

**Crystal Data:** Orthorhombic. *Point Group:*  $2/m\ 2/m\ 2/m$ . As crystals, platy on {010} and elongated to acicular along [001], to 40 cm; stalactitic, foliated, scaly; disseminated, massive. *Twinning:* On {021}, to form heart-shaped twins or pseudo-hexagonal aggregates; on {061}, uncommon.

**Physical Properties:** *Cleavage:* {010} perfect, {110} distinct, {100} in traces. *Fracture:* Conchoidal. *Tenacity:* Very brittle. Hardness = 6.5–7 D(meas.) = 3.2–3.5 D(calc.) = 3.380

**Optical Properties:** Transparent to translucent. *Color:* White, pale gray, colorless, greenish gray, brown, pale yellow, pink, lilac; color may vary with viewing direction in the same specimen, may show a color change from brownish green in daylight to raspberry pink in artificial light; colorless in thin section. *Luster:* Adamantine, vitreous, pearly on cleavage faces. *Optical Class:* Biaxial (+). *Pleochroism:* In thick plates, may be reddish brown to reddish violet; grayish green to green. *Orientation:*  $X = c$ ;  $Y = b$ ;  $Z = a$ . *Dispersion:*  $r < v$ , weak. *Absorption:*  $Z > Y > X$ , seen on strongly colored specimens.  $\alpha = 1.682\text{--}1.706$   $\beta = 1.705\text{--}1.725$   $\gamma = 1.730\text{--}1.752$   $2V(\text{meas.}) = 84^\circ\text{--}86^\circ$

**Cell Data:** *Space Group:*  $Pbnm$ .  $a = 4.4007(6)$   $b = 9.4253(13)$   $c = 2.8452(3)$   $Z = 4$

**X-ray Powder Pattern:** Springfield, Massachusetts, USA.  
3.99 (100), 2.317 (56), 2.131 (52), 2.077 (49), 1.633 (43), 2.558 (30), 1.480 (20)

Chemistry:	(1)		(2)	
SiO <sub>2</sub>	0.42		Fe <sub>2</sub> O <sub>3</sub>	0.18
Al <sub>2</sub> O <sub>3</sub>	84.44	84.98	H <sub>2</sub> O	14.99
				15.02
			Total	100.03
				100.00

(1) Kossoi Brod, Russia. (2) AlO(OH).

**Polymorphism & Series:** Dimorphous with böhmite.

**Occurrence:** Typically a final product of diagenesis in bauxite deposits formed by the tropical weathering of aluminosilicate rocks; from hydrothermal alteration of aluminous minerals; a hydrothermal mineral in some alkalic pegmatites.

**Association:** Corundum, magnetite, margarite, chloritoid, spinel, chlorite, gibbsite, böhmite, sillimanite, lepidocrocite, hematite, kaolinite, halloysite.

**Distribution:** Many localities; some prominent ones include: near Kossoi Brod village, about 37 km south of Yekaterinburg (Sverdlovsk), and Kyshtym, Ural Mountains, Russia. From Banská Belá (Dilln), near Banská Štiavnica (Schemnitz), Slovakia. At Jordansmühl, Silesia, Poland. From Campolungo, Tessin, Switzerland. At Gumuch-dagh, near Ephesus, and in large crystals from between Aydin and Mugla, Turkey. From Sivec, near Prilep, Macedonia. On the islands of Naxos and Samos, Greece. From Lohatla, 30 km north of Postmasburg, Cape Province, South Africa. In the USA, at Chester, Hampden Co., Massachusetts; on Corundum Hill, Newlin, Chester Co., Pennsylvania; at Culsagee, Macon Co., North Carolina; at Swiss, Gasconade Co., Missouri. From the Rosita Hills, Custer Co., Colorado; and at the Champion mine, White Mountains, Mono Co., California.

**Name:** From the Greek for *to scatter*, in allusion to its decrepitation under the blowpipe.

**Type Material:** Natural History Museum, Paris, France.

**References:** (1) Palache, C., H. Berman, and C. Frondel (1951) Dana's system of mineralogy, (7th edition), v. II, 675–679. (2) Deer, W.A., R.A. Howie, and J. Zussman (1962) Rock-forming minerals, v. 5, non-silicates, 102–110. (3) Schmetzer, K. and W. Bartelke (1979) Schleifwürdiger Diaspor aus der Türkei. Zeits. Deutsch Gem. Gess., 28, 69 (in German). (4) Hill, R.J. (1979) Crystal structure refinement and electron density distribution in diaspor. Phys. Chem. Minerals, 5, 179–200. (5) (1954) NBS Circ. 539, 3, 41.

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