



>>Entry Name: Magnesium fluoride (MgF₂), 8Cl

CAS Registry Number: 7783-40-6

MgF₂

Molecular Formula: F₂Mg

Molecular Weight: 62.302

Accurate Mass: 61.981848

Percentage Composition: F 60.99%; Mg 39.01%

Source/Synthesis: Prepd. either by reaction of Mg(HCO₃)₂ with aq. [NH₄]F followed by thermal dec. of the MgF₂·[NH₄]F precipitate or by treatment of 3MgCO₃·Mg(OH)₂·3H₂O with HF followed by heating

Use/Importance: Commercially available

Physical Description: Luminous, pale violet, tetragonal cryst., dissolves in HNO₃ soln.

Melting Point: Mp 1263°

Boiling Point: Bp 2239°

Solubility: Pract. insol. H₂O (7.6 x 10⁻³ g per 100 cm³ at 18°)

Other Data: ΔH_f^o -1124 kJ mol⁻¹; ΔG_f^o -1071 kJ mol⁻¹; S^o 57.3 J K⁻¹ mol⁻¹

Hazard & Toxicity: Irritant

Aldrich: 20368-8

Fluka: 63074

Sigma: M0762

>>Variant: Mineral-form

Synonym(s): Sellaite

CAS Registry Number: 15501-73-2

Molecular Formula: F₂Mg

Molecular Weight: 62.302

Accurate Mass: 61.981848

Percentage Composition: F 60.99%; Mg 39.01%

Physical Description: White cryst.

References:

Duncanson, A. *et al.*, *Proc. Phys. Soc., London*, 1958, **72**, 1001, (*cryst struct*)

Ghosh, S.K. *et al.*, *Indian J. Phys.*, 1961, **35**, 236; *CA*, **55**, 23055f, (*F-19 nmr*)

Kirk-Othmer Encycl. Chem. Technol., 2nd edn., Wiley, 1963, **9**, 627, (*uses*)

Hunt, G.R. *et al.*, *Phys. Rev.*, 1964, **134**, 688

Chase, M.W. *et al.*, *J. Phys. Chem. Ref. Data*, 1985, **14**, 1077

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