



>>Entry Name: ***P,P,P*-Triphenyl-*N*-(trimethylsilyl)phosphine imide**

Synonym(s): *N*-Trimethylsilyltriphenylphosphineimide. 1,1,1-Trimethyl-*N*-(triphenylphosphoranylidene)silanamine, 9CI

CAS Registry Number: 13892-06-3

$\text{Ph}_3\text{P}=\text{NSiMe}_3$

Molecular Formula: $\text{C}_{21}\text{H}_{24}\text{NPSi}$

Molecular Weight: 349.486

Accurate Mass: 349.141563

Percentage Composition: C 72.17%; H 6.92%; N 4.01%; P 8.86%; Si 8.04%

Source/Synthesis: Synth. from trimethylsilyl azide and PPh_3 at 140°

Physical Description: Solid

Melting Point: Mp 76-77°

Aldrich: 47225-5

>>Derivative: Me_3Al complex

Synonym(s): Trimethyl[*P,P,P*-triphenyl-*N*-(trimethylsilyl)phosphine imide]aluminium

CAS Registry Number: 15282-24-3

Molecular Formula: $\text{C}_{24}\text{H}_{33}\text{AlNPSi}$

Molecular Weight: 421.572

Accurate Mass: 421.193527

Percentage Composition: C 68.38%; H 7.89%; Al 6.40%; N 3.32%; P 7.35%; Si 6.66%

Physical Description: Air- and moisture-sensitive colourless cryst.

Solubility: Sol. C_6H_6 , petrol, CH_2Cl_2 , CCl_4 , Et_2O

Other Data: Monomeric

>>Derivative: Ph_3Al complex

Molecular Formula: $\text{C}_{39}\text{H}_{39}\text{AlNPSi}$

Molecular Weight: 607.784

Accurate Mass: 607.240477

Percentage Composition: C 77.07%; H 6.47%; Al 4.44%; N 2.30%; P 5.10%; Si 4.62%

Physical Description: Moisture-sensitive solid (C_6H_6)

Melting Point: Mp 202-212 dec.°

Other Data: Monomeric in C_6H_6

References:

- Schmidbaur, H. *et al.*, *Chem. Ber.*, 1967, **100**, 1000, (*AlR₃ complexes, synth, ir, pmr*)
Schmidbaur, H. *et al.*, *J. Organomet. Chem.*, 1969, **16**, 188, (*relat compd*)
Mardersteig, H.G. *et al.*, *Z. Anorg. Allg. Chem.*, 1969, **368**, 254, (*synth*)
Buchner, W. *et al.*, *Z. Naturforsch., B*, 1974, **29**, 328, (*cmr, pmr*)
Appel, R. *et al.*, *Chem. Ber.*, 1975, **108**, 2329; 1977, **110**, 2382, (*synth*)
Starzewski, K.A. *et al.*, *Inorg. Chem.*, 1979, **18**, 3307, (*pe*)
Abel, E.W. *et al.*, *Inorg. Chim. Acta*, 1979, **37**, 107, (*synth*)
Weller, F. *et al.*, *Z. Naturforsch., B*, 1995, **50**, 1050, (*cryst struct*)