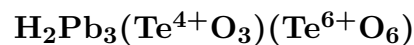


Girdite

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Crystal Data: Monoclinic. *Point Group:* m (?). As dense spherules, to 6 mm, also as bow-tie aggregates of tapered prismatic crystals. *Twinning:* Complex twins noted.

Physical Properties: *Tenacity:* Brittle in aggregates. Hardness = 2 D(meas.) = 5.5(2) D(calc.) = 5.49

Optical Properties: Transparent to translucent. *Color:* White. *Luster:* Chalky in aggregates.

Optical Class: Biaxial (-). *Orientation:* $Z = b$; $Y \wedge c = 34^\circ$. *Dispersion:* $r > v$, strong. $\alpha = 2.44$ $\beta = 2.47$ $\gamma = 2.48$ $2V(\text{meas.}) = 70^\circ$

Cell Data: *Space Group:* n.d. $a = 6.241$ $b = 5.686$ $c = 8.719$ $\beta = 91^\circ 41'$ $Z = 1$

X-ray Powder Pattern: Grand Central mine, Arizona, USA. 3.054 (10), 2.842 (8), 1.765 (8), 3.118 (7), 2.994 (7), 2.102 (7), 1.682 (7)

Chemistry:	(1)	(2)
TeO ₃	18.3	17.17
TeO ₂	16.6	15.60
PbO	61.4	65.47
H ₂ O	2.0	1.76
insol.	0.7	
Total	99.0	100.00

(1) Grand Central mine, Arizona, USA; H₂O by the Penfield method on a separate sample; corresponds to H_{2.3}Pb_{2.8}(Te⁴⁺O₃)_{1.0}(Te⁶⁺O₆)_{1.0}. (2) H₂Pb₃(Te⁴⁺O₃)(Te⁶⁺O₆).

Occurrence: Very rare, coating fractures in oxidized tellurite and tellurate ores.

Association: Chlorargyrite, quartz.

Distribution: From the dumps of the Grand Central mine, Tombstone, Cochise Co., Arizona, USA.

Name: Honors Richard Gird (1836–1910), mining engineer and assayer, a discoverer of the Tombstone district, Arizona, USA.

Type Material: Natural History Museum, Paris, France; The Natural History Museum, London, England, 1980,539.

References: (1) Williams, S.A. (1979) Girdite, oboyerite, fairbankite, and winstanleyite, four new tellurium minerals from Tombstone, Arizona. *Mineral. Mag.*, 43, 453–457. (2) (1980) *Amer. Mineral.*, 65, 809 (abs. ref. 1).