



>>Entry Name: Tantalum(V) methoxide

Synonym(s): Methanol tantalum(5+) salt. Pentamethoxytantalum. Tantalum pentamethoxide

CAS Registry Number: 865-35-0

Ta(OMe)₅

Molecular Formula: C₅H₁₅O₅Ta

Molecular Weight: 336.118

Accurate Mass: 336.039942

Percentage Composition: C 17.87%; H 4.50%; O 23.80%; Ta 53.83%

Source/Synthesis: Synth. from TaCl₅ and MeOH with excess NH₃ in C₆H₆

Use/Importance: Used as a catalyst for polycondensation of methyl(hydroxyethoxy)benzoate; in manuf. of monolithic metal oxide aerogels

Physical Description: Colourless or pale yellow liq.

Melting Point: Mp 50°

Boiling Point: Bp₁₀ 189°

Other Data: V. moisture-sensitive, giving TaO₂. Can be distilled under reduced pressure without dec.

Aldrich: 38324-4

Fluka: 86295

Other: Gelest AKT815

References:

Bradley, D.C. *et al.*, *J.C.S.*, 1955, 726, (*synth, struct*)

Bradley, D.C. *et al.*, *J.C.S.*, 1956, 1139, (*use*)

Bradley, D.C. *et al.*, *Can. J. Chem.*, 1962, **40**, 62, (*synth, use*)

Gut, R., *Helv. Chim. Acta*, 1964, **47**, 2262, (*use*)

Reiss, J.G. *et al.*, *Bull. Soc. Chim. Fr.*, 1968, 2401, (*pmr*)

Pfalzgraf, L.G. *et al.*, *Bull. Soc. Chim. Fr.*, 1968, 4348, (*pmr*)

Holloway, C.E., *J. Coord. Chem.*, 1972, **1**, 253, (*pmr*)