

Crystal Data: Tetragonal. *Point Group:* $4/m\ 2/m\ 2/m$, $\bar{4}2m$, or $4mm$. Crystals are square plates, to about 0.5 mm, which thin markedly toward their edges; commonly in stellate groups of crystals intersecting at angles of 60°–70°.

Physical Properties: *Cleavage:* Perfect on {001}. *Hardness* = n.d. *D*(meas.) = 3.3 *D*(calc.) = 3.44 *Fluoresces* bluish white under SW UV.

Optical Properties: *Translucent.* *Color:* Colorless to milky in the center of crystals. *Streak:* White. *Luster:* Dull to vitreous.

Optical Class: Uniaxial (+). $\omega = 1.629(2)$ $\epsilon = 1.639(2)$

Cell Data: *Space Group:* $I4_1/amd$, $I\bar{4}2d$, or $I4_1md$. $a = 6.825(2)$ $c = 33.36(4)$ $Z = 32$

X-ray Powder Pattern: Near Ashover, England.

2.902 (100), 1.819 (33), 1.702 (21), 1.470 (19), 3.031 (13), 1.0063 (13), 3.332 (11)

Chemistry:

	(1)	(2)
ZnO	84.46	81.88
PbO	2.06	
CdO	0.71	
CaO	0.15	
H ₂ O	14.9	18.12
Total	102.28	100.00

(1) Near Ashover, England; by electron microprobe, average of eight analyses; H₂O by CHN analyzer, thought to lose H₂O under the electron beam; on recalculation to 2(OH,O) corresponds to $(Zn_{1.18}Pb_{0.01}Cd_{0.01})_{\Sigma=1.20}[(OH)_{1.60}O_{0.40}]_{\Sigma=2.00}$. (2) Zn(OH)₂.

Polymorphism & Series: Trimorphous with sweetite and wülfingite.

Occurrence: In an oxidized vein in limestone (near Ashover, England).

Association: Sweetite, wülfingite, fluorite (near Ashover, England).

Distribution: In a limestone quarry 200–300 m northwest of Milltown, near Ashover, Derbyshire, England. From Jüliushutte, Astfeld, Harz Mountains, Germany, in slag.

Name: For the locality at Ashover, England, where it was first found.

Type Material: The Natural History Museum, London, England, 1982,5.

References: (1) Clark, A.M., E.E. Fejer, G. Cressey, and P.C. Tandy (1988) Ashoverite, a new mineral, and other polymorphs of Zn(OH)₂ from Milltown, Ashover, Derbyshire. *Mineral. Mag.*, 52, 699–702. (2) (1990) *Amer. Mineral.*, 75, 431 (abs. ref. 1). (3) Schnorrer-Köhler, G. (1988) *Mineralogische Notizen IV. Aufschluss*, 39, 153–168 (in German).