



>>Entry Name: Gadolinium(III) iodide (GdI₃)

CAS Registry Number: 13572-98-0

GdI₃

Molecular Formula: GdI₃

Molecular Weight: 537.964

Accurate Mass: 538.637518

Percentage Composition: Gd 29.23%; I 70.77%

General Statement: Has BiI₃ struct. Pyramidal molecule in gas phase

Physical Description: Deliquescent white (yellow) cryst.

Melting Point: Mp 931° (926°)

Boiling Point: Bp 1340°

Solubility: Sol. H₂O

Aldrich: 46629-8

>>Derivative: Nonahydrate

CAS Registry Number: 59849-80-8

Molecular Formula: GdH₁₈I₃O₉

Molecular Weight: 700.1

Accurate Mass: 700.732603

Percentage Composition: Gd 22.46%; H 2.59%; I 54.38%; O 20.57%

Physical Description: Hygroscopic colourless needles

Other Data: Forms hexahydrate *in vacuo* at r.t. Dec. >200°

References:

Asprey, L.B. *et al.*, *Inorg. Chem.*, 1964, **3**, 1137, (*struct*)

Brown, D., *Halides of the Lanthanides and Actinides*, Wiley-Interscience, 1968, 219, (*rev*)

Carter, F.L. *et al.*, *Mater. Res. Bull.*, 1972, **7**, 519

Kwestroo, W. *et al.*, *J. Inorg. Nucl. Chem.*, 1976, **38**, 1019, (*nonahydrate, synth*)

Gmelin Handbook Inorg. Chem., Syst. No. 39, 1978, **C6**, 198, (*rev*)

Popenko, N.I. *et al.*, *Inorg. Chim. Acta*, 1978, **31**, L371, (*ed*)

Heinio, O. *et al.*, *Acta Chem. Scand., Ser. A*, 1980, **34**, 207, (*nonahydrate, synth, struct, tga*)

Inorg. Synth., 1983, **22**, 31, (*synth*)

Loktyushina, N.S., *Zh. Fiz. Khim.*, 1984, **58**, 2631, (*ir*)

Molodkhin, A.K. *et al.*, *Zh. Neorg. Khim.*, 1984, **29**, 3147; *Russ. J. Inorg. Chem. (Engl. Transl.)*, 1984, **29**, 1299, (*nonahydrate, synth, tga*)

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