



>>Entry Name: Manganese(II) oxalate

Synonym(s): [Ethanedioato(2-)-O,O']manganese, 11Cl

CAS Registry Number: 640-67-5

Related CAS Registry Numbers(s): 55703-32-7 88682-90-0

Mn(O₂CCO₂)

Molecular Formula: C₂MnO₄

Molecular Weight: 142.958

Accurate Mass: 142.917707

Percentage Composition: C 16.80%; Mn 38.43%; O 44.77%

Physical Description: Pink cryst.

Other Data: Synth. by heating dihydrate in N₂ for 2hr at 200°. $\Delta H_{298}^{\circ} -1087.3 \text{ kJ mol}^{-1}$

>>Variant: Manganese(II) oxalate dihydrate

Synonym(s): Diaqua[ethanedioato(2-)-O,O']manganese, 11Cl

CAS Registry Number: 6556-16-7

Molecular Formula: C₂H₄MnO₆

Molecular Weight: 178.988

Accurate Mass: 178.938837

Percentage Composition: C 13.42%; H 2.25%; Mn 30.69%; O 53.63%

Other Data: $\Delta H_{298}^{\circ} -1624.5 \text{ kJ mol}^{-1}$

>>Derivative: α -form

Source/Synthesis: Formed from damp trihydrate at r.t., or from aq. solns. of Mn²⁽⁺⁾ and C₂O₄²⁽⁻⁾ above 30° at pH 1.5

Physical Description: Monoclinic colourless cryst.

>>Derivative: γ -form

Source/Synthesis: Formed from aq. solns. of Mn²⁽⁺⁾ and C₂O₄²⁽⁻⁾ above 30° at pH 3-6

Physical Description: Orthorhombic pink cryst.

Other Data: More thermally stable than α -form

>>Variant: Manganese(II) oxalate trihydrate

Synonym(s): [Ethanedioato(2-)-O,O']manganese trihydrate

CAS Registry Number: 74174-53-1

Molecular Formula: C₂H₆MnO₇

Molecular Weight: 197.003

Accurate Mass: 196.949402

Percentage Composition: C 12.19%; H 3.07%; Mn 27.89%; O 56.85%

Source/Synthesis: Synth. by mixing aq. solns. of Mn²⁽⁺⁾ and C₂O₄²⁽⁻⁾ below 30° at pH 1.5-6

Physical Description: Orthorhombic pink prisms

References:

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Deyrieux, R. *et al.*, *Bull. Soc. Chim. Fr.*, 1973, 25, (*cryst struct*)

Nagase, K. *et al.*, *Bull. Chem. Soc. Jpn.*, 1975, **48**, 439, (*thermal dec, ir*)

Deyrieux, R. *et al.*, *J. Chem. Phys.*, 1975, **72**, 793, (*thermodyn props*)

Huizing, A. *et al.*, *Mater. Res. Bull.*, 1977, **12**, 605, (*synth, struct, props*)

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