a polished surface to resist the effects of exposure. **D 2825, D21**

weather aging—placing materials in known environmental conditions to evaluate changes. **F 869, F08**

weather conditions, normal—the (actual or anticipated) range of environmental conditions (rain, snow, hail, wind, temperature, pollution) that will typically occur in a local climatic region over several years. **E 772, E44**

weather cracking, n—distinct surface cracks induced by action of ozone in those areas of sidewall that are under tension; the cracks usually form perpendicularly to the direction of stress. **F 538, F09**

weathered coal, n—coal that has been exposed to climatic conditions (precipitation, sunlight, wind, temperature variations, etc.) and sometimes ground water, such that its properties are altered compared to those in coal from the same seam that has not been so exposed. **D 121, D05**

weathering—natural alteration by either chemical or mechanical processes due to the action of constituents of the atmosphere, surface water or ground water, or to temperature change. **C 119, C18**

weathering—atmospheric attack on a glass surface. **C 162, C14**

weathering, n—*in building construction*, any change of an installed

- sealant, coating, or membrane due to the action of atmospheric elements. **C 717, C24**
- weathering**, *v*—*inbuilding construction*, the exposure of an installed sealant, coating, or membrane due to atmospheric elements. **C 717, C24**
- weathering**—the mechanical or chemical disintegration and discoloration of the surface of wood that is caused by exposure to light, the action of dust and sand carried by winds, and the alternate shrinking and swelling of the surface fibers with the continual variation in moisture content brought by changes in the weather. Weathering does not include decay. **D 9, D07**
- weathering**—the process of disintegration and decomposition as a consequence of exposure to the atmosphere, to chemical action, and to the action of frost, water, and heat. (ISRM) **D 653, D18**
- weathering**, *n*—the surface deterioration of a rubber article during outdoor exposure. **D 1566, D11**
- weathering behind glass**, *v*—a technique of weathering in which the test specimens are exposed in a glass covered frame constructed of wood, metal, or other satisfactory material which protects the specimen from the effects of rain and weather. The frame shall be open at the back or sides to allow ambient air to circulate over the specimens. **G 113, G03**
- weathering of waterborne oil**, *n*—the combined effects of evaporation, solution, chemical oxidation, and biological decomposition from environmental exposure. **D 1129, D19**
- weathering reference material (WRM)**, *n*—a reference material having well documented and repeatable degradation properties when exposed to identical test conditions. **G 113, G03**
- weathering steels**—steels having added alloying elements to enhance the resistance to atmospheric corrosion. **F 1789, F16**
- weatherproof**—*as applied to plywood*, the term is synonymous with **exterior type plywood**. **D 1038, D07**
- weather-resistance**—measured ability of a material, assembly, or package to maintain designated physical properties and appearance under specified weathering conditions. **D 996, D10**
- weather-resistive barrier**, *n*—a material conforming to Practice E 2112, located behind the EIFS. **E 2110, E06**
- weather sealer**—form of coating applied to the outer surface of a construction to augment its weather resistance. **E 631, E06**
- weathertight**, *adj*—*in building construction*, impermeable to the passage of air or water or both under certain conditions as determined by test. **C 717, C24**
- weathertightness**, *n*—*in building construction*, the degree of permeability to the passage of water or air or both under certain conditions as determined by test. **C 717, C24**
- weave**, *v*—interlaces, in a specific pattern, strands or yarns oriented in two or more directions in a planar textile process. **D 3878, D30**
- weaving wire**, *n*—round wire intended especially for weaving. **B 899, B02**
- web**—that part of an H-type lock-strip gasket which extends between the flanges, forming two channels and that part of a reglet-type lock-strip gasket which extends between the flanges and spline. **C 717, C24**
- webbing**, *n*—*in textiles*, a stout narrow fabric with a mass per unit area of at least 0.5 kg/m² (0.1 lb/ft²) for each 25.4 mm (1 in.) of width. (Compare **narrow fabric**, **ribbon**, and **tape**.) **D 123, D13**
- webbing**, *n*—(1) phenomenon that occurs when an adhesive is ejected from a spray gun as a series of web-like threads, (2) filaments or threads that may form when adhesive transfer surfaces are separated. **D 907, D14**
- webbing**, *n*—*in textiles*, a stout narrow fabric with a mass per unit area of at least 0.5 kg/m² (0.1 lb/ft²) for each 25.4 mm (1 in.) of width. **D 7018, D13**
- webbing**, *n*—a flat or tubular length of woven fabric used for a variety of purposes in climbing and mountaineering. **F 1773, F08**
- Weber's law**, *n*—the just-perceptible increment of a stimulus is an approximately constant fraction of the stimulus magnitude over a wide range. **E 284, E12**
- weber**, **Wb**—the unit of magnetic flux. The weber is the magnetic flux whose decrease to zero when linked with a single turn induces in the turn a voltage whose time integral is one volt-second. One weber equals 10⁸ maxwells. See **magnetic flux**. **A 340, A06**
- webs**, *n*—the partitions dividing tile or hollow brick into cells. **C 43, C15**
- webs**—interior supports separating channels of vitrified clay filter block. **C 896, C04**
- wedge**, *n*—*in the field of adhesive technology*, a tool made from a rigid material, tapering to a thin edge, used to separate adherends by force. **D 907, D14**
- wedge**, *n*—*in mica*, a crystalline structure in a micablock, which upon splitting results in a yield of pieces thicker at one end than the other. **D 1711, D09**
- wedge**—in ultrasonic angle-beam examination by the contact method, a device used to direct ultrasonic energy into the material at an angle. **E 1316, E07**
- wedge ice**—the ice occurring in an ice wedge. **D 7099, D18**
- wedge point**—point with two convergent planes forming “V.” **F 547, F16**
- wedge tensile strength**—ultimate strength determined by testing with the use of a wedge with a prescribed angle. **F 1789, F16**
- wedge tensile test**—tensile test performed on various headed fasteners and studs using a wedge of prescribed dimensions and hardness, and in a prescribed manner for the purpose of verifying good head quality or ductility, or both. **F 1789, F16**
- wedging of tile**—the difference between two spaced measurements of the length or width of a tile, expressed as a percent of the distance between points of measurement. **C 242, C21**
- week**, *n*—(1) The week for workplace use is considered to be five workdays of approximately 8 h, within a period of seven consecutive days. (2) For reporting analysis of outdoor air on a weekly rate, results are calculated to a base of seven consecutive 24-h days. **D 1356, D22**
- weep hole**—a small diameter hole (usually ¼ in.) drilled into the protective casing above the ground surface that serves as a drain hole for water that may enter the protective casing annulus. **D 653, D18**
- weep hole**, *n*—a small hole allowing drainage of fluid. Compare **drainage hole**, **vent hole**.
wet strength—See **strength**, **wet**. **E 631, E06**
- weeping**, *n*—a condition where undesired ink on the faceplate which contaminates other ink colors. **F 1857, F05**
- weft**, *n*—see **filling**. **D 4439, D35**
- weftless fabric**, *n*—*as used in tire building*, a sheet of parallel cords surrounded by uncured rubber compound. **D 123, D13**
- weftless fabric**, *n*—*as used in tire building*, a sheet of parallel cords surrounded by uncured rubber compound. **D 6477, D13**
- weigh**, *vt*—to determine the mass of a material. **D 4848, D13**
- weigh**, *vt*—to measure the tire load on one or more tires by using a vehicle scale, an axle-load scale, a portable axle-load weigher, or a wheel-load weigher. **E 867, E17**
- weigh-in-motion**, *n*—the process of estimating a moving vehicle's gross weight and the portion of that weight that is carried by each wheel, axle, and axle group, or a combination thereof, by measurement and analysis of dynamic vehicle tire forces. **E 867, E17**
- weight**, *v*—to determine the mass of a material. **D 123, D13**
- weight**, *n*—the force exerted on a body by gravity. (See also **mass** and **force**.) **D 123, D13**
- weight**, *n*—*in warpknitting*, the number of tex (yards per pound) of finished fabric. **D 123, D13**
- weight**, *n*—*as used with fabrics*, mass per unit area. **D 123, D13**
- weight**, *n*—*in textile testing*, an object, having a known mass, used in such procedures as weighing, calibrating, and applying a force. **D 4848, D13**
- weight**, *n*—*in warpknitting*, the number of tex (yards per pound) of finished fabric. **D 4850, D13**
- weight**, *n*—*as used with fabrics*, mass per unit area. **D 4850, D13**

weighted bottom camber, h_B

weighted bottom camber, h_B —the maximum height of the running surface measured from a plane horizontal surface, with the ski held in a plane horizontal orientation and thus subject to deflection due to its weight under the influence of the ski weight. X_{hB} is the location of h_B from the tail of the ski. **F 472, F27**

weight, [lb (kg)], n —the external force of gravity vertically downwards upon a body with a magnitude equal to the body's mass multiplied by the local acceleration of free fall. **E 867, E17**

weight of applied coating wax, n —the weight of applied coating per unit area of board, usually grams per square metre or pounds per thousand square feet of board covered. **D 4175, D02**

weight of wax coating, n —the weight of wax present as a surface film on corrugated paperboard, expressed as weight per unit area, usually grams per square metre or pounds of coating per thousand feet of board covered. **D 4175, D02**

weight percent impregnating wax, n —the weight percent of wax in the facing relative to the weight of unwaxed facing measured at 23°C (73°F) and 50 % relative humidity. **D 4175, D02**

weight percent solids, n —the portion of a coating that remains as part of the dry film expressed as weight. **D 16, D01**

weight resistivity—the resistance in ohms at a specified temperature of a body of uniform cross section and of unit weight and unit length. **B 354, B01**

weir—a submerged refractory wall within a melter to direct glass flow. **C 162, C14**

weir boom (aka skimming boom/barrier)—boom that has a weir skimming device(s) built into its face. **F 818, F20**

Weissenberg camera—an X-ray diffraction camera used mainly for the determination of unknown crystal structures. A variation of the rotating crystal camera, it has a shield in front of the film which admits the diffracted beams of only one layer line. The film moves parallel to the camera axis and in synchronism with the rotation of the crystal. Overlapping spots are thus prevented and the film records not only the position of a diffraction spot but also the position of the crystal at the time the spot was produced. **E 7, E04**

weld decay—not a preferred term. Intergranular corrosion, usually of stainless steels or certain nickel-base alloys, that occurs as the result of sensitization in the heat-affected zone during the welding operation. **G 15, G01**

welded pipe—product made from sheet, strip, or plate with a seam made by welding. **B 846, B05**

welded pipe, n —a round hollow product made by forming flat stock and joining the single longitudinal seam by welding; it is produced to the particular dimensions commercially known as standard pipe sizes. **B 899, B02**

welded tube—product made from sheet, strip, or plate with a seam made by welding. **B 846, B05**

welding—joining the ends of two wires, rods, metal whose length is great in comparison with the major axis of its cross section, or groups of wires (I) by fusing, using the application of heat or pressure or both, by means of a flame torch, electric arc, or electric current or (2) by cold pressure. **B 354, B01**

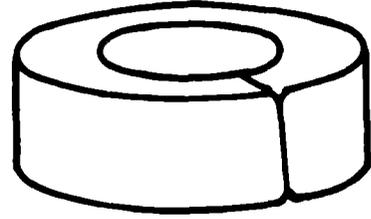
welding, n —in tribology, the bonding between metallic surfaces in direct contact, at any temperature. **G 40, G02**

welding glass—colored glass to protect a welder's eyes from injurious radiation. **C 162, C14**

weld-line, n —a discontinuity in a molded plastic part formed by the merging of two or more streams of plastic flowing together. **D 883, D20**

weld-mark, n —a visible weld-line. **D 883, D20**

weld mark—a deep groove or fissure formed by incomplete union of two or more particles or streams of material flowing together.



F 109, C21

weld-mark, n —a visible weld line. (D20) **F 412, F17**

weld- or knit-line—a mark on, or weakness in, a molded plastic formed by the union of two or more streams of plastic flowing together. **D 883, D20**

weld point—under the conditions of this test, the lowest applied load in kilograms at which the rotating ball welds to the three stationary balls, indicating the extreme-pressure level of the lubricants-force (or newtons) has been exceeded. **D 4175, D02**

weld point, n —the lowest applied load at which sliding surfaces seize and then weld. **D 4175, D02**

weld reinforcement—the portion of the welded joint which extends beyond the inner and outer surface of the base metal of the welded pipe. **B 846, B05**

weld structure—the microstructure of a weld deposit and heat-affected base metal. **E 7, E04**

well, n —in buttons, the recess in the center of a sew through flange button that gives aesthetics and identifies the face side. **D 123, D13**

well, n —in buttons, a recess in center of sew-through flange button that give aesthetics and identifies the face side. **D 5497, D13**

well bonded permafrost—a condition in which the soil particles are strongly held together by the ice, so that the frozen soil possesses relatively high resistance to chipping or breaking. **D 7099, D18**

well completion diagram—a record that illustrates the details of a well installation. **D 653, D18**

well screen—a filtering device used to retain the primary or natural filter pack; usually a cylindrical pipe with openings of a uniform width, orientation, and spacing. **D 653, D18**

well screen jetting (hydraulic jetting)—when jetting is used for development, a jetting tool with nozzles and a high-pressure pump is used to force water outwardly through the screen, the filter pack, and sometimes into the adjacent geologic unit. **D 653, D18**

welt, n —the piping effect produced when welt cord and cover fabrics are sewn together for ornamental purposes to finish the edges between intersecting surfaces of upholstered furniture cushions, pillows, arms, or backs. **E 176, E05**

welt beating—operation of lightly beating the welt into a smooth position around the edge of a shoe. **F 869, F08**

welt cord, n —the continuous small-diameter cylindrical material that is wrapped in fabric and sewn as part of the cover to make a welt edge on upholstered furniture. **E 176, E05**

welted seam, n —in upholstered furniture, seam sewn with a strip of covered cord between the two fabric pieces, joined so that the welting shows on the exterior of the furniture unit. **D 123, D13**

welted seam, n —in upholstered furniture, seam sewn with a strip of covered cord between the two fabric pieces, joined so that the welting shows on the exterior of the furniture unit. **D 7023, D13**

welting, n —in upholstered furniture, a cord covered by strips of exterior fabric, used in welted seams of upholstery covering. **D 123, D13**

welting, n —in upholstered furniture, a cord covered by strips of exterior fabric, used in welted seams of upholstery covering. **D 7023, D13**

welting shoulder—the shoulder portion of the vegetable-tanned cattlehide leather, tanned with a low load to give the flexibility required for a welt. **D 1517, D31**

welt seam, n —a complex seam formed on the inside of the object

- with one trimmed raw edge enclosed and one stitching line visible on the face side. **D 123, D13**
- welt seam**, *n*—*inhome sewing*, a complex seam formed on the inside of the product with one trimmed cut edge enclosed and one stitching line visible on the face side. **D 4965, D13**
- Westlake process**—{archaic} an automatic process using vacuum gather for producing articles in paste molds. **C 162, C14**
- wet**, *adj*—covered or saturated with a liquid, generally water. **D 4538, D33**
- wet adhesion**, *n*—the ability of a coating film to adhere tightly to the substrate directly beneath it under wet conditions such as rain, dew, washing, etc. **D 16, D01**
- wet-basis moisture content**—the moisture content expressed as the ratio of the weight of water in the fuel to the total weight of the fuel. **E 1705, E48**
- wet basis moisture content**—see **total weight basis moisture content**. **E 1705, E48**
- wet blasting**—a process for cleaning or finishing by means of a slurry of abrasive in water directed at high velocity against the work pieces. **B 374, B08**
- wet blue**—hides of skins which have been chromium tanned, but not dyed and/or fat liquored. Commonly referred to as *leather in the Blue*. **D 1517, D31**
- wet-bulb depression** ($t - t_w$), *n*—the difference between the dry-bulb temperature and the wet-bulb temperature.
- wet-bulb temperature**—the equilibrium temperature of a liquid vaporizing into a gas. With water and air, wet-bulb and dry-bulb temperatures give a measure of the relative humidity. **D 9, D07**
- wet-bulb temperature**—See **temperature**. **D 1356, D22**
- wet-bulb temperature**, *n*—the equilibrium temperature of a liquid vaporising into a gas. With water and air, wet-bulb and dry-bulb temperatures can be used to calculate the relative humidity. **G 113, G03**
- wet chop**—fiber glass strand which has been chopped directly after application of sizing. See **chopped fiber** and **dry chop**. **C 162, C14**
- wet cleaning**—under **cleaning**, see **wet cleaning**. **D 459, D12**
- wet cockle**, *n*—the wave pattern on paper substrate, which may be created by the ink solvent during printing caused as paper fibers expand relieving stresses. **F 1857, F05**
- wet crock**—the degree of polish rub-off obtained during rubbing tests using water between a cloth (clothing) and the shoes. **D 2825, D21**
- wet deposition**—See **deposition**. **D 1356, D22**
- wet edge**, *n*—the edge of a wet, painted area that remains workable for continued painting. **D 16, D01**
- wet edge**, *n*—the leading edge of a continuously applied wet-state material. **E 2110, E06**
- wet edge extender**, *n*—high boiling liquids such as propylene glycol added to latex or water-based paints to reduce the evaporation rate and thereby extend the (open) time that they are wet enough to brush into. **D 16, D01**
- wet-felting**—forming of a fibrous-felted board mat from a water suspension of fibers and fiber bundles by means of a deckle box, fourdrinier, or cylinder board machine. **D 1554, D07**
- wet-film gage**—a gage for measuring the thickness of a wet film. **C 717, C24**
- wet-film thickness**—the thickness of a liquid coating as it is applied. **C 717, C24**
- wet gas**—natural gas that contains water vapor in excess of sales or contractual specifications, or both. **D 4150, D03**
- wet impingement**—See **impingement**. **D 1356, D22**
- wet-installed fastener**—a fastener that is coated on the shank and under the head with a curing-type sealant to provide a corrosion barrier and a secondary seal. **E 631, E06**
- wetland**—land which has the water table at, near, or above the land surface, or which is saturated for long enough periods to promote hydrophylic vegetation and various kinds of biological activity which are adapted to the wet environment. **D 653, D18**
- wet layup**, *n*—a method of making a reinforced plastic in which the polymer compound is applied as a liquid and as the reinforcement is put in place. **D 883, D20**
- wet milling**—the grinding of porcelain enamel materials with sufficient liquid to form a slurry. **C 286, B08**
- wet milling**, *n*—the grinding of materials with sufficient liquid to form a slurry. **C 1145, C28**
- wet pressing**—See **wet pressing** under **pressing**. **C 242, C21**
- wet process**—See **wet process** under **process**. **C 242, C21**
- wet process enameling**—a method of porcelain enameling in which slip is applied to a metal article at ambient temperature, dried and fired. **C 286, B08**
- wet scraping**, *n*—removal of leaded paint by hand scraping while keeping the surface wetted to minimize the generation of dust. **E 1605, E06**
- wet sieving**—for the purpose of *Test Method D 4749*, the test method for the sieving of coal that uses water as a medium for facilitating the segregation of the sample into particle size; this is generally used when testing coal particles 600 μm (No. 30 U.S.A. Standard Series) or smaller. **D 121, D05**
- wet slurry technique**—a magnetic particle examination technique in which the magnetic particles are suspended in a high-viscosity vehicle. **E 1316, E07**
- wet spots**, *n*—local patches of high moisture content in raw rubber. **D 1566, D11**
- wet-state materials**, *n*—the adhesive, base coat, and finish coat applied in liquid or semiliquid state. **E 2110, E06**
- wet storage stain (coatings)**—See **whiterust**. **D 16, D01**
- wet strength**, *n*—see **wet strength** under **bond strength**. **D 907, D14**
- wet strength**—See **strength, wet**. **E 1749, E06**
- wet strength paper**—See **paper**. **D 996, D10**
- wettability**—the rate at which particles can be made wet under specified conditions. **D 2652, D28**
- wettage**, *n*—see **static hold-up** or **wettage**. **D 4175, D02**
- wet technique**—the examination technique in which the magnetic particles are suspended in a liquid vehicle. **E 1316, E07**
- wet tensile strength**, *n*—of paper, tensile strength of water-saturated paper or paperboard measured under specified conditions. **D 1968, D06**
- wetting**—the formation of a relatively uniform, smooth, unbroken, and adherent film of solder to a base material. **B 846, B05**
- wetting**—the property of a polish to uniformly and completely contact the solid surface to which it is applied. **D 2825, D21**
- wetting action**—the ability of a liquid to spread over and adhere to solid surfaces. **E 1316, E07**
- wetting agent**—a substance that reduces the surface tension of a liquid, thereby causing it to spread more readily on a solid surface. **B 374, B08**
- wetting agent**—a chemical additive that reduces the surface tension of a fluid, inducing it to spread readily on a surface to which it is applied, thus causing wetting of the surface of the solid with the fluids. **C 242, C21**
- wetting agent**, *n*—a chemical additive which reduces the surface tension of a fluid, inducing it to spread readily on a surface to which it is applied, thus causing wetting of the surface with the fluids. **C 1145, C28**
- wetting agent**—a material that increases the spreading of a liquid medium on a surface. **D 459, D12**
- wetting agent**—a substance capable of lowering the surface tension of liquids, facilitating the wetting of solid surfaces, and facilitating the penetration of liquids into the capillaries. **D 653, D18**
- wetting agent**—wetting agents can be considered synonymous with spreading agents in function. **E 1519, E35**
- wetting agent (latex)**, *n*—a substance used to reduce the surface tension of latex and thereby facilitate spreading or impregnation of a surface by the latex. **D 1566, D11**

wetting and adhesion, surface, n

wetting and adhesion, surface, n—the mutual affinity of and bonding between finish and the surface to which it is applied.

C 168, C16

wet unit weight—see **unit weight**.

D 653, D18

wet winding, n—a method of making filament-wound reinforced plastics in which the fiber reinforcement is coated with a polymer compound as a liquid just prior to wrapping on a mandrel.

D 883, D20

wheel, n—a rigid structure consisting of a rim connected to a central disk that permits rotationally centered attachment to an axle.

F 538, F09

wheelbarrow sprayer—a sprayer apparatus mounted on a frame with wheelbarrow-type handles and one or two wheels.

E 1102, E35

wheel cast button, n—see **rotation cast button**.

D 5497, D13

wheel center, n—the point at which the spin axis of a wheel intersects the wheel plane.

F 538, F09

wheel force transducer system—a force-to-electrical signal converter system including transducer(s), associated signal condition, zeroing, amplifying, recording, and monitoring instrumentation.

E 867, E17

wheel load, (lb (kg)), n—the sum of the tire loads on all tires included in the wheel assembly on one end of an axle; a wheel assembly may have a single tire or dual tires.

E 867, E17

wheel plane, n—the central plane of a tire that is mounted on the wheel, normal to the spin axis.

F 538, F09

wheel search unit—an ultrasonic device incorporating one or more piezoelectric elements mounted inside a liquid-filled flexible tire. The beam is coupled to the test surface through the rolling contact area of the tire.

E 1316, E07

wheel torque, n—the external torque acting about the spin axis.

F 538, F09

wheel track, n—a line or path followed by the tire of a road vehicle on a traveled surface.

E 867, E17

whippers—a mechanical device used to beat air into a beverage so as to change its properties from a liquid drink to a frothy drink.

F 1827, F26

whirling psychrometer—See **psychrometer, sling**.

D 1356, D22

whisker, n—a short, single-crystal fiber.

D 883, D20

whisker—two triangular pieces of metal formed during cutting of nail point.

F 547, F16

whiskering, n—fine hair-like lines that are dragged from solid print areas to non-print areas.

D 6488, D01

whiskers—metallic filamentary growths, often microscopic, sometimes formed during electrodeposition and sometimes spontaneously during storage or service, after finishing.

B 374, B08

whiskers—See **striation**.

C 162, C14

whiskers at trailing edge of solid areas, n—ragged edges around the printed image caused by improper roller setting or by an impression roll that is too hard (improper durometer).

D 6488, D01

white, adj—for **colordetermination**, color description most usually applied to opaque, highly reflecting, highly diffusing, visually hueless specimens.

D 2946, C17

white iron, n—cast iron in which substantially all of the carbon is in solution and in the combined form. The metal has a white fracture.

A 644, A04

white light—see **visible light**.

E 1316, E07

white light—light containing all wave lengths in the visible spectrum (in the range from 380 to 780 nm).

E 1316, E07

whiteness—the degree of approach of the color of a substance to that of the ideal white, commonly represented by a standardized preparation of magnesium oxide.

D 1695, D01

whiteness, n—the degree to which a near-white surface approaches **perfect white** defined as a 100 % reflectance over the whole visible spectrum.

D 2946, C17

whiteness, n—attribute of color perception by which an object color is judged to approach the preferred white.

E 284, E12

whiteness index, n—a number, computed by a given procedure from

colorimetric data, that indicates the degree of departure of an object color from a preferred white.

E 284, E12

whiteness-retention—comparative whiteness of original and cleaned fabric.

D 459, D12

white noise—noise with a continuous frequency spectrum and with equal power per unit bandwidth. For example, equal power in any band of 100-Hz width.

C 634, E33

white rust, n—white corrosion products (zinc hydroxide and zinc oxide) on zinc-coated articles. They form when the parts are stored so close together that condensed moisture is entrapped between them and the air circulation is inadequate to assist drying. Also called wet storage stain. See **rust**.

D 16, D01

white sidewall, n—a sidewall which contains a white (or light colored) compound as a part of the total sidewall.

F 538, F09

white speck—in western softwoods, pockets of decay caused by *Fomes pini*.

D 9, D07

white standard—a substance that reflects 100 % light and is used in calibrating test instruments. See **barium sulfate**.

F 149, F05

whiteware—See **ceramic whiteware**.

C 242, C21

white wash—a combination of hydrated lime (or slaked quicklime), water, and other materials to be used as a paintlike coating.

C 51, C07

white weight—the weight of limed, unwashed stock.

D 1517, D31

white wool, n—wool having shade variations from true white to creamy white but free of pigmented, dyed, or otherwise colored wools.

D 123, D13

white wool, n—wool having shade variations from true white to creamy white but free of pigmented, dyed, or otherwise colored wools.

D 4845, D13

white write—a process in electrostatic printing where the photoconductive element is charged with a charge of the opposite sign as that of the toner. A light beam, acting like a "charge eraser" is used to discharge all areas of the photoconductor that are NOT to receive toner to form the image. The toner is attracted to the remaining charged areas of the photoconductor when the latent electrostatic image is developed.

F 909, F05

white (X-rays)—containing a large number of wavelengths.

E 7, E04

whiting—calcium carbonate powder of high purity.

C 242, C21

whole air sampling, n—the collection of an air sample into a sealable container such as a canister, bottle, or bag for subsequent analysis of its contents.

D 1356, D22

whole sediment—sediment and associated pore water that have had minimal manipulation.

E 943, E47

whole tire, n—a scrap tire that has been removed from a rim but which has not been processed.

D 5681, D34

wick, n—an object that delivers fuel to a flame through the process of capillary action.

F 1972, F15

wicking, n—transmission of a gas or liquid, due to a pressure differential or capillary action, along fibers incorporated in a rubber product.

D 1566, D11

wicking—absorption of film by materials allowed to rest on polished substrate, for example, felt pads on bottoms of decorator pieces.

D 2825, D21

wickproof, adj—in **tire fabric, tire cord fabric, tire cord, or yarn**, a term used to describe a fabric or yarn that shows no air wicking by this prescribed test.

D 6477, D13

wide crown—staple crown usually larger than $1\frac{1}{16}$ in. (17 mm) in width.

F 592, F16

wide elastic fabric, n—an elastic fabric that is at least 150 mm (6 in.) in width. (Compare **narrow elastic fabric**.)

D 123, D13

wide elastic fabric, n—an elastic fabric that is at least 150 mm (6 in.) in width. (Compare **narrow elastic fabric**.)

D 4850, D13

widfield eyepiece—an eyepiece that permits the observation of an extended field of view of the specimen.

E 7, E04

wide ring—a rate of growth of less than four annual rings per inch, that is, a growth rate faster than that described by **medium grain**.

D 9, D07

widespread permafrost—widely distributed, discontinuous permafrost. **D 7099, D18**

wide strip tensile test, n—for geosynthetics, a tensile test in which the entire width of a 200 mm (8.0 in.) wide specimen is gripped in the clamps and the gage length is 100 mm (4.0 in.). **D 4439, D35**

wide-to-narrow-ratio, n—a calculated proportion comparing the width of wide elements to narrow elements in a bar code having two widths. **F 1294, F05**

wide-width strip tensile test, n—for geotextiles, a uniaxial tensile test in which the entire width of a 200-mm (8.0-in.) wide specimen is gripped in the clamps and the gage length is 100 mm (4.0 in.). **D 4439, D35**

Widmannstätten structure—a precipitate structure, resulting from the precipitation of a new phase along certain crystallographic planes of the parent solid solution and characterized by a geometrical pattern appearance in the microstructure, originally observed in meteorites but readily produced in many other alloys with proper heat treatment. **E 7, E04**

width, n—the maximum dimension of the tile measured perpendicular to the length. **C 43, C15**

width, n—of flatknit fabrics, the perpendicular distance between the selvages when the fabric is under zero tension and free of folds or wrinkles. **D 123, D13**

width, n—of circularknit fabrics, twice the perpendicular distance between the enclosed edges of a flattened tube of fabric that is under zero tension and free of folds or wrinkles. **D 123, D13**

width, n—of a raised-surface fabric, the dimension included within the outer limits of the nap or pile, but excluding the selvages, or as otherwise agreed upon by the purchaser and supplier. **D 123, D13**

width, n—of a fabric, the distance from the outer edge of one selvage to the outer edge of the other selvage, measured perpendicular to the selvages while the fabric is held under zero tension and is free of folds and wrinkles. **D 123, D13**

width, n—of a fabricwoven on a shuttleless loom, the distance from the outer warp on one side to the outer warp on the other side, measured perpendicular to the warp yarns while the fabric is held under zero tension and is free of folds and wrinkles. **D 123, D13**

width—in the case of a beam, the cross-sectional dimension perpendicular to the direction in which the load is applied. **D 883, D20**

width, n—of flatknit fabrics, the perpendicular distance between the selvages when the fabric is under zero tension and free of folds or wrinkles. **D 4850, D13**

width, n—of circularknit fabrics, twice the perpendicular distance between the enclosed edges of a flattened tube of fabric that is under zero tension and free of folds or wrinkles. **D 4850, D13**

width, n—of a raised-surface fabric, the dimension included within the outer limits of the nap or pile, but excluding the selvages, or as otherwise agreed upon by the purchaser and supplier. **D 4850, D13**

width, n—of a fabric, the distance from the outer edge of one selvage to the outer edge of the other selvage, measured perpendicular to the selvages while the fabric is held under zero tension and is free of folds and wrinkles. **D 4850, D13**

width, n—of a fabricwoven on a shuttleless loom, the distance from the outer warp on one side to the outer warp on the other side, measured perpendicular to the warp yarns while the fabric is held under zero tension and is free of folds and wrinkles. **D 4850, D13**

width—in the case of a beam, the shorter dimension perpendicular to the direction in which the load is applied. (D20) **F 412, F17**

width—See **spacing**. **F 547, F16**

width—the width measurement is a straight line running across the bottom of the last at the ball or the widest part of the foot. **F 869, F08**

width, b—total distance measured perpendicular to the center line on the running surface. X_b indicates the location of ski width from the tail of the ski. **F 472, F27**

width code, n—in bar code symbology, a binary code that assigns a value of one to the wide element (bar or space) and a value of zero to the narrow element. **F 1294, F05**

width of metal connector plate—dimension of metal connector plate perpendicular to longitudinal axis of coiled metal strip from which plate was sheared during its fabrication.

window—See **windows and doors**.

windows and doors:

back bedding—a bead of sealant, glazing compound, or putty, applied between the face of glass and the frame containing it.

back putty—Use **back bedding**.

balance, n—a mechanism used in hung window assemblies to provide mechanical assistance in raising the operable sash and providing a means of holding the sash in the open position.

bead, n—in glazing, (1) a strip of metal or wood used around the periphery of a pane of glass to secure it in place (also referred to as a “stop”). (2) a strip of sealant, glazing compound, or putty.

bite, n—the distance that the surround member (rail or stile) overlaps the glazing.

fixed, adj—describing a sash, panel, or glazing designed not to be opened (antonym: operable).

frame, n—an assembly of structural members that surrounds and supports the sash, ventilators, doors, panels, or glazing that is installed into an opening in a building envelope or wall.

glaze, v—to install glazing.

glazing, n—a material installed in a sash, ventilator, or panel such as glass, plastic, etc.

glazing bead, n—a glazing material used in a sash, ventilator, panel, window or door assembly that retains the glazing.

glazing material, n—the components used to install glazing into its surrounding edge members, such as gaskets, sealants, glazing retainers, etc.

head, n—an upper horizontal member of a window or door frame.

horizontal sliding window, n—a window assembly in which the operable sash(es) moves horizontally in the plane of the window.

hung window, n—window assembly in which the operable sash(es) moves vertically in the plane of the window and having a balance(s) to aid in the operation of the sash.

Windows may be single, double, or triple hung depending on the number of operable sash(es).

interlock, n—a set of meeting rails or meeting stiles that contains a provision for each of the rails or stiles to physically engage one another over their entire length.

jamb, n—a vertical member of a window or door frame.

light, n—Use **lite**.

lite, n—one piece of glazing (preferred term) (also spelled light) (synonym: pane)

meeting rail, n—a rail that overlaps another rail.

mull, v—to join or connect frame members of windows or doors; or a frame member to a mullion.

mullion, n—a member used between windows or doors as a means of connection, which may or may not be structural.

muntin, n—a member used between lites of glazing within a sash, ventilator, or panel.

“O”—in window and door design, a designation used to indicate a fixed sash, panel, or lite.

operable, adj—describing a sash, ventilator, or panel designed to be opened and closed (antonym: fixed).

pane, n—See **lite**.

panel, n—an assembly of one or more lites of glazing, encompassed by surrounding edge members, which when operable, slides horizontally in the plane of a sliding door.

rail, n—a horizontal surrounding edge member of a sash, ventilator, or panel.

sash, n—an assembly of one or more lites of glazing,

width of metal connector plate

- encompassed by surrounding edge members, which when **operable**, slides in the plane of the **window**.
- sealed insulating glass, n**—an assembly of two or more **lites** separated by a dehydrated gaseous space(s), the entire assembly being sealed to resist passage of water vapor or gas.
- sill, n**—a lower horizontal member of a **window** or sliding door **frame**.
- sliding glass door, n**—a door assembly in which the **operable panel** (s) moves horizontally in the plane of the door.
- stile, n**—a vertical surrounding edge member of a **sash, ventilator, or panel**.
- ventilator, n**—an assembly of one or more **lites** encompassed by surrounding edge members, that operates in a manner other than sliding in the plane of the **window**.
- window, n**—an assembly consisting of a surrounding **frame** and one or more **sashes, ventilators, or fixed lites** of glass, or a combination of these, designed to be installed in a **wall** opening for the purpose of admitting light or air, or both.
- “X”—in window and door design, a designation used to indicate an **operable sash, ventilator, or panel**. **E 631, E06**
- widthwise direction, n**—in *textiles*, the direction in a machine-made fabric perpendicular to the warp. **D 123, D13**
- widthwise direction, n**—in *textiles*, the direction in machine-made fabric perpendicular to the warp. (Syn. *cross-machine direction, weftwise direction, fillingwise direction*). **D 5684, D13**
- wilderness setting**—situations in which the delivery of patient care by EMS providers is adversely affected by logistical complications, such as: an environment that is physically stressful or hazardous to the patient, rescue personnel, or both; remoteness of the patient’s location, such that it causes a delay in the delivery of care to the patient; or lack of adequate medical supplies, equipment, or transportation. **F 1177, F30**
- wildness, n**—an obsolete term previously used to describe a number of cord properties including flare, straightness, and residual torsion. **D 123, D13**
- wildness, n**—obsolete term, previously used to describe a number of steel tire cord properties including flare, straightness, and residual torsion. **D 6477, D13**
- wild type**—the naturally occurring, original isolate. **E 1705, E48**
- willow**—(1) *willow grain*—refers to boarded leather.
- (2) *willow tanned*—In the sporting goods industry, used to indicate flexible, well-oiled, chrome-tanned cattlehide or horsehide used for gloves. **D 1517, D31**
- winding**—a process in which continuous material is applied under controlled tension to a form in a predetermined geometric relationship to make a structure. A matrix material to bind the fibers together may be added before, during or after winding. Filament winding is the most common type. **D 3878, D30**
- winding loss, (copper loss), P_w** —the power expended, as heat, in the conductors of an inductor or resistor, or both, as a result of the electric current in them. **A 340, A06**
- winding system, n**—in *open-end spinning machines*, a device which forms the yarn package. **D 123, D13**
- winding system, n**—in *open-end spinning machines*, a device which forms the yarn package. **D 3888, D13**
- winding wire**—see **magnet wire**. **D 1711, D09**
- window**—in a chamois skin, a thin portion that transmits light when the skin is viewed against a window or light background. **D 1517, D31**
- window assembly, n**—an integrally fabricated unit containing a glazed light(s) placed in an opening in a wall or partition and that is intended primarily for the transmission of light, or light and air, and not primarily as an entrance or exit. **E 176, E05**
- window glass**—See **sheet glass**. **C 162, C14**
- windows, n**—part of *zippers*, the openings in pin-lock and cam-lock sliders through which the locking pin and cams, respectively, may extend. **D 123, D13**
- windows, n**—the openings in pin-lock and cam-lock sliders through which the locking pin and cams, respectively, may extend. **D 2050, D13**
- window sash**—assembly of one or more lites (or panes) of glazing, encompassed by surrounding edge members, which when operable, slides in the plane of the window. **E 1605, E06**
- window stool**—flat, horizontal molding fitted over the sill, on the window interior, between jambs, that comes in contact with the bottom rail of the (lower) operating sash and the window sill. **E 631, E06**
- window stool**—flat, horizontal molding fitted over the sill, on the window interior, between jambs, that comes in contact with the bottom rail of the (lower) operating sash and the window sill. **E 1605, E06**
- wind response**—change in freeboard or draft due to wind force acting to displace the boom from rest. **F 818, F20**
- wipe, v**—in *upholsterycleaning*, to clean coated upholstery fabrics with a sponge or cloth wetted with a mild detergent, soap solution, or coated fabric cleaner formulated for the purpose. **D 123, D13**
- wipe, v**—in *upholsterycleaning*, clean face-coated upholstery fabrics by removing surface soil with a sponge or cloth wetted with a mild detergent, soap solution, or coated fabric cleaner formulated for the purpose. Do not use dry solvent cleaner. **D 5253, D13**
- wipe, n**—sorberent material (e.g. cotton gauze) that is rubbed on a surface to collect a sample for chemical analysis. **D 5681, D34**
- wipe, n**—a disposable, porous paper (cellulosic) towellelette that is moistened with a wetting agent. **E 631, E06**
- wipe**—disposable twoelettes moistened with a wetting agent. These towelettes are used for cleaning sampling equipment. Wipe brands or sources selected for use shall contain insignificant background lead levels. **E 631, E06**
- wipe**—disposable towelettes moistened with a wetting agent (see 2.1.5.1 and 2.1.5.2). These towlettes are used to collect the sample and to clean sampling equipment. Wipe brands or sources selected for use shall not contain significant background lead levels (see 2.1.5.1.) Wipe brands or sources selected for use shall be of adequate width and thickness to perform the collection procedure (see 2.1.5.2). **E 631, E06**
- wipe, n**—a disposable towellelette that is moistened with a wetting agent. **E 1605, E06**
- wiper**—see **slider**. The term “wiper” is sometimes used interchangeably with the more preferred term “slider.” **B 542, B02**
- wipe sampling kit**—a sealable rigid walled container with 50 mL minimum volume (see 2.1.6.1). The kit must also include a separate container of clean uncontaminated wipes for use in collecting samples. One container of bulk packed wipes is typically used for collection of multiple samples.
- wire fabric**—See **screen**.
- wire mesh**—See **screen**.
- wire mesh**—See **railing systems**. **E 631, E06**
- wire, n**—a single continuous length of metal, generally with a circular cross section, that is cold drawn from wire rod or bar. **A 902, A05**
- wire**—a rod or filament of drawn or rolled metal whose length is great in comparison with the major axis of its cross section. **B 354, B01**
- wire, n**—solid wrought product that is long in relation to its cross section, which is square or rectangular with sharp or rounded corners or edges, or is round, hexagonal, or octagonal, and whose diameter or greatest perpendicular distance between parallel faces is less than 0.375 in. [up through 10.00 mm].
- Alclad wire, n**—composite wire product comprised of an aluminum-alloy wire having on its surface a metallurgically bonded aluminum or aluminum-alloy coating that is anodic to the alloy to which it is bonded, thus electrolytically protecting the core against corrosion.
- cold-heading wire, n**—wire of a quality suitable for use in the manufacture of cold-headed products such as bolts and rivets.

- drawn wire, n*—wire brought to final dimension by drawing through a die.
- extruded wire, n*—wire produced by hot extruding.
- flattened wire, n*—wire having two parallel flat surfaces and rounded edges produced by roll-flattening round wire.
- rivet wire, n*—See *cold-heading wire*. **B 881, B07**
- wire, n**—a thin, flexible continuous length of metal, usually of uniform, round cross section. **B 899, B02**
- wire**—a single strand flexible anchor component with a circular cross section that connects the bony elements of the spine, pelvis, or ribs to each other or to other implant components. A series of wire components can be bound together to form a cable (see **cable**). **F 1582, F04**
- wire**—used extensively in fastener manufacturing. It is produced from hot rolled or annealed rods or bars by cold drawing. Steel sizes range from 0.062 to 1.375 in. **F 1789, F16**
- wire bar**—refinery shape used for rolling into rod or flat product for subsequent processing into wire, strip, or shape. Approximately 3½ to 5 in. (89 to 127 mm) square in cross section, usually 54 in. (1.37 m) in length, and ranging in weight from 200 to 420 lb (91 to 191 kg). Usually tapered on both ends. **B 846, B05**
- wirebound box**—See **box**. **D 996, D10**
- wire brush surface**—a roughness due to fibers protruding above the surface of the pultruded part.
- NOTE—This condition usually occurs at the edge of a reinforcing mat strip and is typically located at the edges or corners of the profile. **D 3918, D20**
- wired glass**—flat glass with a layer of wire mesh completely embedded in the glass. **C 162, C14**
- wire fabric**—See **screen**. **E 1481, E06**
- wire gage**—measure used to describe, by system of arbitrary numbers, diameter of shank or wire from which nail is made. Because several systems of gage designations are in use, reference to particular gage system should be indicated. **F 547, F16**
- wire mesh**—See **screen**. **E 1481, E06**
- wire nail**—nail manufactured from metal wire or rod. **F 547, F16**
- wire rings (hog rings), n**—wires formed to make attachments during splicing or under certain conditions to serve as an alternate to the tie wires (see *double loop ties*). **F 1379, F14**
- wire rod, n**—a hot-rolled, single continuous length of metal, generally of circular cross section, hot wound or laid into irregular coils, considered a semifinished product, primarily intended for wire drawing. **A 902, A05**
- wire rope, n**—a number of wire strands laid helically about an axis. **A 902, A05**
- wires, n**—high tensile, brass plated steel wires, coated with a special adhesion-promoting compound, that are used as tire reinforcement. Belts or radial tires plies and beads are common uses. **D 5681, D34**
- wire sawn**—a surface with a pattern of linear and/or curved grooves produced by a wire saw. **C 119, C18**
- wire side, n**—of *paper*, the side of paper that was in contact with the sheet-forming wire on a paper machine that utilized a single wire (versus a twin-wire) forming section (also called the “bottom side”). **D 1968, D06**
- wire side**—in *paper*, the side of a sheet next to the wire in paper manufacturing. **F 149, F05**
- wires per unit length, n**—for *woven pile yarn floor covering*, the number of binding sites per unit of floor covering length; wires in the widthwise direction being the usual means of forming the pile. **D 123, D13**
- wires per unit length, n**—for *woven pile yarn floor covering*, the number of binding sites per unit of floor covering length; wires in the widthwise direction being the usual means of forming the pile. **D 5684, D13**
- wire strand, n**—a number of wires laid helically about an axis; may or may not contain a center wire. **A 902, A05**
- wiry end**—See **tight twist end**. **D 3990, D13**
- withdrawal force**—the force required to separate two mated connector halves. **B 542, B02**
- withdrawal pressing, n**—a powder consolidation method in which the die moves downward in relation to the lower punch(es) during compaction. It further descends over the fixed lower punch(es) for ejection, so that the compact may then be pushed off the tooling at this point. **B 243, B09**
- with grain, n**—the direction in a body with preferred orientation due to forming stresses that has the maximum *a*-axis alignment as measured in an X-ray diffraction test. **C 709, D02**
- with grain, n**—the direction in a body with preferred orientation due to forming stresses that has the maximum *a*-axis alignment as measured in an X-ray diffraction test. **D 4175, D02**
- within-laboratory, between days variability**—the precision of a method expressed as the agreement attainable between independent determinations (each the average of duplicates) performed by one analyst using the same apparatus and techniques on each of two days. **E 1547, E15**
- within-laboratory standard deviation, n**—the standard deviation of test results obtained within a laboratory for a single material under conditions that may include such elements as different operators, equipment, and longer time intervals. **E 456, E11**
- within-laboratory standard deviation, S_p, n** —the standard deviation of results collected on the same material in the same laboratory on different days (synonym: **repeatability**). **E 135, E01**
- witness tire, n**—a reference tire with an extended period of stability for specified characteristic properties. **F 538, F09**
- Wobbe index**—a numerical value that is calculated as the heat value (calorific value/heat) on a volume basis at specified reference conditions, divided by the square root of the relative density at the same specified reference conditions. The Wobbe index is a measure of heat input to gas appliances derived from the orifice flow equation. It indicates the relative amount of energy that would flow through a small burner orifice jet. **D 4150, D03**
- wobble**—in electromagnetic testing, an effect that produces variations in coil spacing (operational lift-off) due to lateral motion of the test specimen in passing through an encircling coil. **E 1316, E07**
- wollastonite**—a calcium metasilicate mineral with the formula CaSiO_3 containing theoretically 48.3 % lime (CaO) and 51.7 % silica (SiO_2), occurring in acicular masses of elongated triclinic crystals, usually white or pale gray. **C 242, C21**
- wood**—the tissues of the stem, branches, and roots of a woody plant lying between the pith and cambium, serving for water conduction, mechanical strength, and food storage, and characterized by the presence of tracheids or vessels. **D 9, D07**
- wood-base fiber and particle panel materials**—a generic term applied to a group of board materials manufactured from wood or other lignocellulosic fibers or particles to which binding agents and other materials may be added during manufacture to obtain or improve certain properties. Composed of two broad types, fibrous-felted and particleboards. **D 1554, D07**
- wood cellulose, purified**—chemical cellulose from wood. **D 1695, D01**
- wood-cement board**—a panel material where wood usually in the form of excelsior is bonded with inorganic cement. **D 1554, D07**
- wood-destroying organisms**—principally the decay-producing fungi, beetles, termites, carpenter ants, marine borers, etc. **D 9, D07**
- wood failure, n**—the rupturing of wood fibers in strength tests on bonded specimens, usually expressed as the percentage of the total area involved which shows such failure. **D 907, D14**
- wood failure**—(1) as applied to *plywood glueline testing*, the area of wood fiber remaining at the glueline following completion of the specified shear test. Determination is by means of visual examination and expressed as a percent of the test area.
- (2) as applied to *failure in plywood not directly associated with*

wood failure

the adhesive, a rupture, shelling, tearing or breaking of the wood itself. (See also **broken grain**.)

D 1038, D07

wood fiber, *n*—insulation composed of wood fibers, with or without binders. **C 168, C16**

wood-fibered plaster, *n*—a calcined gypsum plaster containing shredded or ground wood fiber added during manufacture. **C 11, C11**

wood flour—very fine wood particles generated from wood reduced by a ball or similar mill until it resembles wheat flour in appearance, and of such a size that the particles usually will pass through a 40-mesh screen. **D 1554, D07**

wood fuel—fuel derived from biomass composed of woody trees or shrubs. **E 772, E44**

wood fuel—fuel derived from biomass composed of woody trees or shrubs. **E 1705, E48**

wood-heel attaching nail—bright, regular-stock-steel, annularly threaded or helically threaded, $\frac{3}{8}$ by 0.054 to $\frac{7}{8}$ by 0.072-in. nails with slightly countersunk flat head and medium or long diamond point. **F 547, F16**

wood-heel top-lift nail—bright, regular-stock-steel, $\frac{1}{2}$ by 0.041 to $\frac{3}{4}$ by 0.048-in. nails with flat or brad head and long diamond point. **F 547, F16**

wood laminates, *n*—(see also **laminated**, *n*)

built-up laminated wood, *n*—an assembly made by joining layers of lumber with mechanical fastenings so that the grain of all laminations is essentially parallel.

glue-laminated wood, *n*—an assembly made by bonding layers of veneer or lumber with an adhesive so that the grain of all laminations is essentially parallel.

plywood, *n*—a panel generally flat built up of layers of veneer called plies, united under pressure by an adhesive to create a panel with the bond between the plies as strong as, or stronger than, the wood, and that has the following characteristics: (1) is constructed of an odd number of layers with grain of adjacent layers perpendicular, (2) with a layer consisting of either a single ply or two or more plies laminated with parallel grain direction, and (3) with outer layers and all odd numbered layers generally having the grain direction oriented parallel to the long dimension of the panel. **D 907, D14**

wood-lath nail—blued, regular-stock-steel, 1 and $1\frac{1}{8}$ by 0.054 and 0.072-in. nails with flat $\frac{1}{8}$ to $\frac{1}{64}$ -in. head and medium diamond point. **F 547, F16**

wood residue, *n*—the scrap and waste wood resulting from the harvest of trees. **D 1968, D06**

wood substance—the moisture-free material of which wood is composed.

NOTE—In laboratory tests, wood substance is usually on an extractive-free basis, but in common usage it usually includes all material remaining after oven-drying. There is little variation in the specific gravity of wood substance among temperate-zone species. Variation among species is caused primarily by the proportions of wood substance and air. **D 9, D07**

wood veneer, *n*—a thin sheet of wood, generally within the thickness range from 0.01 to 0.25 in. (0.3 to 6.3 mm) to be used in a laminate. **D 907, D14**

wood wool (excelsior)—long, curly, slender strands of wood used as an aggregate component for some particleboards. **D 1554, D07**

wool—a mass of staple fibers bonded into a three dimensional network, producing a low density material for thermal and/or acoustic insulation. **C 162, C14**

wool, *n*—used in the generic sense in these tolerances, the fiber from the fleece of the sheep or lamb, the hair of the Angora or Cashmere goat, rabbit hair, and the so-called specialty fibers from the hair of the camel, alpaca, llama, and vicuna. **D 123, D13**

wool, *n*—the fibrous covering of the sheep, *Ovis* species. **D 123, D13**

wool, *n*—as defined in the Wool Products Labeling Act of 1939, “the

fiber from the fleece of the sheep or lamb, or hair of the Angora goat or Cashmere goat (and may include the so-called specialty fibers from the hair of the camel, alpaca, llama, and vicuna) which has never been reclaimed from any woven or felted wool product.” **D 123, D13**

wool, *n*—the fibrous covering of the sheep, *Ovis* species. **D 4845, D13**

wool, *n*—as defined in the Wool Products Labeling Act of 1939, “the fiber from the fleece of sheep or lamb, or hair of the Angora goat or Cashmere goat (and may include the so called specialty fibers from the hair of the camel, alpaca, llama, and vicuna) which has never been reclaimed from any woven or felted wool product.” **D 4845, D13**

wool base, *n*—oven-dried scoured wool free of alcohol-extractable matter, mineral matter, vegetable matter, and all impurities. **D 123, D13**

wool base, *n*—oven-dried scoured wool free of alcohol-extractable matter, mineral matter, vegetable matter, and all impurities. **D 4845, D13**

wool content, *n*—the quantity of new and recycled wool, as defined in the Wool Products Labeling Act, which is determined by chemical analysis. **D 123, D13**

wool content, *n*—the quantity of new and recycled wool, as defined in the Wool Products Labeling Act, which is determined by chemical analysis. **D 4845, D13**

woolen run—an indirect yarn numbering system in the woolen system, equal to the number of 1600-yd lengths per pound. (Compare **woolen cut**, **worsted count**.) **D 123, D13**

woolen-spun, *adj*—of, or pertaining to, material produced by the woolen system of yarn spinning as distinct from materials made by the worsted system of spinning. (Compare **worsted-spun**.) **D 123, D13**

woolen-spun, *adj*—of, or pertaining to, material produced by the woolen system of yarn spinning as distinct from materials made by the worsted system of spinning. (Compare **worsted-spun**.) **D 4849, D13**

woolen system, *n*—a spinning system employing a minimum of drafting and producing yarns of low-bulk density. **D 123, D13**

woolen system, *n*—a spinning system employing a minimum of drafting and producing yarns of low-bulk density. **D 4849, D13**

woolen yarn, *n*—yarn spun from wool fibers which have been carded but not combed or gilled. **D 123, D13**

woolen yarn, *n*—yarn spun from wool fibers which have been carded but not combed or gilled. **D 4845, D13**

wool felt, *n*—a felt composed wholly of any one or a combination of new or recycled wool fibers. **D 123, D13**

wool felt, *n*—a felt composed wholly of any one of or a combination of new or recycled wool fibers. **D 4845, D13**

wool, grease—See **grease wool**. **D 4845, D13**

wool, new—See **wool, virgin**. **D 4845, D13**

wool, raw—See **raw wool**. **D 4845, D13**

wool, recycled—See **recycled wool**. **D 4845, D13**

wool, reprocessed—See **recycled wool**. **D 4845, D13**

wool, reused—See **recycled wool**. **D 4845, D13**

woolskin—sheepskin tanned with the wool on. **D 1517, D31**

word processors—a combination of pieces of hardware consisting of keyboard, video display, and printer interfaced with a computer for the purpose of combining operator and computer logic control in preparing printed matter. **F 909, F05**

work, *n*—the energy expended in displacing a body; mathematically, force times distance. **D 123, D13**

work, *n*—the energy expended in displacing a body; mathematically, force times distance. **D 4848, D13**

workability—a subjective term used to describe the ease of fabrication of molten glass. **C 162, C14**

workability, *n*—the ability of mortar to be easily placed and spread. **C 1180, C12**

workability—the degree of ease and smoothness of cut obtainable on wood with hand or machine tools. **D 9, D07**

workability enhancer, *n*—admixture incorporated into a masonry mortar to increase the ease of being worked and used. A workability enhancer will increase the board life and maintain the water retention of a mortar. **C 1180, C12**

workability index, *n*—a measure of the moldability of plastic refractories, determined in accordance with Test Method C 181. **C 71, C08**

workability of concrete, *n*—that property determining the effort required to manipulate a freshly mixed quantity of concrete with minimum loss of homogeneity. **C 125, C09**

work area—assigned space within a building, or at an exterior location, that is designated as the region delineated by the scope of work. **E 631, E06**

work area, *n*—the interior or exterior space where lead hazard control or other building maintenance or modification activities are performed. **E 1605, E06**

work breakdown structure (WBS), *n*—a hierarchically structured list of work packages and activities, that defines the total work scope of a project, identifies and organizes the relationships of the work packages and activities to each other, and provides the basis for effective project planning, management, and control. **E 833, E06**

work function—the potential barrier that must be overcome to remove an electron from the Fermi level of a specimen to the vacuum level. **E 673, E42**

work hardening—a change in the hardness of a material as a result of plastic deformation. **E 7, E04**

working cotton standard, *n*—a reference standard developed primarily for use within a specific laboratory. (See **Precision**.) **D 123, D13**

working cotton standard, *n*—a reference standard developed primarily for use within a specific laboratory. **D 7139, D13**

working direction, *n*—in *manufactured carbon and graphite product technology*, direction of applied force used in forming a solid body; generally the direction of applied molding pressure for a uniaxially molded material and the extrusion direction for an extruded material. **C 709, D02**

working direction, *n*—in *manufactured carbon and graphite product technology*, direction of applied force used in forming a solid body; generally the direction of applied molding pressure for a uniaxially molded material and the extrusion direction for an extruded material. **D 4175, D02**

working distance—the distance between the surface of the specimen being examined and the front surface of the objective lens. **E 7, E04**

working drawing—a detail drawing, usually produced by a draftsman under direction of an architect, engineer, or other designer showing form, quantity, and relationship of construction elements and materials; indicating their location, identification, grades, dimensions, and connections. Compare **shop drawing**.

working life:

adhesive working life—the period of time during which an adhesive, after mixing with catalyst, solvent, or other compounding ingredients, remains suitable for use.

sealant working life—the amount of time faying surfaces can be left open once sealant has been applied and still squeeze out excess sealant on closure to a thickness of 0.005 in. (0.13 mm) or less. **E 631, E06**

working drawing—See **drawing**. **E 1480, E06**

*working drawing, *n** (dessin d'exécution)—detail drawing, usually produced by a draftsman under direction of an architect, engineer, or other designer showing the form, quantity, and relationship of construction elements and materials and indicating their location, identification, grades, dimensions, and connections. **E 631, E06**

working electrode—the test or specimen electrode in an electrochemical cell. **G 15, G01**

working elongation (WE), *n*—of rope, elongation which is immediately recoverable when tension is removed from the rope. **D 123, D13**

working end—the compartment of a melting furnace from which glass is delivered for forming. **C 162, C14**

working flow-rate standard—See **standard**. **D 1356, D22**

working life, *n*—of a sealant, the time interval after opening a container of a single component sealant, or after mixing the components of a multi-component sealant, during which application and tooling is possible. **C 717, C24**

working life, *n*—the period of time during which an adhesive, after mixing with catalyst, solvent, or other compounding ingredients, remains suitable for use. (Synonym **pot life**.) (Compare **storage life**.) **D 907, D14**

working life:

adhesive working life—the period of time during which an adhesive, after mixing with catalyst, solvent, or other compounding ingredients, remains suitable for use.

sealant working life—the amount of time faying surfaces can be left open once sealant has been applied and still squeeze out excess sealant on closure to a thickness of 0.005 in. (0.13 mm) or less. **E 1749, E06**

working pressure—the pressure adjudged best for any particular set of conditions encountered during grouting. **D 653, D18**

working range—the range of surface temperature in which glass is formed into ware in a specific process. The “upper end” refers to the temperature at which the glass is ready for working (generally corresponding to a viscosity of 10^2 to 10^3 Pa · s), while the “lower end” refers to the temperature at which it is sufficiently viscous to hold its formed shape (generally corresponding to a viscosity greater than 10^4 Pa · s). For comparative purposes, when no specific process is considered, the working range of glass is assumed to correspond to a viscosity range from 10^3 to $10^{6.6}$ Pa · s. **C 162, C14**

working standard—See **standard**. **D 1356, D22**

working standard, *n*—an instrument standard or laboratory standard in routine use. **E 284, E12**

working stresses—See **allowable properties**. Archaic. **D 9, D07**

working time, *n*—the elapsed time from the first addition of liquid during mixing of the refractory castable until the first indication that it can no longer be placed by the desired placement method; the total of the mixing time and placement time. **C 71, C08**

working time (chemical-resistant mortars)—the time interval in minutes after initial mixing of the component parts, at a specific temperature and in the absence of direct sunlight, in which the mortar may be applied to a brick or tile surface without curling behind the trowel. **C 904, C03**

work-in-process—material that has been released to manufacturing, engineering, design, or other services under the contract and includes undelivered manufactured parts, assemblies, and products, either complete or incomplete. **E 2135, E53**

workmanship—expected absence of imperfections affecting serviceability of a fastener. Often used to describe a finish free from injurious burrs, seams, laps, or irregular surfaces. **F 1789, F16**

workplace—See **space categories**. **E 1480, E06**

work plan—a plan, specific to a particular site, for conducting activities specified in the plan. **D 5681, D34**

work plans, *n*—plans that are specific to sampling at a particular site; examples are Health and Safety Plans and Sampling and Analysis Plans. **D 5681, D34**

work (plating)—the material being plated or otherwise finished. **B 374, B08**

work-practice control—see **engineered control**. **E 631, E06**

work recovery, *n*—the percent of recoverable work to the total work required to strain a fiber a specified amount under specified conditions. **D 123, D13**

work recovery, *n*—the percent of recoverable work to the total work

work recovery, *n*

- required to strain a fiber a specified amount under specified conditions. **D 4848, D13**
- workshop effort**—the exclusive, intense concentration of the VA team on the project during the workshop period.
workstation—See **building space**. **E 631, E06**
- workshop effort, *n***—the exclusive, intense concentration of the VA team on the project during the workshop period. **E 833, E06**
- workspace**—See **space categories**. **E 1480, E06**
- workstation**—See **space categories**. **E 1480, E06**
- work-to-break, *n***—the total energy required to rupture a specimen to the breaking force during a tensile test. **D 123, D13**
- work to break, *n***—the energy expended up to the breaking force. (See **work-to-rupture**. Compare **toughness**.) **D 4848, D13**
- work-to-break, *n***—the total energy required to rupture a specimen to the breaking force during a tensile test. **D 6477, D13**
- work-to-break (W, LF), *n***—*in tensile testing*, the total energy required to rupture a specimen. **D 4439, D35**
- work-to-rupture, *n***—the energy expended to tear apart a material. (See **work-to-break**. Compare **toughness**.) **D 123, D13**
- work to rupture, *n***—the energy expended to tear apart a material. (See **work to break**. Compare **toughness**.) **D 4848, D13**
- worst area difference**—one of the measures of how easily an interpreter can identify the characters of a font set, it is the range of the surface areas enclosed by the nominal COL's of the characters; the greater this range, the more easily the characters can be identified. **F 149, F05**
- worsted count, *n***—an indirect yarn numbering system in the worsted system equal to the number of 560-yd lengths per pound. (*Syn.* English worsted count. Compare **woolen run**.) **D 123, D13**
- worsted count, *n***—an indirect yarn numbering system in the worsted system equal to the number of 560-yd lengths per pound. (*Syn.* English worsted count. Compare **woolen run**.) **D 4849, D13**
- worsted-spun, *adj***—of, or pertaining to, materials produced by the worsted system of yarn spinning as distinct from materials made by the woolen system of spinning. **D 123, D13**
- worsted-spun, *adj***—of, or pertaining to, materials produced by the worsted system of yarn spinning as distinct from materials made by the woolen system of spinning. **D 4845, D13**
- worsted system, *n***—a spinning system adapted to fibers 50 to 225 mm (2 to 9 in.) in length. **D 123, D13**
- worsted system, *n***—a spinning system adapted to fibers 50 to 225 mm (2 to 9 in.) in length. **D 4849, D13**
- worsted yarn, *n***—yarn spun from wool fibers which have been carded, and either gilled or combed, or both. **D 123, D13**
- worsted yarn, *n***—yarn spun from wool fibers which have been carded, and either gilled or combed, or both. **D 4845, D13**
- worth**—the value as defined in monetary terms of a specific function identified.
XEPS—see **rigid cellular polystyrene thermal insulation board**. **E 631, E06**
- worth, *n***—the value as defined in monetary terms of a specific function identified. **E 833, E06**
- wound, *n***—an injury or damage, usually restricted to those caused by physical means with disruption of the normal continuity of structures. Called also injury and trauma. **F 2312, F04**
- wound closure, *n***—the provision of an epithelial cover over a wound; it can be accomplished by approximating wound edges, performing a skin [auto]graft, or allowing spontaneous healing from the edges. **F 2312, F04**
- wound contraction, *n***—the shrinkage and spontaneous closure of open skin wounds. **F 2312, F04**
- wound contracture, *n***—a condition of fixed high resistance to passive stretch of muscle, skin or joints resulting from fibrosis and scarring of the skin or the tissues supporting the muscles or the joints, or both. (This definition is a modification of Dorland's definition of contracture, "a condition of fixed high resistance to passive stretch of muscle, resulting from fibrosis of the tissues supporting the muscles or the joints, or disorders of the muscle

- fibers," because that definition does not address fibrosis and scarring in skin.) **F 2312, F04**
- wound inflammation, *n***—a localized protective response elicited by injury or destruction of tissues, which serves to destroy, dilute, or wall off (sequester) both the injurious agent and the injured tissue. **F 2312, F04**
- woven fabric, *n***—a structure produced when at least two sets of strands are interlaced, usually at right angles to each other, according to a predetermined pattern of interlacing, and such that at least one set is parallel to the axis along the lengthwise direction of the fabric. **D 123, D13**
- woven fabric**—See **woven fabric** under **fabric**. **D 3878, D30**
- woven fabric, *n***—a structure produced when at least two sets of strands are interlaced, usually at right angles to each other, according to a predetermined pattern of interlacing, and such that at least one set is parallel to the axis along the lengthwise direction of the fabric. **D 4850, D13**
- wppm, *abbr***—an abbreviation for part per million by weight. **D 4175, D02**
- wppm, *abbr***—an abbreviation for part per million by weight. **D 6384, D02**
- WQA**—water quality association. **D 6161, D19**
- wrap, *n***—a flexible sheet material used to protect items in **packaging**. **D 996, D10**
- wrap, *v***—to protect the exposed edges of thermal insulation board. **E 2110, E06**
- wrap angle, *n***—*in yarn friction testing*, the cumulative angular contact of the test specimen against the friction-inducing device, expressed in radians. **D 123, D13**
- wrap angle, *n***—*in yarn friction testing*, the cumulative angular contact of the test specimen against the friction-inducing device, expressed in radians. **D 4849, D13**
- wrap around**—the display of misleading reflections from a previously transmitted pulse, caused by an excessively high pulse-repetition frequency. **E 1316, E07**
- wrap-around bend, *n***—the bend obtained when a specimen is wrapped in a closed helix around a cylindrical mandrel. **E 6, E28**
- wrap-in, *n***—*in vinyl-coated glass yarns*, a method of completing a package after a break by wrapping the two ends together on the package without splicing or tying a knot. **D 123, D13**
- wrap-in, *n***—*in vinyl-coated glass yarns*, a method of completing a package after a break by wrapping the two ends together on the package without splicing or tying a knot. **D 7018, D13**
- wrap seam**—a depression or step in the surface finish caused by the lap of the flexible mold or carrier strip after it is removed from the cured pultrusion. **D 3918, D20**
- Wratten filter**—the trade name for a specific type of color filter. **E 7, E04**
- wrinkle, *n***—an objectionable crease, generally short and irregular in shape. **D 123, D13**
- wrinkle, *n***—an imperfection in reinforced plastics that has the appearance of a wave molded into one or more plies of fabric or other reinforcing material. **D 883, D20**
- wrinkle**—a permanent crease or furrow in the grain surface of a hide or leather, incapable of removal by rolling or plating. **D 1517, D31**
- wrinkle, *n***—an objectionable crease, generally short and irregular in shape. **D 3990, D13**
- wrinkle depression**—an undulation or series of undulations or waves on the surface of the pultruded part.
NOTE—This condition can occur in either the lengthwise or crosswise direction of the pultrusion and is caused by reinforcement shifting and crowding (see **folded reinforcement**). Wrinkles affect the flatness of the surface. **D 3918, D20**
- wrinkle recovery, *n***—that property of a fabric which enables it to recover from folding deformations. **D 123, D13**
- wrinkle recovery, *n***—that property of a fabric which enables it to recover from folding deformations. **D 4850, D13**
- wrinkle resistance, *n***—that property of a fabric which enables it to

resist the formation of wrinkles when subjected to a folding deformation. **D 123, D13**

wrinkle resistance, n—that property of a fabric which enables it to resist the formation of wrinkles when subjected to a folding deformation. **D 4850, D13**

wrinkles, n—a condition where ink being absorbed into a substrate coating causes it to swell and stretch to the point where it cannot recede back to its former dimensions, forming folds in the image area. **F 1857, F05**

wrinkling—*in protective coatings*, the formation of a surface appearance in a coating film resembling the skin of a prune. **D 4538, D33**

wrist, n—*in anatomy*, the joint which articulates between the end of the lower arm and the hand. **D 123, D13**

wrist, n—the joint that articulates between the end of the lower arm and the hand. **D 5219, D13**

wrist, n—*in anatomy*, the joint which articulates between the end of the lower arm and the hand. **F 1494, F23**

wrist girth, n—*in body measurements*, the circumference over the prominence of the inner and the outer forearm bones. **D 123, D13**

wrist girth, n—the maximum circumference of the wrist, taken over the inner and outer prominence of the wrist bones. **D 5219, D13**

wrist girth, n—*in body measurements*, the circumference over the prominence of the inner and outer forearm bones. **F 1494, F23**

write—the images produced by a ribbon or first carbon. **F 221, F05**

writing—the act of producing an image on a document, or other receptor media, one character or stroke at a time, such as by hand with a pen or pencil or by means of a typewriter or pen plotter. **F 335, F05**

writing—the act of producing an image on a document or other receptor media, one character or stroke at a time, such as by hand with a pen or pencil or by means of a typewriter or pen plotter. **F 909, F05**

wrong draft—See **wrong draw**. **D 3990, D13**

wrong draw, n—*in woven fabric*, one or more incorrectly drawn warp ends in the harness or reed. **D 123, D13**

wrong draw, n—*in woven fabric*, one or more incorrectly drawn warp ends in the harness or reed. (*Syn.* wrong draft, misdraw) **D 3990, D13**

wrong pick—See **mispick**. **D 3990, D13**

wrong side, n—See **back side**. **D 4965, D13**

"WS"—clean with shampoo, foam, or dry cleaning solvents as desired. Do not saturate with any the liquid. Pile fabrics may require brushing to restore appearance. Cushion covers should not be removed and laundered or dry cleaned. **D 5253, D13**

"WS"—a letter code. See **upholstery cleaning instructions**. **D 5253, D13**

WSF—*in aquatic toxicity testing*, abbreviation for water soluble fraction. **D 4175, D02**

X

“X”—do not clean with either water cleaner or solvent-based cleaner. Use a vacuum cleaner or light brush only. **D 5253, D13**

“X”—a letter code. See **upholstery cleaning instructions**. **D 5253, D13**

xanthate viscosity—see **viscosity, xanthate**. **D 1695, D01**

X_{bH} , X_{bM} , and X_{bV} —the X coordinates of the locations of these respective widths of the snowboard measured from the tail of the snowboard.

X_{bH} , X_{bM} , X_{bV} —the x coordinates for the location of these respective widths of the ski measured from the tail of the ski. **F 472, F27**

X dimension, n—in *bar code symbology*, the intended width of the narrow elements as set by the application or specification, or both. **F 1294, F05**

xenogeneic or xenogenic, n—cells, tissues, and organs in which the donor and recipient belong to different species. Synonyms: *xenogenous, heterogeneic, or heterologous*. **F 2312, F04**

xenograft, n—a graft of tissue transplanted between animals of different species. Called also heterograft, heterologous graft and heteroplastic graft. **F 2312, F04**

xenon arc, n—an excited state xenon-plasma that emits UV, visible, and IR radiation and is produced by passing a high intensity electric current through a quartz tube containing xenon gas. **G 113, G03**

xenotransplantation, n—any procedure that involves the transplantation or infusion into a human recipient of either (1) live cells, tissues, or organs from a nonhuman animal source or (2) human body fluids, cells, tissues, or organs that have had *ex vivo* contact with live nonhuman cells, tissues, or organs. **F 2312, F04**

Xeriscape, n—a term that refers to water-efficient choices in planting and irrigation design. It refers to seven basic principles to conserve water and protect the environment, including: planning and designing; use of well-adapted plants; soil analysis; practical turf areas; use of mulches; appropriate maintenance; and efficient irrigation. **E 2114, E06**

xerographic copying—a form of plain paper copying which uses a dry toner. Synonym for *xerography*. **F 335, F05**

xerographic paper, n—a grade of paper suitable for copying by the electrostatic process. **D 1968, D06**

xerography—See **xerographic copying**. **F 335, F05**

x-mm minus, n—pieces of classified, size reduced scrap tires where the maximum size of 95 % of the pieces is less than x-mm in any dimension (that is, 25-mm minus; 50-mm minus; 75-mm minus, etc). **D 5681, D34**

X-radiation—electromagnetic radiation of the same nature as visible light but having a wavelength approximately 1/1000 that of visible light. **E 7, E04**

X-ray fluorescence instrument, n—a measurement device that determines metal contents of materials using the physics of the interaction of gamma rays (from the excitation source) with electrons in target metals (for example, lead) in the material and the resulting fluorescence. **E 1605, E06**

X-ray ghost line—XPS, lines in a spectrum due to presence of contaminating X-ray photons from an impurity in the X-ray anode, from the X-ray window, or from certain elements present in the specimen. **E 673, E42**

X-ray image plane, n—in *tire testing*, a surface located at a specified distance from the X-ray tube “focal spot.” **F 538, F09**

X-ray imaging system, n—in *tire testing*, a collection of the components and subsystems needed to produce a fluoroscopic or radiographic image of the tire. **F 538, F09**

X-ray linewidth—the energy width of the principal characteristic X-ray; in XPS it usually refers to that of the X-ray source. The X-ray linewidth contributes to the photo-electron peak widths. **E 673, E42**

X-ray monochromator—a device used to eliminate photons of energies other than those in a narrow band. **E 673, E42**

X-ray radiograph, n—an X-ray film, plate, or paper that is placed at the image plane and is used for recording an X-ray image of the object being examined. **F 538, F09**

X-rays—See **X-radiation**. **E 7, E04**

X-ray screen, n—a fluorescent screen, placed at the image plane, that produces an X-ray image of the object being examined. **F 538, F09**

X-ray standard field—an X-ray field that is well characterized as to the exposure rate, or absorbed dose rate produced in a specified material, at a specified location within the field for a given tube voltage, current, and filtration. **E 170, E10**

X-ray tube—a device for the production of X-rays by the impact of high-speed electrons on a metal target. **E 7, E04**

XRF analyzer—instrument that determines lead concentration, using the principle of X-ray fluorescence. **E 631, E06**

XRF direct-reading analyzer—an analyzer that provides the operator with a display of a lead concentration calculated from the lead “K” x-ray intensity. Compare **XRF spectrum analyzer**. **E 631, E06**

XRF reading cycle-XRF direct-reading analyzers—calculate the lead “K” x-ray intensity in a specific time interval (10 to 30 s) that is fixed by the manufacturer and related to the age of the source. The calculated result in this time interval is a *reading cycle*. **E 631, E06**

XRF sample site—specific spot on a surface being tested for lead concentration by portable or laboratory XRF equipment. **E 631, E06**

XRF-shoot, v—to obtain the results of an XRF single reading cycle. **E 631, E06**

XRF spectrum analyzer—type of XRF analyzer that provides the operator with a plot of the energy and intensity of both “k” and “L” x-rays, as well as a calculated concentration of lead. Compare **XRF direct-reading analyzer**. **E 631, E06**

XRF substrate effect—return of backscattered radiation from paint, substrate, or underlying material to the XRF analyzer. **E 631, E06**

X/R ratio, n—the ratio of system inductive reactance to resistance. **F 819, F18**

xylan—a pentosan giving almost exclusively xylose on hydrolysis. **D 1695, D01**

xylem—the portion of the tree trunk, branches, and roots that lies between the pith and the cambium. **D 9, D07**

xylene—a mixture of C₈ aromatic hydrocarbons. **D 4790, D16**

xylene, 10°C—xylene having a total distillation range of no more than 10°C. This range brackets the boiling points of the three individual isomers and ethylbenzene. Refer to Specification D 846 for complete specifications. **D 4790, D16**

xylene, nitration grade—xylene consisting principally of the meta isomer and having a total distillation range of no more than 5°C. Nonaromatic impurities is limited to a maximum of 4 volume %. Refer to Specification D 843 for complete specifications. **D 4790, D16**

xylol(s)—dimethyl phenol(s), hydroxydimethylbenzene (C₈H₁₀O) mol weight 122.16; colorless crystalline powders. Five isomeric xylenols exist. **D 4790, D16**

Y

- Y**—conversion, recovery. **D 6161, D19**
- yarn**, *n*—a generic term for a continuous strand of textile fibers, filaments, or material in a form suitable for knitting, weaving, or otherwise intertwining to form a textile fabric. **D 123, D13**
- yarn**—*in fibrous composites*, a continuous, ordered assembly of essentially parallel, collimated filaments, normally with twist, and of either discontinuous or continuous filaments.
- single yarn*, *n*—an end in which each filament follows the same twist. **D 3878, D30**
- yarn**, *n*—a generic term for a continuous strand of textile fibers, filaments, or material in a form suitable for knitting, weaving, or otherwise intertwining to form a textile fabric. **D 4849, D13**
- yarn appearance**, *n*—the visual effect obtained by viewing a sample of yarn wound with a designated traverse on a black board of designated size. **D 123, D13**
- yarn appearance**, *n*—the visual effect obtained by viewing a sample of yarn wound with a designated traverse on a black board of designated size. **D 4849, D13**
- yarn break**, *n*—*in sewn seams*, a mode of failure evidenced by yarns rupturing at the seam or at any other area in the test specimen. (Syn. yarn burst and yarn tear) **D 123, D13**
- yarn break**, *n*—*in sewn seams*, a mode of failure evidenced by yarns rupturing at the seam or at any other area in the test specimen. (Syn. yarn burst and yarn tear.) **D 4850, D13**
- yarn crimp**, *n*—*in fabric*, the undulations or waviness in a yarn due to interactions with other yarns. **D 123, D13**
- yarn crimp**, *n*—*in fabric*, the undulations or waviness in a yarn due to interactions with other yarns. **D 4850, D13**
- yarn distortion**, *n*—*in woven fabrics*, a condition in which the symmetrical surface appearance of a fabric is altered by the shifting or sliding of warp or filling yarns. **D 123, D13**
- yarn distortion**, *n*—*in woven fabrics*, a condition in which the symmetrical surface appearance of a fabric is altered by the shifting or sliding of warp or filling yarns. **D 4850, D13**
- yarn fault**, *n*—*in textile strands*, a change in thickness sufficient without magnification. **D 123, D13**
- yarn fault**, *n*—*in textile strands*, a change in thickness sufficient to be visible without magnification. **D 4849, D13**
- yarn fault count**, *n*—the number of yarn faults per specified length of product. **D 123, D13**
- yarn fault count**, *n*—the number of yarn faults per specified length of product. **D 4849, D13**
- yarn number**, *n*—a measure of the linear density of a yarn, expressed as “mass per unit length,” or “length per unit mass,” depending upon the yarn numbering system used. (Syn. **yarn count**.) (See **yarn numbering system**.) **D 123, D13**
- yarn number**, *n*—a measure of the linear density of a yarn expressed as “mass per unit length,” or “length per unit mass,” depending upon the yarn numbering system used. (Syn. **yarn count**.) (See **yarn numbering system**.) **D 4849, D13**
- yarn numbering system**, *n*—a system expresses the size of a yarn as a relationship between its length and associated mass. (See also **direct yarn numbering system** and **indirect yarn numbering system**.) **D 123, D13**
- yarn numbering system**, *n*—a system that expresses the size of a yarn as a relationship between its length and associated mass. (See **direct yarn numbering system** and **indirect yarn numbering system**.) **D 4849, D13**
- yarn number jute**, *n*—mass per unit length of a yarn measured as the number of pounds per 13 167 m (14 400 yd), and expressed as pounds per spynle. **D 123, D13**
- yarn package**, *n*—a length or parallel lengths of yarn in a form suitable for handling, storing, or shipping. **D 123, D13**
- yarn package**, *n*—a length or parallel lengths of yarn in a form suitable for handling, storing, or shipping. **D 4849, D13**
- yarn severance**, *n*—a numerical value expressed on a percentage basis from this test that is used as an index of the degree of cutting of fabric yarns by the sewing machine needle in making sewn seams. **D 123, D13**
- yarn slippage**, *n*—*at the seam in sewn fabrics*, the displacement of one or more yarns from the original position, causing differences in alignment, spacing, or both. **D 123, D13**
- yarn slippage**, *n*—*at the seam in sewn fabrics*, the displacement of one or more yarns from the original position, causing differences in alignment, spacing, or both. **D 4850, D13**
- yarn streak**, *n*—*for inflatable restraint fabrics*, discoloration of an individual yarn that does not affect adjacent yarns. **D 6799, D13**
- yarn take-up**, *n*—*in fabric*, the additional length of yarn used to make a given length of fabric. **D 123, D13**
- yarn take-up**, *n*—*in fabric*, the additional length of yarn used to make a given length of fabric. **D 4850, D13**
- yaw**, *n*—*in a vehicle*, the angular motion of a vehicle about its vertical axis through the center of gravity. **F 538, F09**
- yaw velocity**, *n*—the magnitude of the yaw (rotation or angular displacement); it may be measured by fore and aft, vehicle versus pavement, velocity sensors. **F 538, F09**
- Y dimension**, *n*—*in a bar code symbology*, the specified height of elements. **F 1294, F05**
- yeast**—single cell microorganisms (fungi) that produce alcohol and CO₂ under normal fermentation conditions. **E 1705, E48**
- yellow**, *adj*—hue description applied to light of wavelengths from 572 to 783 nm and to visually similar stimuli. **D 2946, C17**
- yellowness**, *n*—*in asbestos fiber and products*, the degree to which asbestos deviates from colorlessness or neutral grey toward yellowish or tan as determined by the yellowness index. **D 2946, C17**
- yellowness**, *n*—attribute of color perception by which an object color is judged to depart from colorless or a preferred white toward yellow. **E 284, E12**
- yellowness index**, *n*—*in asbestos fiber and products*, an index calculated arbitrarily from reflectance measurements using tristimulus filters. Use the following relationship for asbestos:
- $$\text{yellowness index} = (A - B)/G$$
- where:
- A = reflectance with the amber tristimulus filter,
 B = reflectance with the blue tristimulus filter, and
 G = reflectance with the green tristimulus filter.
- NOTE—Additional definitions are presented in Specification C 296, Specification C 428, Test Method C 458, Test Methods C 500, Specification C 508, Specification C 541, Specification C 663, Specification C 668, Specification C 875, Guide C 966, Terminology D 123, Test Method D 1918, Test Method D 2985, Test Method D 2590, Test Method D 3879, and STP 834. **D 2946, C17**
- yellowness index**, *n*—a number, computed by a given procedure from colorimetric or spectrophotometric data, that indicates the degree of departure of an object color from colorless, or from a preferred white, toward yellow. **E 284, E12**
- yellow ware**—a yellow semivitreous ware or an earthenware with a colorless, clear glaze. **C 242, C21**
- yield**, *n*—the weight percent of the feed that reports to the concentrate. **D 121, D05**
- yield**, *n*—*in knitted fabrics*, the number of finished square meters per kilogram (square yards per pound) of greige fabric. **D 123, D13**
- yield**, *n*—*of wool*, the percentage of a designated commercial composition obtained by processing a lot of raw wool. **D 123, D13**
- yield**, *n*—*in raw wool*, the combined weight of clean wool fiber present and vegetable matter present, as a percentage of the raw wool weight. **D 123, D13**
- yield**—*in grouting*, the volume of freshly mixed grout produced from a known quantity of ingredients. **D 653, D18**
- yield**, *n*—*in raw wool*, the combined weight (mass) of clean wool

yield, *n*

- fiber present and vegetable matter present, as a percentage of the raw wool weight. **D 4845**, D13
- yield**, *n*—of wool, the percentage of a designated commercial composition obtained by processing a lot of raw wool. **D 4845**, D13
- yield**, *n*—in *knitted fabrics*, the number of finished square metres per kilogram (square yards per pound) of greige fabric. **D 4850**, D13
- yield**—an estimate of the number of pages that can be produced with a particular toner cartridge under specified conditions. **F 335**, F05
- yield, aerosol foam sealant**, *n*—in *building construction*, the cured volume of a compound after it is dispensed from a container. **C 717**, C24
- yield bend angle**—the angle at which the yield bend moment occurs. **F 1840**, F04
- yield bend moment**—the amount of moment required to initiate plastic deformation during a bend test. **F 1840**, F04
- yield, expected**, *n*—the quantity of material or the percentage of theoretical yield anticipated at any appropriate phase of production based on previous laboratory, pilot scale, or manufacturing data. **E 2363**, E55
- yield factor**, *n*—in *papermaking*, either a proportion or percentage representing that portion of the input material that is retained after paper stock preparation for inclusion in the paper manufacturing process. **D 1968**, D06
- yielding arch**—type of support of arch shape, the joints of which deform plastically beyond a certain critical load, that is, continue to deform without increasing their resistance. (ISRM) **D 653**, D18
- yield locus**—plot of shear stress versus normal stress at failure. The yield locus (YL) is sometimes called the instantaneous yield locus to differentiate it from the time yield locus. **D 653**, D18
- yield point**, *n*—in a *stress strain curve*, the point beyond which work is not completely recoverable and permanent deformation takes place. **D 123**, D13
- yield point**, *n*—that point on the stress-strain curve, short of ultimate failure, where the rate of stress with respect to strain goes through a zero value and may become negative. **D 1566**, D11
- yield point**, *n*—in *geosynthetics*, the point on the force-elongation curve at which the first derivative equals zero (the first maximum). **D 4439**, D35
- yield point**, *n*—in a *stress-strain curve*, the point beyond which work is not completely recoverable and permanent deformation takes place. (Compare **elastic limit**) **D 4848**, D13
- yield point elongation**, *YPE*, *n*—the strain (expressed in percent) separating the stress-strain curve's first point of zero slope from the point of transition from discontinuous yielding to uniform strain hardening. **E 6**, E28
- yield point**, *YP* [FL^{-2}], *n*—term previously used, by E 8 and E 8M, for the property which is now referred to as **upper yield strength**. **E 6**, E28
- yield strain**, *n*—the strain below which a material acts in an elastic manner, and above which it begins to exhibit permanent deformation or flow. **D 907**, D14
- yield strain**, *n*—the level of strain at the yield point. **D 1566**, D11
- yield strength**, *n*—the stress at which a material exhibits a specified limiting deviation from the proportionality of a stress-strain relationship. **D 123**, D13
- yield strength**, *n*—the stress at which a material exhibits a specified limiting deviation from the proportionality of stress to strain. **D 6477**, D13
- yield strength**—tension-applied load at which the fastener experiences a specific amount of permanent deformation, that is, the bolt has been stressed beyond its elastic limit and is in the plastic zone. It is very difficult to test full size bolts for yield strength. Because of different strain rates in the threaded section, thread runout and unthreaded shank which together comprise the stressed length, a "proof load" concept was introduced. **F 1789**, F16
- yield strength**, σ_{YS} [FL^{-2}]*n*—the stress at which a material exhibits a specific limiting deviation from the proportionality of stress to strain. This deviation is expressed in terms of strain. **E 1823**, E08
- yield strength**, *YS* or *S_y* [FL^{-2}], *n*—the engineering stress at which, by convention, it is considered that plastic elongation of the material has commenced. This stress may be specified in terms of (a) a specified deviation from a linear stress-strain relationship, (b) a specified total extension attained, or (c) maximum or minimum engineering stresses measured during discontinuous yielding. **E 6**, E28
- yield stress**—the stress beyond which the induced deformation is not fully annulled after complete destressing. (ISRM) **D 653**, D18
- yield stress**, *n*—the stress (either normal or shear) at which a marked increase in deformation occurs without an increase in load. (Synonym *yield value*) **D 907**, D14
- yield stress**, *n*—the level of stress at the yield point. **D 1566**, D11
- yield stress**, *n*—in *solids*, the maximum stress that can be applied without causing permanent deformation. **D 4175**, D02
- yield stress**, *n*—in *fluids*, the shear stress required to initiate flow. **D 4175**, D02
- yield stress**, *n*—limit to internal force developed by application of external force or load or generation of internal strain to a material, member, connection component, or assembly beyond which a marked increase in the rate of deformation occurs without an increase in load; expressed in terms of units of force per unit area, psi, pounds force per square inch (Mpa, megapascals). **E 631**, E06
- yield, theoretical**, *n*—the quantity that would be produced at any appropriate phase of production based upon the quantity of material to be used, in the absence of any loss or error in actual production. **E 2363**, E55
- yield value*, *n*—Synonym **yield stress**. **D 907**, D14
- yoke**—a magnet that induces a magnetic field in the area of a part that lies between its poles. Yokes may be permanent magnets or either alternating-current or direct-current electromagnets. **E 1316**, E07
- yoke magnetization**—a longitudinal magnetic field induced in a part, or in an area of a part, by means of an external electromagnet shaped like a yoke. **E 1316**, E07
- Youden square**, *n*—a type of block design derived from certain Latin squares by deleting, or adding, rows (or columns) so that one block factor remains complete blocks and the second block factor constitutes balanced incomplete blocks. **E 456**, E11
- Youden square**, *n*—A type of block design derived from certain Latin squares by deleting, or adding, rows (or columns) so that one block factor remains complete blocks and the second block factor constitutes balanced incomplete blocks. **E 1325**, E11
- Young's modulus**, *n*—in a *stress-strain curve for an elastic material*, the ratio of change in stress to change in strain within the elastic region of the material. **D 123**, D13
- Young's modulus**—the ratio of the increase in stress on a test specimen to the resulting increase in strain under constant transverse stress limited to materials having a linear stress-strain relationship over the range of loading. Also called **elastic modulus**. **D 653**, D18
- Young's modulus**, *n*—in a *stress-strain curve for an elastic material*, the ratio of change in stress to change in strain within the elastic region of the material. **D 4848**, D13
- Young's modulus**—the ratio of the increase of stress acting on a test sample to the resulting increase in strain, under constant transverse stress. **D 7099**, D18
- Young's modulus**—see *modulus of elasticity*. **F 1789**, F16
- Young's modulus**, *E* [FL^{-2}], *n*—modulus of elasticity in tension or compression. **E 6**, E28

Z

Zahn cup—an apparatus for the measurement of liquid or slurry viscosity expressed as the number of seconds required for the liquid or slurry to drain from the cup through a hole of definite diameter. **C 242, C21**

Z-Axis, *n*—in *barcode reading*, a coordinate related to the orientation and movement of a symbol on a transport system. **F 1294, F05**

Z dimension, *n*—in *bar code reading*, a calculation of element width achieved by adding the average element width of bar and space and dividing by two. **F 1294, F05**

zeolite—any of various natural or synthetic hydrated aluminum silicates used as ion exchange substrates in water softening. **D 6161, D19**

zephyr yarn, *n*—a variety of soft worsted yarn characterized by a low twist and spun from wool which is as fine or finer in average diameter than U.S. Standard 64's grade tops. **D 123, D13**

zephyr yarn, *n*—a variety of soft worsted yarn characterized by a low twist and spun from wool which is as fine or finer in average diameter with U.S. Standard 64's grade tops. **D 4845, D13**

zero air voids curve (saturation curve)—the curve showing the zero air voids unit weight as a function of water content. **D 653, D18**

zero air voids density (zero air voids unit weight)—see **unit weight**. **D 653, D18**

zero carbon steel—see **decarburized enameling steel**. **C 286, B08**

zero crossings—in *fatigueloading*, the number of times that the force-time history crosses zero force level with a positive slope or negative slope, or both, as specified, during a given period. **E 1823, E08**

zero curtain—the period during which a nearly constant temperature, very close to the freezing point, exists during annual freezing and, occasionally, thawing, of the active layer. The zone immediately above the permafrost table where zero temperature (°C) exists for a considerable period during freezing and thawing of the overlying ground. **D 7099, D18**

zero defects—term which indicates that no deviation from the requirements of a specification are present within a statistically valid sample drawn from a given fastener lot. **F 1789, F16**

zero discharge—a condition whereby a facility discharges no process effluent. **D 6161, D19**

zero drift—See **analyzer**. **D 1356, D22**

zero-filling—addition of zero-valued points to the end of a measured interferogram. **E 131, E13**

zero-moisture, *adj*—See **moisture-free**, the preferred term. **D4920, D13**

zero path difference point—see **centerburst**. **E 131, E13**

zero-power resistance, *n*—the dc resistance of a device, at a specified temperature, calculated for zero-power. **E 344, E20**

zero retardation point—see **centerburst**. **E 131, E13**

zero-span, *adj*—in *tensile testing*, having a grip separation of 0.00 mm (0.000 in.). **D 1968, D06**

zero-span tensile strength, *n*—of *paper*, the tensile strength of a sheet of fibrous material, measured with special jaws, at an apparent initial span of zero. **D 1968, D06**

zero suppression, *n*—in *bar code reading*, the technique used to shorten UPC codes by omitting zeros from the symbol. **F 1294, F05**

zero time, *n*—the time when the given loading or constraint conditions are initially obtained in creep and stress-relaxation tests, respectively. **E 6, E28**

zero time (T₀), *n*—the travel time (correction factor), measured in seconds, associated with the electronic circuits in the pulse propagation system. **C 709, D02**

zero time (T₀), *n*—the travel time (correction factor), measured in seconds, associated with the electronic circuits in the pulse propagation system. **D 4175, D02**

zeta potential—colloidal stability measured in millivolts. High negative value (−10 to −30 mv) results in particulate stability. **D 6161, D19**

zigzagged seam-finish, *n*—a finish for the raw edges of the seam allowances of a plain seam, in which machine zigzag stitching is placed 3 to 6 mm (1/8 to 1/4 in.) from the raw edge. (Compare **edge-stitched seam-finish**.) **D 123, D13**

zigzagged seam finish, *n*—in *home sewing*, a seam finish in which machine zigzag stitching is placed 3 to 6 mm (1/8 to 1/4 in.) from each of the cut edges of the seam allowances. (Compare **edge-stitched seam finish**.) **D 4965, D13**

zinc coated, galvanized—generic terms covering barrel-galvanized, dipped, electro-galvanized, electro-zinc-plated, flake-galvanized, hot-dipped, hot-dip galvanized, hot-dipped zinc coated, hot-galvanized, mechanically plated, peen-coated, peen galvanized, tumbler-galvanized, and wean-galvanized. **F 547, F16**

zinc phosphate—coating that serves as a vehicle to retain various lubricants on the surface of wire or rod and protects the surfaces of the tool and workpiece against damage during various steps in the cold forming and extrusion process. It is also a coating used for corrosion protection of finished fasteners. **F 1789, F16**

zinc-plated—surface provided with usually thin electrochemical deposit of zinc as a result of immersion in electrolytic bath or with mechanical deposit of zinc as a result of peen coating. **F 547, F16**

zinc-rich primer, *n*—a primer for ferrous metals, incorporating zinc dust at a concentration sufficient to make the dried film electrically conductive thus providing cathodic protection to the ferrous substrate. **D 16, D01**

zipper, *n*—a slide fastener consisting of interlockable elements each attached to one of the opposing edges of two tapes and a movable part called a "slider" that spans the interlockable elements, which when moved in one direction causes the elements on one tape to interlock with the elements on the other tape, and when moved in the opposite direction causes the elements to disengage. (Compare **continuouselement zipper** and **separate-element zipper**.) **D 123, D13**

zipper, *n*—a slide fastener consisting of interlockable elements each attached to one of the opposing edges of two tapes and a movable part called a "slider" that spans the interlockable elements, which when moved in one direction causes the elements on one tape to interlock with the elements on the other tape, and when moved in the opposite direction causes the elements to disengage. (Compare **continuouselement zipper** and **separate element zipper**.) **D 2050, D13**

zipper gasket—See **lock-stripgasket**, the preferred term. **C 717, C24**

zirconium oxide refractory, *n*—refractory products consisting substantially of zirconium dioxide. **C 71, C08**

zircon porcelain—See **zircon porcelain** under **porcelain**. **C 242, C21**

zircon refractory, *n*—refractory products consisting substantially or entirely of crystalline zirconium orthosilicate (ZrSiO₄). **C 71, C08**

zircon whiteware—See **zircon whiteware** under **ceramic whiteware**. **C 242, C21**

Zn-5Al-MM—an abbreviation describing an alloy of zinc, 5% aluminum, and mischmetal, employed as a metallic coating over steel wire or steel sheet used in the manufacture of chain link fabric, fence framework materials, and other products (see Specifications F 1234 and F 1345). **F 552, F14**

zone—any group of crystal planes which are all parallel to one line, called the zone axis. **E 7, E04**

zone of gas-hydrate stability—that portion of the subsurface where the conditions of temperature and pressure are suitable for the formation and preservation of gas hydrates. **D 7099, D18**

zone of mixing

zone of mixing—the layer of the specimen surface within which the primary beam causes atomic mixing. E 673, E42

zone of saturation—a hydrologic zone in which all the interstices between particles of geologic material or all of the joints, fractures,

or solution channels in a consolidated rock unit are filled with water under pressure greater than that of the atmosphere.

D 653, D18