



>>Entry Name: Iron sulfide (FeS₂)

Synonym(s): Iron disulfide

CAS Registry Number: 12068-85-8

FeS₂

Molecular Formula: FeS₂

Molecular Weight: 119.979

Accurate Mass: 119.879079

Percentage Composition: Fe 46.55%; S 53.45%

Use/Importance: Used in anti-fouling agents, batteries; cathodes; solar cells and in sulfuric acid manuf. Catalyst in coal liquifactor

>>Variant: Pyrite

Synonym(s): Fool's gold. Iron pyrites. Pyrites

CAS Registry Number: 1309-36-0

coordinated by 6 S atoms; each S is tetrahedrally coordinated by 1S and 3Fe atoms

Source/Synthesis: Occurs widely, often mixed with small amounts Cu, As, Ni, Co, Au and Se

Use/Importance: Most abundant sulfide mineral ore. Used in manuf. of S, H₂SO₄ and SO₂, in imitation jewellery, in metal recovery

Physical Description: Brass yellow metallic cryst.

>>Variant: Marcasite

CAS Registry Number: 1317-66-4

octahedra are rotated to give short S-S distances (221 pm) between S atoms of different chains

Source/Synthesis: Found in clay, shale, chalk limestone; widespread in USA

Use/Importance: Low-temp. mineral formed from highly acid solns.

Physical Description: Pale bronze-yellow or whitish cryst.

Other Data: Transforms to pyrite $\geq 400^\circ$

References:

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