



>>Entry Name: Magnesium carbonate, BAN, JAN, USAN

Synonym(s): Carbonic acid magnesium salt, 8CI

CAS Registry Number: 546-93-0

Related CAS Registry Numbers(s): 39409-82-0

Extra CAS Registry Numbers(s): 2090-64-4

MgCO₃

Molecular Formula: CMgO₃

Molecular Weight: 84.314

Accurate Mass: 83.969787

Percentage Composition: C 14.25%; Mg 28.83%; O 56.93%

Source/Synthesis: Synth. from MgO + CO₂

Use/Importance: Antacid. Tablet and capsule diluent. Used as an abrasive agent in toothpastes. White pigment

Physical Description: White powder; dec. on heating with CO₂ loss. Readily dissolves in aq. acids forming the corresp. salts

Melting Point: Mp 350 dec.°

Solubility: Prac. insol. H₂O (0.011 g per 100 cm³); insol. Me₂CO, NH₃(l)

Other Data: ΔH_f° -1112 kJ mol⁻¹; ΔG_f° -1028 kJ mol⁻¹; S° 65.9 J K⁻¹ mol⁻¹

Hazard & Toxicity: ACGIH TLV-TWA 10 mg/m³

>>Derivative: Dihydrate

Synonym(s): Barringtonite

CAS Registry Number: 5145-48-2

Molecular Formula: CH₄MgO₅

Molecular Weight: 120.345

Accurate Mass: 119.990917

Percentage Composition: C 9.98%; H 3.35%; Mg 20.20%; O 66.47%

Physical Description: Triclinic cryst.

>>Derivative: Trihydrate

Synonym(s): Nesquehonite

CAS Registry Number: 14457-83-1

Extra CAS Registry Numbers(s): 5145-46-0 23389-33-5

Molecular Formula: CH₆MgO₆

Molecular Weight: 138.36

Accurate Mass: 138.001482

Percentage Composition: C 8.68%; H 4.37%; Mg 17.57%; O 69.38%

Physical Description: Monoclinic cryst.

Melting Point: Mp 165°

Solubility: Spar. sol. H₂O (0.18 g per 100 cm³ at 16°)

>>Derivative: Pentahydrate

Synonym(s): Lansfordite

Extra CAS Registry Numbers(s): 5145-47-1 61042-72-6

Molecular Formula: CH₁₀MgO₈

Molecular Weight: 174.39

Percentage Composition: C 6.89%; H 5.78%; Mg 13.94%; O 73.40%

Physical Description: Monoclinic cryst.

Solubility: Spar. sol. H₂O (0.38 g per 100 cm³ at 20°)

Other Data: ΔH_f° -2584 kJ mol⁻¹

>>Variant: Mineral-form

Synonym(s): Magnesite

CAS Registry Number: 13717-00-5

Molecular Formula: CMgO₃

Molecular Weight: 84.314

Accurate Mass: 83.969787

Percentage Composition: C 14.25%; Mg 28.83%; O 56.93%

Source/Synthesis: Occurrence widespread

Physical Description: Colourless to yellow to brown cryst.