



Minerals

Diopside

CaMg Si₂O₆ (Pyroxene Group)

Crystallography:

Monoclinic; *2/m*. Crystals prismatic showing square or 8-sided cross section; also granular, massive.

Physical Properties:

Cleavage: {110}, at 87° and 93°, imperfect; frequently parting on {001}. Fracture uneven to conchoidal; brittle.

Hardness: 5.0-6.0.

Specific Gravity: 3.2.

Luster: Vitreous.

Color: White to light green, deepening with increase in Fe; transparent to translucent.

Streak: White.

Composition/Features:

A calcium magnesium silicate of the Pyroxene Group, diopside forms a complete solid solution series with hedenbergite, with Mg and Fe substituting for each other in all proportions. Characterized by crystal form and imperfect prismatic cleavage. Fusible at 4 to a green glass; insoluble in acids.

Occurrence/Use:

A common metamorphic mineral, diopside often forms as the result of thermal metamorphism of siliceous, Mg-rich limestones or dolomites. It may also be a product of igneous crystallization. Transparent varieties have been cut and used as gemstones.