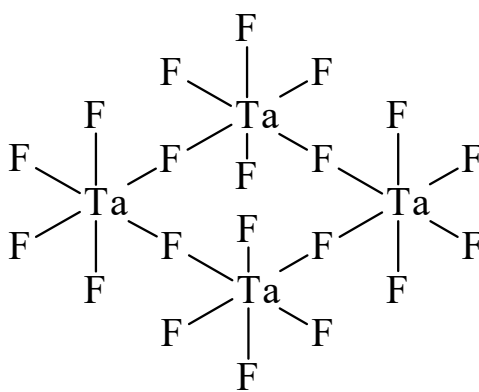




>>Entry Name: Tantalum(V) fluoride (TaF₅), 11Cl

Synonym(s): Tantalum pentafluoride



tetramer

CAS Registry Number: 7783-71-3

Molecular Formula: F₅Ta

Molecular Weight: 275.94

Accurate Mass: 275.940007

Percentage Composition: F 34.42%; Ta 65.58%

Source/Synthesis: Synth. from Ta + F₂ at 200-350°

Use/Importance: Commercially available. Has been used in a wide range of catalysts. Forms a superacid with HF

Physical Description: White moisture-sensitive solid. Sol. BrF₃ to form TaF₆⁽⁻⁾

Melting Point: Mp 97°

Boiling Point: Bp 229°

Other Data: ΔG_f -1750 kJ mol⁻¹

Hazard & Toxicity: Forms HF on hydrol.

Aldrich: 31700-4

>>Derivative: Tetramer

Synonym(s): Tetra-μ-fluorohexadecafluorotetratantalum

CAS Registry Number: 85853-84-5

Molecular Formula: F₂₀Ta₄

Molecular Weight: 1103.76

Accurate Mass: 1103.760028

Percentage Composition: F 34.42%; Ta 65.58%

References:

Edwards, A.J., *J.C.S.*, 1964, 3714, (*cryst struct*)

Canterford, J.A. *et al.*, *Inorg. Chem.*, 1966, **5**, 1442, (*synth*)

Beveridge, A.D. *et al.*, *Halogen Chem.*, (Ed. Gutmann, V.), Academic Press, N.Y., 1967, **3**, 179, (*rev, struct*)

Brauer, G., *Handbuch Prap. Anorg. Chem.*, 3rd edn., Ferdinand Enke Verlag, 1975, **1**, 262, (*synth*)

Petrova, V.N. *et al.*, *Zh. Strukt. Khim.*, 1985, **26**, 56, (*vap phase struct*)

Kirk-Othmer Encycl. Chem. Technol., 4th edn., Wiley, 1991, **11**, 450, (*rev*)

Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., Van Nostrand Reinhold, 1992, TAF250