Minerals

Schorl (Tourmaline Group)

$Na\,Fe_3^{+2}\,Al_6\,(BO_3)_3\,Si_6\,O_{18}\,(OH)_4$

Crystallography:

Hexagonal *-R; 3m*. Usually in prismatic crystals with rounded triangular cross-section due to prominent trigonal prism and subordinate hexagonal prism {1120}; often vertically striated. Common in parallel or radiating groups of columnar to acicular crystals.

Physical Properties:

Cleavage: Poor. Fracture conchoidal to uneven; brittle.
Hardness: 7.0-7.5.
Specific Gravity: 3.0-3.25.
Luster: Vitreous to resinous.
Color: Black; transparent to opaque.
Streak: White.

Composition/Features:

An iron-bearing tourmaline, schorl is a complex sodium iron aluminum borosilicate hydroxide. Characterized by the rounded triangular cross-section of its crystals and its conchoidal fracture. Fusible with difficulty. Strongly piezoelectric and pyroelectric.

Occurrence/Use:

Schorl commonly occurs in granite pegmatites and as an accessory mineral in igneous and metamorphic rocks. Often associated with microcline, albite, quartz, and muscovite. Its piezoelectric property is used in the manufacture of pressure gauges.