

Xonotlite**Ca₆Si₆O₁₇(OH)₂**

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Crystal Data: Monoclinic. *Point Group:* 2/m. As needlelike crystals, elongated || [010], to 2 cm, with striated prism zones and tapering terminations; as flaky fibrous radiating bundles and rosettes; massive.

Physical Properties: *Cleavage:* Perfect in one {h0l} direction. *Fracture:* Splintery. *Tenacity:* Tough. Hardness = 6–6.5 D(meas.) = 2.71–2.72 D(calc.) = 2.71

Optical Properties: Translucent. *Color:* Chalky white to bluish gray, pale pink, fading on exposure. *Luster:* Pearly, greasy. *Optical Class:* Biaxial (+). *Orientation:* Z = b. $\alpha = 1.581\text{--}1.583$ $\beta = 1.581\text{--}1.583$ $\gamma = 1.591\text{--}1.593$ 2V(meas.) = Very low.

Cell Data: *Space Group:* C2/m. a = 17.03 b = 3.678 c = 7.003 $\beta = 90.32^\circ$ Z = 1

X-ray Powder Pattern: Tetela de Xonotla, Mexico. 3.07 (vs), 2.04 (s), 1.95 (s), 3.65 (ms), 3.23 (ms), 2.83 (m), 2.71 (mw)

Chemistry:	(1)	(2)
SiO ₂	49.58	50.42
FeO	1.31	
MnO	1.79	
CaO	43.56	47.06
H ₂ O	3.70	2.52
Total	99.94	100.00

(1) Tetela de Xonotla, Mexico. (2) Ca₆Si₆O₁₇(OH)₂.

Occurrence: In contact metamorphic deposits within limestones, serpentinites, and metavolcanic rocks.

Association: Tobermorite, clinohedrite, wollastonite, diopside, thaumasite, laumontite, stilbite, apophyllite.

Distribution: Many localities. At Tetela de Xonotla, Puebla, Mexico. In the USA, at Leesburg, Loudoun Co., Virginia; from Franklin, Sussex Co., New Jersey; in the Hunting Hill quarry, Rockland, Montgomery Co., Maryland; on Isle Royale, Lake Superior, Michigan; at Crestmore, Riverside Co., California; and at Christmas, Gila Co., Arizona. In Canada, at Point Shivery, Bay of Islands, Newfoundland. Found near Yauco, Puerto Rico. At Arsiero, Vicenza, Italy. From Scawt Hill, near Larne, Co. Antrim, Ireland. At Broadford, Isle of Skye, Scotland. From Marrait, Greenland. At Hashidate and Kotaki, Niigata Prefecture; Kaisuka, Chiba Prefecture; and in the Mihara mine, Okayama Prefecture, Japan. From the Wessels and N'Chwaning mines, near Kuruman, Cape Province, South Africa.

Name: For the Mexican locality at Tetela de Xonotla, from which it was first described.

References: (1) Dana, E.S. (1892) Dana's system of mineralogy, (6th edition), 569. (2) Heller, L. and H.F.W. Taylor (1956) Crystallographic data for the calcium silicates. H.M. Stationary Office, London, 46–48. (3) Eberhard, E., S.A. Hamid, and B. Röttger (1981) Strukturverfeinerung und Polytypie von Xonotlit Ca₆[Si₆O₁₇](OH)₂. Zeits. Krist., 154, 271–272 (in German).