



Minerals

Pyrite

FeS_2

Crystallography:

Isometric; $2/m\bar{3}$. Crystals commonly cubic (often striated) also pyritohedral or octahedral. Frequently massive, granular, sometimes globular, reniform, radiated.

Physical Properties:

Cleavage: None. Conchoidal fracture; brittle.

Hardness: 6.0-6.5.

Specific Gravity: 5.02.

Luster: Metallic, splendent.

Color: Pale brass yellow; opaque. May darken with tarnish.

Streak: Greenish or brownish black.

Composition/Features:

Pyrite is a common iron sulfide distinguished from most yellow metallic minerals by its superior hardness and crystal form. Fusible at 2.5-3 to a magnetic globule. Yields much sulfur in the closed tube. Insoluble in HCl but completely dissolves as a fine powder in strong nitric acid.

Occurrence/Use:

Often referred to as “fools gold,” pyrite is the most common and widespread of the sulfide minerals. Occurs in almost any type of geological environment. Most frequent associated with chalcopyrite, sphalerite, and galena. Mined chiefly as a source of sulfur or for the gold and copper commonly associated with it.