



>>Entry Name: **Magnesium sulfate hexahydrate**

Synonym(s): Sulfuric acid, magnesium salt, hexahydrate, 8Cl

CAS Registry Number: 17830-18-1

MgSO₄·6H₂O

Molecular Formula: H₁₂MgO₁₀S

Molecular Weight: 228.46

Accurate Mass: 228.000162

Percentage Composition: H 5.29%; Mg 10.64%; O 70.03%; S 14.04%

Physical Description: Colourless monoclinic cryst. Dec. on heating → monohydrate at 70-150° in a single stage. Subsequently the anhyd. material is obt.

Other Data: $\Delta H_f^\circ -3087 \text{ kJ mol}^{-1}$; $\Delta G_f^\circ -2632 \text{ kJ mol}^{-1}$; $S^\circ 348 \text{ J K}^{-1} \text{ mol}^{-1}$

>>Variant: Mineral-form

Synonym(s): Hexahydrate

CAS Registry Number: 13778-97-7

Molecular Formula: H₁₂MgO₁₀S

Molecular Weight: 228.46

Accurate Mass: 228.000162

Percentage Composition: H 5.29%; Mg 10.64%; O 70.03%; S 14.04%

Source/Synthesis: Dehyd. product of Epsomite

Physical Description: White to pale greenish cryst.

References:

Zalkin, A. *et al.*, *Acta Cryst.*, 1964, **17**, 235, (*cryst struct*)

Lafont, R. *et al.*, *C. R. Hebd. Seances Acad. Sci. Ser. B*, 1966, **262**, 83, (*Raman*)

Lallemant, M. *et al.*, *Rev. Chim. Miner.*, 1974, **11**, 113, (*dissn press*)

Skokanova, Z. *et al.*, *Czech. J. Phys., Sect. B (Engl. Transl.)*, 1978, **28**, 220, (*magnetism*)

Petrushenko, L.G. *et al.*, *Zh. Fiz. Khim.*, 1981, **55**, 1332, (*thermal dec*)