



>>Entry Name: Tetraaquadichloromanganese(II), 9Cl

Synonym(s): Manganese(II) chloride (MnCl₂) tetrahydrate. **Manganese chloride**, USAN. Mangatrace. Eviprostat

CAS Registry Number: 13446-34-9

MnCl₂(OH₂)₄

Molecular Formula: Cl₂H₈MnO₄

Molecular Weight: 197.904

Accurate Mass: 196.918011

Percentage Composition: Cl 35.83%; H 4.07%; Mn 27.76%; O 32.34%

Use/Importance: Mineral supplement

Aldrich: 22127-9

Fluka: 63536

Sigma: M5005

>>Variant: *cis*-form

Synonym(s): α -form

Molecular Formula: Cl₂H₈MnO₄

Molecular Weight: 197.904

Accurate Mass: 196.918011

Percentage Composition: Cl 35.83%; H 4.07%; Mn 27.76%; O 32.34%

Source/Synthesis: Prepared from sat. aq. MnCl₂ at r.t.

Physical Description: Dec. at approx. 55° → dihydrate

Other Data: $\mu_{\text{eff}} = 5.94\mu_{\text{B}}$ (298K). Becomes antiferromagnetic at v. low temp. T_{N} 1.6K. Magnetic props. have been studied in detail

>>Variant: *trans*-form

Synonym(s): β -form

Molecular Formula: Cl₂H₈MnO₄

Molecular Weight: 197.904

Accurate Mass: 196.918011

Percentage Composition: Cl 35.83%; H 4.07%; Mn 27.76%; O 32.34%

Source/Synthesis: Synth. by cooling a supersaturated soln.

References:

Borehardt, H.J. *et al.*, *J. Phys. Chem.*, 1957, **61**, 917, (*cis*-form, thermal dec)

Zalkin, A. *et al.*, *Inorg. Chem.*, 1964, **3**, 529, (*cis*-form, synth, cryst struct)

Nakagawa, I. *et al.*, *Spectrochim. Acta*, 1964, **20**, 429, (*cis*-form, ir)

el Saffar, Z.M. *et al.*, *Acta Cryst. B*, 1971, **27**, 66, (*cis*-form, cryst struct)

Altman, R.F. *et al.*, *Phys. Rev. B*, 1975, **11**, 458, (*cis*-form, magnetism)

Gorling, R.L.A. *et al.*, *Can. J. Phys.*, 1977, **55**, 1526, (*cis*-form, magnetic struct)

Gmelin Handbook Inorg. Chem., Syst. No. 56, 1978, **C5**, 34; 1983, **C10**, 31, (*rev, bibl, uv-vis*)

Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., Van Nostrand Reinhold, 1992, MAR250