



>>Entry Name: Tetrakis(dimethylamido)titanium(IV)

Synonym(s): Methylmethanamine titanium(4+) salt, 12Cl. Dimethylamine titanium(IV) salt. Tetrakis(dimethylamino)titanium. Titanium(IV) dimethylamide

CAS Registry Number: 3275-24-9

Ti(NMe₂)₄

Molecular Formula: C₈H₂₄N₄Ti

Molecular Weight: 224.184

Accurate Mass: 224.148043

Percentage Composition: C 42.86%; H 10.79%; N 24.99%; Ti 21.36%

Source/Synthesis: Synth. from TiCl₄ and LiNMe₂ in hexane under reflux

Use/Importance: Reagent for conversion of hindered ketones to enamines

Physical Description: Thermally stable orange or yellow liq.

Boiling Point: Bp_{0.1} 112°. Bp_{0.05} 50°

Solubility: Sol. common org. solvs.

Other Data: Readily hydrolysed and converted to alkoxide in alcohol. Ir ν_{TiN} 592s cm⁻¹

Aldrich: 40738-0

References:

Bradley, D.C. *et al.*, *J.C.S.*, 1960, 3857; 1969, 980, (*synth, ir, pmr*)

Bürger, H. *et al.*, *Inorg. Nucl. Chem. Lett.*, 1966, **3**, 209, (*ir*)

Fieser and Fieser's Reagents for Organic Synthesis, Wiley, 1969, **2**, 399, (*use*)

Andersen, R.A. *et al.*, *Inorg. Chem.*, 1985, **24**, 4741, (*synth*)

Haaland, A. *et al.*, *J.C.S. Dalton*, 1992, 891, (*ed*)