

Crystal Data: Orthorhombic. *Point Group:* 2/m 2/m 2/m. As prismatic crystals to 3 mm, with wedge-shaped terminations; typically, in divergent sprays.

Physical Properties: *Cleavage:* Perfect on {100}. *Fracture:* Splintery. *Tenacity:* Brittle, thin slivers are slightly flexible. Hardness = ~5 D(meas.) = 3.96(5) D(calc.) = 3.940 Decomposes immediately (and dramatically) in cold, dilute HCl with exfoliation and formation of a white precipitate of PbCl₂ (cotunnite).

Optical Properties: Transparent. *Color:* Colorless to pale blue. *Streak:* White. *Luster:* Vitreous. *Optical Class:* Biaxial (+). $\alpha = 1.674(2)$ $\beta = 1.684(2)$ $\gamma = 1.708(2)$ $2V(\text{meas.}) = 66(2)^\circ$ $2V(\text{calc.}) = 66.5^\circ$ *Dispersion:* $r > v$, strong. *Orientation:* $X = b, Y = c, Z = a$.

Cell Data: *Space Group:* Pbcn. $a = 13.2083(4)$ $b = 9.7832(3)$ $c = 8.6545(2)$ $Z = 4$

X-ray Powder Pattern: Blue Bell claims, San Bernardino County, California, USA. 3.623 (100), 7.88 (97), 2.938 (57), 2.555 (51), 2.243 (50), 3.166 (45), 4.90 (38)

Chemistry:	(1)	(2)
PbO	60.25	63.34
CuO	0.23	
SiO ₂	36.22	34.10
<u>H₂O</u>	<u>3.29</u>	<u>2.56</u>
Total	99.99	100.00

(1) Blue Bell claims, San Bernardino County, California, USA; average electron microprobe analysis supplemented by IR spectroscopy, H₂O by CHN analysis; corresponding to Pb_{1.79}Cu_{0.02}Si₄O_{9.62}(OH)_{0.38}·1.02H₂O (2) Pb₂Si₄O₁₀·H₂O.

Occurrence: A tertiary mineral formed from cerussite in narrow veins in a highly siliceous hornfels in a fractured and chaotic region of limestone showing irregular skarn formation.

Association: Cerussite, chrysocolla, fluorite, goethite, gypsum, mimetite, opal, plumbotsumite, quartz, sepiolite, wulfenite.

Distribution: From the Blue Bell claims, ~11 km west of Baker, San Bernardino County, California, USA.

Name: *Plumbo* for its essential lead content and *phyllite* for its silicate sheet structure.

Type Material: Natural History Museum of Los Angeles County, Los Angeles, California, USA (58829, 58830, 58831, and 58832).

References: (1) Kampf, A.R., G.R. Rossman, and R.M. Housley (2009) Plumbophyllite, a new species from the Blue Bell claims near Baker, San Bernardino County, California. *Amer. Mineral.*, 94, 1198-1204.