



>>Entry Name: Copper hydroxide (Cu(OH)₂)

Synonym(s): Cupric hydroxide

CAS Registry Number: 20427-59-2

Cu(OH)₂

Molecular Formula: CuH₂O₂

Molecular Weight: 97.561

Accurate Mass: 96.945078

Percentage Composition: Cu 65.13%; H 2.07%; O 32.80%

Source/Synthesis: Synth. by addn. of NaOH to an ammoniacal soln. of a Cu^{II} salt. Stabilised form synth. by electrol. of a Cu anode in an electrolyte contg. Na₂SO₄ and Na₃PO₄

Use/Importance: Commercially available. Catalyst for the Ullmann condensation; mediates conversion of acid hydrazides to carboxylic acids. Used in stabilised form as a fungicide, in antifouling marine paints, in the cuprammonium process for rayon manuf. and as a nylon stabiliser

Biological Use/Importance: Fungicide, bactericide

Physical Description: Hygroscopic blue gel or powder

Solubility: Sol. acids, conc. alkali, NH₄OH, (CH₂NH₂)₂; insol. H₂O

Other Data: Dec. to CuO on warming

Hazard & Toxicity: LD₅₀ (rat,orl) 489mg/kg

Aldrich: 28978-7

>>Variant: Mineral-form

Synonym(s): Spertiniite, ₉Cl

CAS Registry Number: 79087-31-3

Molecular Formula: CuH₂O₂

Molecular Weight: 97.561

Accurate Mass: 96.945078

Percentage Composition: Cu 65.13%; H 2.07%; O 32.80%

Source/Synthesis: Occurs associated with chalcocite in sites in Canada and the USSR

Physical Description: Blue to blue-green orthorhombic cryst.

References:

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Grice, J.D. *et al.*, *Can. Mineral.*, 1981, **19**, 337, (*occur, mineralogy*)

Cudennec, Y. *et al.*, *Eur. J. Solid State Inorg. Chem.*, 1988, **25**, 351, (*synth, ir, dta*)

Voloshin, A.V. *et al.*, *Nov. Dannye Miner. SSSR.*, 1988, **35**, 40; *CA*, **113**, 118512y, (*occur*)

Pollard, A.M. *et al.*, *Mineral. Mag.*, 1989, **53**, 557, (*synth*)

Encyclopaedia of Reagents for Organic Synthesis, (ed. Paquette, L.A.), Wiley, 1995, **2**, 1345, (*use*)

Pesticide Manual, 12th edn., 2000, 168

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