



>>Entry Name: Lutetium(III) fluoride (LuF₃)

CAS Registry Number: 13760-81-1

LuF₃

Molecular Formula: F₃Lu

Molecular Weight: 231.962

Accurate Mass: 231.935979

Percentage Composition: F 24.57%; Lu 75.43%

Source/Synthesis: Ppts. from soln. as hydrate

Use/Importance: Forms solid solns. with other fluorides used in ir → vis. conversion

Physical Description: White solid

Melting Point: Mp 1184° (1152°, 1182°)

Boiling Point: Bp 2200° (?)

Solubility: Insol. H₂O

Aldrich: 43211-3

References:

Zalkin, A. *et al.*, *J.A.C.S.*, 1953, **75**, 2453, (*cryst struct*)

Thoma, R.E. *et al.*, *Inorg. Chem.*, 1966, **5**, 1222; 1937, (*struct*)

Peterson, J.R. *et al.*, *J. Inorg. Nucl. Chem.*, 1968, **30**, 1775

Spedding, F.H. *et al.*, *J. Chem. Phys.*, 1971, **54**, 2476

Sobolev, B.P. *et al.*, *Kristallografiya*, 1973, **18**, 751

Greis, O. *et al.*, *Z. Anorg. Allg. Chem.*, 1974, **403**, 1

Brauer, G., *Handbuch Prap. Anorg. Chem.*, 3rd edn., Ferdinand Enke Verlag, 1975, **1**, 254, (*synth*)

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Greis, O. *et al.*, *Handbook on the Physics and Chemistry of Rare Earths*, 1982, **5**, 387, (*rev*)

Greis, O. *et al.*, *Thermochim. Acta*, 1985, **87**, 145, (*dta*)

Uwamino, Y. *et al.*, *Bull. Chem. Soc. Jpn.*, 1986, **59**, 2263, (*pe*)