



>>Entry Name: Zinc hydroxide (Zn(OH)₂)

Synonym(s): Zinc dihydroxide

CAS Registry Number: 20427-58-1

Zn(OH)₂

Molecular Formula: H₂O₂Zn

Molecular Weight: 99.405

Accurate Mass: 97.934625

Percentage Composition: H 2.03%; O 32.19%; Zn 65.78%

Physical Description: Cryst.

Solubility: Nearly insol. H₂O; sol. alkali, acid, aq. NH₃

Other Data: K_{sp} 7.5 x 10⁻¹⁷. Dec. to ZnO at 125°

Aldrich: 38327-9

>>Variant: E-form

Molecular Formula: H₂O₂Zn

Molecular Weight: 99.405

Accurate Mass: 97.934625

Percentage Composition: H 2.03%; O 32.19%; Zn 65.78%

Source/Synthesis: Synth. by electrochem. oxid. of Zn in NaOH/NH₃ soln.

Physical Description: Colourless cryst.

>>Variant: Mineral-form

Synonym(s): Sweetite

Molecular Formula: H₂O₂Zn

Molecular Weight: 99.405

Accurate Mass: 97.934625

Percentage Composition: H 2.03%; O 32.19%; Zn 65.78%

Source/Synthesis: Occurs associated with fluorite at site in Derbyshire U.K.

Physical Description: Colourless or whitish bipyramidal cryst.

Other Data: Dimorphous with Wulfingite

References:

Duval, C. *et al.*, *Bull. Soc. Chim. Fr.*, 1941, **8**, 713

Feitknecht, W., *Helv. Chim. Acta*, 1949, **32**, 2294

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Schnering, H.G., *Z. Anorg. Allg. Chem.*, 1964, **330**, 170, (*synth, struct, ε-form*)

Giovanoli, R. *et al.*, *Helv. Chim. Acta*, 1966, **49**, 1971, (*synth, thermal anal, powder struct*)

Srivastava, O.K. *et al.*, *Can. J. Chem.*, 1967, **45**, 585, (*ir, ε-form*)

Noerlund, C.A., *Acta Chem. Scand.*, 1969, **23**, 2016, (*synth, struct, γ-form*)

Baneeva, M.I., *Geokhimiya*, 1969, 1014, (*struct, high P-form*)

Brauer, G., *Handbuch Prap. Anorg. Chem.*, 3rd edn., Ferdinand Enke Verlag, 1975, **2**, 1026, (*synth*)

Pakholkov, V.S. *et al.*, *Radiokhimiya*, 1988, **30**, 508, (*ir, powder struct*)

Hugot-le-Goff, A. *et al.*, *J. Electroanal. Chem. Interfacial Electrochem.*, 1989, **263**, 127, (*Raman*)

Dake, L.S. *et al.*, *SIA, Surf. Interface Anal.*, 1989, **14**, 71, (*Auger*)

Stahl, R. *et al.*, *Z. Anorg. Allg. Chem.*, 1998, **624**, 1130-1136, (*E-form, synth, cryst struct*)