



>>Entry Name: Copper carbonate hydroxide ($\text{Cu}_2(\text{CO}_3)(\text{OH})_2$)

Synonym(s): Basic copper carbonate‡. Cupric subcarbonate. Bremen blue. Bremen green

CAS Registry Number: 12069-69-1

$\text{CuCO}_3 \cdot \text{Cu}(\text{OH})_2$

Molecular Formula: $\text{CH}_2\text{Cu}_2\text{O}_5$

Molecular Weight: 221.116

Accurate Mass: 219.869421

Percentage Composition: C 5.43%; H 0.91%; Cu 57.48%; O 36.18%

Source/Synthesis: Synth. by adding CuSO_4 soln. to Na_2CO_3 soln.

Use/Importance: Used in treatment of Cu deficiency, as fungicide, in pyrotechnics and as a pigment

Physical Description: Dark green cryst. or blue amorphous powder

Solubility: Insol. H_2O , alcohols; sol. dil. acids, NH_3

Aldrich: 20789-6

Fluka: 61167

Sigma: C1771

>>Variant: Mineral-form

Synonym(s): Malachite

CAS Registry Number: 1319-53-5

Molecular Formula: $\text{CH}_2\text{Cu}_2\text{O}_5$

Molecular Weight: 221.116

Accurate Mass: 219.869421

Percentage Composition: C 5.43%; H 0.91%; Cu 57.48%; O 36.18%

Source/Synthesis: Widespread in the oxidn. zone of Cu deposits, closely associated with azurite and other secondary minerals

Physical Description: Bright green cryst.

References:

Palache, C. *et al.*, *Dana's System of Mineralogy*, 7th edn., Wiley, 1951, **2**, 252, (rev)

Org. Synth., *Coll. Vol.*, **3**, 1955, 460, (use)

Suesse, P., *Naturwissenschaften*, 1966, **53**, 80; *CA*, **64**, 15111h, (cryst struct)

Goldsmith, J.A. *et al.*, *Spectrochim. Acta*, 1966, **22**, 1069, (uv-vis)

Druzhinin, I.G. *et al.*, *Zh. Neorg. Khim.*, 1966, **11**, 2374; *CA*, 1967, **66**, 6080u, (phase props)

Schmuckler, J.S. *et al.*, *Chemistry*, 1975, **48**, 19, (synth)

Zigon, F. *et al.*, *Z. Kristallogr., Kristallgeom., Kristallphys., Kristallchem.*, 1977, **145**, 412, (cryst struct)

Merck Index, 11th edn., 1989, 2634, (synth, use)

Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., Van Nostrand Reinhold, 1992, CNJ750