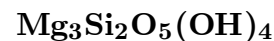


## Orthochrysotile



©2001 Mineral Data Publishing, version 1.2

**Crystal Data:** Orthorhombic, pseudo-hexagonal. *Point Group:* n.d. Fibrous along [100]; asbestiform.

**Physical Properties:** *Tenacity:* Brittle, in part. Hardness = 2.5 D(meas.) = n.d.  
D(calc.) = [2.58]

**Optical Properties:** Translucent. *Color:* Yellow, white, gray, green. *Luster:* Greasy, silky in aggregates.

*Optical Class:* Biaxial (-).  $\alpha = 1.532\text{--}1.549$   $\beta = \text{n.d.}$   $\gamma = 1.545\text{--}1.556$   $2V(\text{meas.}) = \text{n.d.}$

**Cell Data:** *Space Group:*  $C$  [sic].  $a = 5.32$   $b = 9.17$   $c = 14.64$   $Z = 4$

**X-ray Powder Pattern:** Transvaal, South Africa. (ICDD 25-645).  
7.36 (100), 3.66 (80), 1.531 (65), 4.56 (50), 2.50 (50), 2.604 (40), 1.310 (40)

**Chemistry:** Material positively known to be this species apparently has not been analyzed.

**Polymorphism & Series:** Polymorphous with antigorite, clinochrysotile, lizardite, and parachrysotile; also denoted as chrysotile-2Or<sub>c1</sub>.

**Mineral Group:** Kaolinite-serpentine group.

**Occurrence:** Commonly intermixed with clinochrysotile in veinlets cutting serpentinite.

**Association:** Clinochrysotile.

**Distribution:** Probably not uncommon, but difficult to characterize as intermixed with the more common clinochrysotile. The structure was determined on material from Cuddapah, Andhra Pradesh, India.

**Name:** Refers to the mineral's ORTHOrhombic structure, with *chrysotile* from the Greek for *golden* and *fiber*.

**Type Material:** n.d.

**References:** (1) Deer, W.A., R.A. Howie, and J. Zussman (1963) Rock-forming minerals, v. 3, sheet silicates, 170–190. (2) Whittaker, E.J.W. (1956) The structure of chrysotile. III. Ortho-chrysotile. *Acta Cryst.*, 9, 862–864. (3) Wicks, F.J. and E.J.W. Whittaker (1975) A reappraisal of the structure of the serpentine minerals. *Can. Mineral.*, 13, 227–243. (4) Yada, K. (1979) Microstructures of chrysotile and antigorite by high-resolution electron microscopy. *Can. Mineral.*, 17, 679–691. (5) Bayliss, P. (1981) Unit cell data of serpentine group minerals. *Mineral. Mag.*, 44, 153–156. (6) Wicks, F.J. and D.S. O'Hanley (1988) Serpentine minerals: structures and petrology. In: S.W. Bailey, Ed., *Hydrous phyllosilicates*. *Rev. Mineral.* 19, MSA, 91–167.