



Minerals

Ilmenite



Crystallography:

Hexagonal-R; $\bar{3}$. Crystals usually thick tabular with prominent basal planes and small rhombohedral truncations. Commonly in thin plates, massive or compact; also in grains or as sand.

Physical Properties:

Cleavage: None; parting on {0001} and {01-12}. Fracture conchoidal.

Hardness: 5-5.6.

Specific Gravity: 4.7.

Luster: Metallic to submetallic.

Color: Iron-black; opaque.

Streak: Black to brownish-red.

Composition/Features:

An iron titanium oxide, ilmenite can be distinguished from hematite by its streak and from magnetite by its lack of strong magnetism. Infusible. Magnetic after heating.

Occurrence/Use:

A common accessory mineral in igneous rocks, ilmenite may be present in large masses in gabbros, diorites, and anorthosites in association with magnetite.

Also found in some pegmatites and vein deposits. The major source of titanium for industry.