

## Wickenburgite

## $\text{Pb}_3\text{CaAl}_2\text{Si}_{10}\text{O}_{27}\cdot 3\text{H}_2\text{O}$

©2001 Mineral Data Publishing, version 1.2

**Crystal Data:** Hexagonal. *Point Group:*  $6/m\ 2/m\ 2/m$ . Tabular holohedral crystals, dominated by  $\{0001\}$  and  $\{10\bar{1}1\}$ , to 1.5 mm. As spongy aggregates of small, highly perfect individuals; as subparallel aggregates or rosettes; granular.

**Physical Properties:** *Cleavage:*  $\{0001\}$ , indistinct. *Tenacity:* Brittle but tough. Hardness = 5 D(meas.) = 3.85 D(calc.) = 3.88 Fluoresces dull orange under SW UV.

**Optical Properties:** Transparent to translucent. *Color:* Colorless to white; rarely salmon-pink. *Luster:* Vitreous.

*Optical Class:* Uniaxial (-). *Dispersion:*  $r < v$ , moderate.  $\omega = 1.692$   $\epsilon = 1.648$

**Cell Data:** *Space Group:*  $P6_3/mmc$ .  $a = 8.53$   $c = 20.16$   $Z = 2$

**X-ray Powder Pattern:** Near Wickenburg, Arizona, USA.  
10.1 (100), 3.26 (80), 3.93 (60), 3.36 (40), 2.639 (40), 5.96 (30), 5.04 (30)

Chemistry:	(1)	(2)
SiO <sub>2</sub>	42.1	40.53
Al <sub>2</sub> O <sub>3</sub>	7.6	6.88
PbO	44.0	45.17
CaO	3.80	3.78
H <sub>2</sub> O	3.77	3.64
Total	101.27	100.00

(1) Near Wickenburg, Arizona, USA. (2)  $\text{Pb}_3\text{CaAl}_2\text{Si}_{10}\text{O}_{24}(\text{OH})_6$ . [needsnew??formula]

**Occurrence:** In oxidized hydrothermal veins, carrying galena and sphalerite, in quartz and fluorite gangue (near Wickenburg, Arizona, USA).

**Association:** Phoenicochroite, mimetite, cerussite, willemite, crocoite, duftite, hemihedrite, alamosite, melanotekite, luddenite, ajoite, shattuckite, vauquelinite, descloizite, laumontite.

**Distribution:** In the USA, in Arizona, at several localities south of Wickenburg, Maricopa Co., including the Potter-Cramer property, Belmont Mountains, and the Moon Anchor mine; on dumps at a Pb-Ag-Cu prospect in the Artillery Peaks area, Mohave Co.; and in the Dives (Padre Kino) mine, Silver district, La Paz Co.

**Name:** For Wickenburg, Arizona, USA, the community near which it was discovered.

**Type Material:** Harvard University, Cambridge, Massachusetts, 119099; National Museum of Natural History, Washington, D.C., USA, 122875.

**References:** (1) Williams, S.A. (1968) Wickenburgite, a new mineral from Arizona. *Amer. Mineral.*, 53, 1433-1438.