



>>Entry Name: Iron(II) oxalate

Synonym(s): Ferrous oxalate. Ferrous ethanedioate. Iron(II) ethanedioate. Oxalic acid, iron(2+) salt

CAS Registry Number: 516-03-0

Related CAS Registry Numbers(s): 55703-34-9

Extra CAS Registry Numbers(s): 15843-42-2

Fe(C2O4)

Molecular Formula: C2FeO4

Molecular Weight: 143.867

Accurate Mass: 143.914599

Use/Importance: Component of coatings for cold forming of alloy steels. Corrosion inhibitor; heat stabiliser; catalyst. Commercially available as dihydrate

Physical Description: Solid

>>Derivative: Dihydrate

Synonym(s): Diaqua(oxalato)iron(II). Diaqua[ethanedioato(2-)-O,O']iron(II). Iron(II) oxalate dihydrate

CAS Registry Number: 6047-25-2

Molecular Formula: C2H4FeO6

Molecular Weight: 179.897

Accurate Mass: 179.935729

Percentage Composition: C 13.35%; H 2.24%; Fe 31.04%; O 53.36%

Source/Synthesis: Obt. by recryst. of Fe(C2O4) from H2O or Fe^{2+} + oxalate in water

Use/Importance: Photographic developer. Pigment in glasses, plastics and paint. Scale preventor

Physical Description: Light-sensitive, hygroscopic yellow cryst. (H2O)

Solubility: Sol. acids; insol. H2O

Other Data: $\mu_{\text{eff}} = 5.11 \mu_{\text{B}}$ (300K)

Hazard & Toxicity: Toxic, irritant

Aldrich: 30772-6

Fluka: 44951

References:

Gmelin Handbook Inorg. Chem., Syst. No.59, 1930, B3, 532, (bibl, rev)

Waterman, V., *J.O.C.*, 1949, **14**, 289, (synth)

Figgis, B.N. *et al.*, *Prog. Inorg. Chem.*, 1964, **6**, 177, (magnetism)

Deyrieux, R. *et al.*, *Bull. Soc. Chim. Fr.*, 1969, 2675, (struct, allotropes)

Nikonenko, E.A. *et al.*, *Zh. Neorg. Khim.*, 1982, **27**, 975, (struct)

Ramani, S. *et al.*, *Mater. Chem. Phys.*, 1983, **9**, 539, (thermal dec, Mössbauer)

Jiingyann, C. *et al.*, *J. Appl. Phys.*, 1985, **57**, 3338, (magnetism)

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