



>>Entry Name: Iron(II) carbonate (FeCO₃)

ENTRY UNDER REVIEW

CAS Registry Number: 563-71-3

Extra CAS Registry Numbers(s): 10290-71-8

FeCO₃

Molecular Formula: CFeO₃

Molecular Weight: 115.856

Accurate Mass: 115.919684

Percentage Composition: C 10.37%; Fe 48.20%; O 41.43%

Source/Synthesis: Formed as white ppt. when Fe(II) solns. treated with alkali metal carbonate

Use/Importance: Precursor for Fe(II) complexes and in diamond synth.

Physical Description: Grey solid, dec. yielding CO₂ + FeO at 200°

Solubility: Insol. H₂O, sol. acids to give CO₂; sol. H₂O saturated with CO₂ to give Fe(HCO₃)₂ which then oxidises

>>Variant: Mineral-form

Synonym(s): Siderite. Chalybite. Spathic iron ore

CAS Registry Number: 14476-16-5

Molecular Formula: CFeO₃

Molecular Weight: 115.856

Accurate Mass: 115.919684

Percentage Composition: C 10.37%; Fe 48.20%; O 41.43%

Source/Synthesis: Ore widespread; may occur with some Ca, Mg or Mn

Physical Description: Yellow-brown to dark brown, or grey rhombohedral cryst.

Other Data: Dec. on heating

>>Derivative: Hydrate

Solubility: Sl. sol. H₂O

Other Data: Dec. on heating

References:

Gmelin Handbook Inorg. Chem., Syst. No. 59, 1929, B2, 502, (bibl)

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Srivastava, K.K.P., *Phys. Rev. B*, 1985, **32**, 3282, (Mössbauer)

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Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., Van Nostrand Reinhold, 1992, FBH100