



>>Entry Name: Zinc chlorate ($\text{Zn}(\text{ClO}_3)_2$)

Synonym(s): Zinc chlorate

CAS Registry Number: 10361-95-2

$\text{Zn}(\text{ClO}_3)_2$

Molecular Formula: $\text{Cl}_2\text{O}_6\text{Zn}$

Molecular Weight: 232.292

Accurate Mass: 229.836339

Percentage Composition: Cl 30.52%; O 41.33%; Zn 28.15%

Source/Synthesis: Synth. from ZnSO_4 and $\text{Ba}(\text{ClO}_3)_2$

Use/Importance: Bleaching agent; component of explosives; herbicide

Physical Description: Hygroscopic cryst.

Solubility: V. sol. H_2O (262g per 100g at 20°), EtOH; sol. Me_2CO

Other Data: Various hydrates known which can be dehydrated to the anhyd. salt

Hazard & Toxicity: Powerful oxidant

>>Derivative: Tetrahydrate

Molecular Formula: $\text{Cl}_2\text{H}_8\text{O}_{10}\text{Zn}$

Molecular Weight: 304.353

Accurate Mass: 301.878599

Percentage Composition: Cl 23.30%; H 2.65%; O 52.57%; Zn 21.48%

Physical Description: Yellowish to colourless deliquescent cubes

Solubility: V. sol. H_2O , EtOH, Me_2CO , Et_2O , glycerine

References:

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Rocchiccioli, C., *C. R. Hebd. Seances Acad. Sci.*, 1956, **242**, 2922, (synth, ir)

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Weigel, D., *Bull. Soc. Chim. Fr.*, 1963, 2087, (synth, powder struct)

Moshier, R.W., *Inorg. Chem.*, 1964, **3**, 199, (synth, Cl-35 nqr, dihydrate)

Remy, H. *et al.*, *Z. Anorg. Allg. Chem.*, 1964, **329**, 203, ($\text{H}_2\text{O}/\text{Zn}(\text{ClO}_3)_2$ system, synth, hydrates)

Sprowles, J.C. *et al.*, *J. Phys. Chem.*, 1975, **79**, 1711, (Raman)

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