



>>Entry Name: Magnesium hydroxide, 8CI, USAN

Synonym(s): Milk of Magnesia. Mint-O-Mag

CAS Registry Number: 1309-42-8

Related CAS Registry Numbers(s): 37317-08-1

Mg(OH)₂

Molecular Formula: H₂MgO₂

Molecular Weight: 58.32

Accurate Mass: 57.990522

Percentage Composition: H 3.46%; Mg 41.68%; O 54.87%

Source/Synthesis: Prepd. by addition of alkali to aq. solns. of magnesium salts

Use/Importance: Antacid, laxative. Commercially available

Physical Description: Amorph. powder or colourless hexagonal cryst. Readily dissolves in aq. acids forming corresp. salts. Dec. on heating at 350° → MgO + H₂O

Solubility: Prac. insol. H₂O (9 x 10⁻⁴ g per 100 cm³ at 18°; 4 x 10⁻³ g per 100 cm³ at 100°)

Other Data: Component of Ascriptin, Camalox, Fermalox, Gelusil, Maalox Plus, Mylanta and Oxaine M. $\Delta H_f^\circ -925 \text{ kJ mol}^{-1}$; $\Delta G_f^\circ -834 \text{ kJ mol}^{-1}$; $S^\circ 63.2 \text{ J K}^{-1} \text{ mol}^{-1}$

Hazard & Toxicity: LD₅₀ (rat, orl) 8500 mg/kg

Aldrich: 31009-3

Fluka: 63081

Sigma: M8511

>>Variant: Mineral-form

Synonym(s): Brucite

CAS Registry Number: 1317-43-7

Molecular Formula: H₂MgO₂

Molecular Weight: 58.32

Accurate Mass: 57.990522

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References:

Swanson, H.E. *et al.*, *Natl. Bur. Stand. Circ. (U.S.)*, No. 539, 1956, **6**, 30, (*cryst struct*)

Krishnamurti, D., *Proc. - Indian Acad. Sci., Sect. A*, 1959, **50**, 223, (*ir, Raman*)

Lippincott, E.R. *et al.*, *J. Chem. Phys.*, 1964, **41**, 3006, (*pmr*)

U.S. Pat., 1964, Dow, 3 127 241; *CA*, **60**, 14155h

Brauer, G., *Handbuch Prap. Anorg. Chem.*, 3rd edn., Ferdinand Enke Verlag, 1975, **2**, 908, (*synth*)

Brindley, G.W. *et al.*, *Phys. Chem. Miner.*, 1984, **10**, 187, (*ir*)

Chase, M.W. *et al.*, *J. Phys. Chem. Ref. Data*, 1985, **14**, 1267, (*thermochem data*)

Sigma-Aldrich Library of Chemical Safety Data, 1988, **2**, 2179C, (*haz*)

Washington, N., *Antacids and Anti-Reflux Agents*, CRC Press, Boca Raton, 1991, (*book*)

Mofenson, H.C. *et al.*, *J. Toxicol. Clin. Toxicol.*, 1991, **29**, 215, (*tox*)

Martindale, The Extra Pharmacopoeia, 30th edn., Pharmaceutical Press, 1993, 889

Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., Van Nostrand Reinhold, 1992, MAG750; NBT000