

Crystal Data: Orthorhombic. *Point Group:* $2/m\ 2/m\ 2/m$. As fan-shaped aggregates of acicular crystals, to 1.5 cm long, and granular.

Physical Properties: *Cleavage:* Distinct on {010}, poor on {0kl}. Hardness = 2.5
VHN = Markedly anisotropic from 87 (transverse) to 191 (longitudinal) (50 g load).
D(meas.) = 6.85 D(calc.) = 6.88

Optical Properties: Opaque. *Color:* Tin-white; in reflected light, whitish gray, bluish gray in oil. *Luster:* Metallic. *Pleochroism:* Moderate to distinct. *Anisotropism:* Distinct in air, strong in oil.

R₁–R₂: (480) 45.2–51.2, (546) 42.9–47.2, (589) 42.0–46.1, (644) 40.2–45.0

Cell Data: *Space Group:* $Pnma$. $a = 54.76(4)$ $b = 4.030(3)$ $c = 22.75(3)$ $Z = 4$

X-ray Powder Pattern: Bärenbad, Austria.

3.414 (100), 2.014 (80), 2.893 (70), 3.010 (60), 2.141 (50), 2.037 (45), 3.488 (40)

Chemistry:

	(1)
Pb	34.3
Cu	0.9
Fe	0.6
Ag	0.3
Bi	45.8
Sb	1.5
S	17.3
Total	100.7

(1) Bärenbad, Austria; by electron microprobe, average of 16 analyses of two crystals; corresponds to Pb_{8.61}(Cu_{0.73}Fe_{0.57}Ag_{0.16})_{Σ=9.50}(Bi_{11.36}Sb_{0.62})_{Σ=11.98}S_{28.00}.

Occurrence: In gold-bearing sulfide ores of copper located in quartz veins cutting amphibolite facies metamorphosed mafic rocks (Bärenbad, Austria).

Association: Pyrite, arsenopyrite, chalcopyrite, pyrrhotite, sphalerite, stannite, bismuth, gold, quartz (Bärenbad, Austria).

Distribution: From Bärenbad, west of Hollersbachtal, Salzburg, Austria. At Gordon Camp and the Abril mine, Middle Pass district, Cochise Co., Arizona, USA.

Name: To honor Professor Eberhard Clar (1904–), Austrian mineralogist, University of Vienna, Vienna, Austria.

Type Material: Institute for Geosciences (Mineralogy), University of Salzburg, Salzburg, Austria; Mineralogical-Crystallographical Institute, University of Göttingen, Göttingen, Germany; The Natural History Museum, London, England, 1982,573; Royal Ontario Museum, Toronto, Canada; National Museum of Natural History, Washington, D.C., USA, 150482.

References: (1) Paar, W.H., T.T. Chen, V. Kupcik, and K. Hanke (1984) Eclarite, (Cu, Fe)Pb₉Bi₁₂S₂₈, ein neues Sulfosalz von Bärenbad, Hollersbachtal, Salzburg, Österreich. *Tschermaks Mineral. Petrog. Mitt.*, 32, 103–110 (in German with English abs.). (2) (1985) *Amer. Mineral.*, 70, 215 (abs. ref. 1). (3) Kupčík, V. (1984) Die Kristallstruktur des Minerals Eclarit (Cu, Fe)Pb₉Bi₁₂S₂₈. *Tschermaks Mineral. Petrog. Mitt.*, 32, 259–269 (in German with English abs.). (4) Wulf, R. (1995) Experimental distinction of elements with similar atomic number in (Pb, Bi)-sulfosalts. *Mineral. Petrol.*, 52, 187–196.