



Minerals

Bornite

(Na,K) $AlSi_3O_8$ (Feldspar Group)

Crystallography:

Orthorhombic - dipyramidal ($2/m\ 2/m\ 2/m$) Crystals rare; commonly massive.

Physical Properties:

Cleavage: None. Fracture small conchoidal, uneven; brittle.

Hardness: 3.0.

Specific Gravity: 5.06-5.08.

Luster: Metallic.

Color: Fresh surface fracture is brownish bronze; tarnishes to purple/blue.

Streak: Black.

Composition/Features:

A common sulfide ore showing extensive solid solution within the Cu-Fe-S system. Distinguished by its bronze color on a fresh fracture and its purple tarnish. Fusible at 2.5. Under blowpipe flame test on charcoal, bornite gives off odor of sulfur dioxide and becomes magnetic. Alters readily to chalcocite and covellite.

Occurrence/Use:

A widely occurring copper ore usually found associated with other sulfides. Found disseminated in basic rocks, in contact metamorphic deposits, in replacements zones, and in pegmatites.