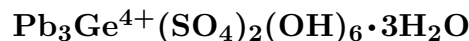


Fleischerite

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Crystal Data: Hexagonal. *Point Group:* $\bar{6}m2$. Prismatic to fibrous crystals, to 1.5 cm, typically in rounded aggregates.

Physical Properties: Hardness = “Soft. D(meas.) = 4.2–4.4 D(calc.) = 4.59

Optical Properties: Transparent. *Color:* White to pale rose; colorless in transmitted light. *Luster:* Silky in aggregates.

Optical Class: Uniaxial (+). $\omega = 1.747$ $\epsilon = 1.776$

Cell Data: *Space Group:* $P\bar{6}2c$. $a = 8.89$ $c = 10.86$ $Z = 2$

X-ray Powder Pattern: Tsumeb, Namibia.

3.619 (10), 2.635 (8), 3.437 (6), 2.214 (6), 1.889 (6), 7.681 (5), 2.800 (5)

Chemistry:

	(1)	(2)
SO ₃	15.06	15.36
Ga ₂ O ₃	0.86	
Fe ₂ O ₃	0.05	
PbO	63.34	64.23
GeO	8.18	10.04
H ₂ O ⁺	11.35	
H ₂ O [−]	0.21	
H ₂ O		10.37
insol.	0.56	
Total	99.61	100.00

(1) Tsumeb, Namibia; corresponds to $\text{Pb}_{2.84}(\text{Ge}_{0.93}\text{Ga}_{0.09})_{\Sigma=1.02}(\text{SO}_4)_{1.88}(\text{OH})_{5.91} \cdot 3.47\text{H}_2\text{O}$.

(2) $\text{Pb}_3\text{Ge}(\text{SO}_4)_2(\text{OH})_6 \cdot 3\text{H}_2\text{O}$.

Occurrence: Very rare in an oxidized portion of a dolostone-hosted hydrothermal germanium-bearing polymetallic ore deposit.

Association: Cerussite, anglesite, melanotekite, kegelite, alamosite, mimetite, tennantite, plumbojarosite, itoite.

Distribution: From Tsumeb, Namibia.

Name: Honors Dr. Michael Fleischer (1908–1998), mineralogist and geochemist, U.S. Geological Survey, Washington, D.C., USA.

Type Material: National School of Mines, Paris, France; Technical University, Berlin, Germany, 57/1405; Harvard University, Cambridge, Massachusetts, 111461; National Museum of Natural History, Washington, D.C., USA, 115310, 162620.

References: (1) Frondel, C. and H. Strunz (1960) Fleischerit und Itoit, zwei neue Germanium-Mineralien von Tsumeb. Neues Jahrb. Mineral., Monatsh., 132–142 (in German with English abs.). (2) (1960) Amer. Mineral., 45, 1313 (abs. ref. 1). (3) Otto, H.H. (1975) Die Kristallstruktur von Fleischerit, $\text{Pb}_3\text{Ge}[(\text{OH})_6](\text{SO}_4)_2 \cdot 3\text{H}_2\text{O}$, sowie kristallchemische Untersuchungen an isotypen Verbindungen. Neues Jahrb. Mineral., Abh., 123, 160–190 (in German with English abs.).