

Crystal Data: Monoclinic. *Point Group:* 2/m. Rare in small crystals, short prismatic; may be hairlike, to 4 cm, in radiating groups, and fine-grained crusts.

Physical Properties: *Cleavage:* {111}, imperfect. Hardness = 2–3 D(meas.) = 1.943 (synthetic). D(calc.) = 1.948 (synthetic). Dehydrates in air to brassite.

Optical Properties: Transparent. *Color:* Colorless to white, may be faintly tinted pink; colorless in transmitted light. *Luster:* Vitreous to dull.

Optical Class: Biaxial (+). *Orientation:* Z = b; X ∧ c = 14°. α = 1.525(5) β = 1.53(1) γ = 1.550(5) 2V(meas.) = Small.

Cell Data: *Space Group:* C2/c (synthetic). a = 6.6918(5) b = 25.744(2) c = 11.538(1) β = 95.15(1)° Z = 8

X-ray Powder Pattern: Synthetic.

4.08 (100), 6.43 (89), 4.49 (89), 4.67 (82), 4.29 (79), 12.90 (59), 2.863 (53)

Chemistry:

| | (1) | (2) |
|--------------------------------|--------|--------|
| As ₂ O ₅ | 40.16 | 39.58 |
| MgO | 14.22 | 13.88 |
| H ₂ O | 45.62 | 46.54 |
| Total | 100.00 | 100.00 |

(1) Bieber, Germany. (2) MgHAsO₄·7H₂O.

Occurrence: A secondary mineral in the oxidized zone of arsenic-bearing ore deposits.

Association: Pharmacolite, haidingerite, picroparmacolite, erythrite.

Distribution: In Germany, from Bieber, near Hanau, and from the Bauhaus district, Richelsdorf Mountains, Hesse; in the Sophia mine, near Wittichen, from the Anton mine, Heubachtal, near Schiltach, and in the Wolfgang mine, near Alpirsbach, Black Forest; at St. Andreasberg, Harz Mountains. Long fibers from Jáchymov (Joachimsthal), Czech Republic. At the White Caps mine, Manhattan district, Nye Co., Nevada, USA.

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References: (1) Palache, C., H. Berman, and C. Frondel (1951) Dana's system of mineralogy, (7th edition), v. II, 712–713. (2) Keller, P. (1971) Die Kristallchemie der Phosphat- und Arsenatminerale unter besonderer Berücksichtigung der Kationen-Koordinationspolyeder und des Kristallwassers. Neues Jahrb. Mineral., Monatsh., 491–510. (3) Ferraris, G. and M. Franchini-Angela (1973) Hydrogen bonding in the crystalline state. Crystal structure of MgHAsO₄·7H₂O, roesslerite. Acta Cryst., 29, 286–292. (4) Street, R.L.T. and A. Whitaker (1973) The isostructurality of rösslerite and phosphorösslerite. Zeits. Krist., 137, 246–255.