



>>Entry Name: Zinc permanganate

Synonym(s): Zinc manganate(VII) ($\text{Zn}(\text{MnO}_4)_2$)

CAS Registry Number: 23414-72-4

Extra CAS Registry Numbers(s): 13986-20-4

$\text{Zn}(\text{MnO}_4)_2$

Molecular Formula: $\text{Mn}_2\text{O}_8\text{Zn}$

Molecular Weight: 303.261

Accurate Mass: 301.764559

Percentage Composition: Mn 36.23%; O 42.21%; Zn 21.56%

Use/Importance: Component of corrosion inhibitors; strong oxidising agent

Biological Use/Importance: Antiseptic, astringent

Physical Description: Violet, brown or blue deliquescent cryst. + $6\text{H}_2\text{O}$ (H_2O)

Solubility: V. sol H_2O

Other Data: Dec. with release of O_2 at 95° ; dec. in acids; loses $5\text{H}_2\text{O}$ at 100°

Hazard & Toxicity: Fire results on contact with such solvs. as THF, MeOH, EtOH, 1-butanol, Me_2CO and AcOH; explosions result on contact with cellulose

References:

Moles, E. *et al.*, *CA*, 1923, **17**, 2999, (*synth*)

Müller, A. *et al.*, *Naturwissenschaften*, 1965, **52**, 494, (*powder struct*)

Baran, E.J. *et al.*, *Monatsh. Chem.*, 1968, **99**, 1584, (*ir*)

Doyle, W.P. *et al.*, *Spectrochim. Acta A*, 1968, **24**, 1495, (*ir*)

Wolfe, S. *et al.*, *J.A.C.S.*, 1983, **105**, 7755, (*synth, uses as oxidising agent*)

Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., Van Nostrand Reinhold, 1992, ZLA000