



>>Entry Name: Tetrakis(dimethylamino)silane

Synonym(s): Octamethylsilanetetramine, 12Cl, 9Cl, 8Cl

CAS Registry Number: 1624-01-7

Si(NMe₂)₄

Molecular Formula: C₈H₂₄N₄Si

Molecular Weight: 204.39

Accurate Mass: 204.177023

Percentage Composition: C 47.01%; H 11.84%; N 27.41%; Si 13.74%

Source/Synthesis: Synth. from SiCl₄ + NHMe₂

Use/Importance: Cocatalyst for alkene polym. Used with NH₃ in CVD of silicon nitride films

Physical Description: Liq.

Melting Point: Mp -2°

Boiling Point: Bp 180°. Bp₁₄ 73-75°

Refractive Index: n_D²⁰ 1.4436

References:

Kannengiesser, G. *et al.*, *Bull. Soc. Chim. Fr.*, 1967, 2492, (*synth*)

Buerger, H. *et al.*, *Spectrochim. Acta A*, 1967, **23**, 2841, (*ir, Raman*)

Pacl, Z. *et al.*, *Coll. Czech. Chem. Comm.*, 1971, **36**, 1588, (*synth, ir*)

Gibbins, S.G. *et al.*, *J.C.S. Dalton*, 1975, 72, (*struct*)

Radeglia, R., *Z. Phys. Chem. (Leipzig)*, 1975, **256**, 453, (*Si-29 nmr*)

Naessens, L.A. *et al.*, *Bull. Soc. Chim. Belg.*, 1982, **91**, 519, (*ms*)

Gordon, R.G. *et al.*, *Chem. Mater.*, 1990, **2**, 480, (*use, cvd*)