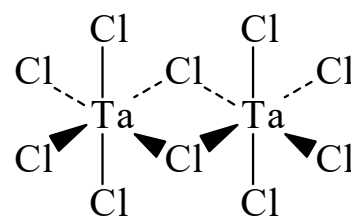




>>Entry Name: Tantalum(V) chloride (TaCl₅), 11Cl

Synonym(s): Tantalum pentachloride



dimer

CAS Registry Number: 7721-01-9

Molecular Formula: Cl₅Ta

Molecular Weight: 358.211

Accurate Mass: 355.792252

Percentage Composition: Cl 49.49%; Ta 50.51%

Source/Synthesis: Synth. from Ta + Cl₂ at 300-350° or by chlorinating Ta₂O₅ with a variety of reagents

Use/Importance: Commercially available. Widely used in catalysts. The compds. with graphite are active as battery electrodes

Physical Description: Moisture-sensitive off-white solid. Forms intercalated phases with graphite + Cl₂

Melting Point: Mp 216-220°

Boiling Point: Bp 233-239°

Other Data: ΔH_f -840 kJ mol⁻¹

Aldrich: 40047-5

Fluka: 86290

Sigma: T5162

>>Derivative: Dimer

Synonym(s): Di-μ-chlorooctachloroditantalum(V), 9Cl

CAS Registry Number: 17499-29-5

Molecular Formula: Cl₁₀Ta₂

Molecular Weight: 716.423

Accurate Mass: 711.584504

Percentage Composition: Cl 49.49%; Ta 50.51%

References:

Alexander, K.M. *et al.*, *J.C.S.*, 1949, 5223, (*synth*)

Zalkin, A. *et al.*, *Acta Cryst.*, 1958, **11**, 615, (*cryst struct*)

Canterford, J.H. *et al.*, *Halides of the Second and Third Row Transition Metals*, Wiley, N.Y., 1968, 152, (*synth, props*)

Brauer, G., *Handbuch Prep. Anorg. Chem.*, 3rd edn., Ferdinand Enke Verlag, 1975, **3**, 1453, (*synth*)

Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., Van Nostrand Reinhold, 1992, TAF000