



>>Entry Name: Diphenyl(trimethylsilyl)phosphine, 9CI

Synonym(s): (Diphenylphosphino)trimethylsilane. (Trimethylsilyl)diphenylphosphine

CAS Registry Number: 17154-34-6

Type of Compound Code(s): AC0300

Ph₂PSiMe₃

Molecular Formula: C₁₅H₁₉PSi

Molecular Weight: 258.374

Accurate Mass: 258.099364

Percentage Composition: C 69.73%; H 7.41%; P 11.99%; Si 10.87%

Source/Synthesis: Synth. from Ph₂PLi and Me₃SiCl

Use/Importance: Valuable intermed. for alkylation or acylation at phosphorus

Physical Description: Thermally stable malodorous colourless liq. which often solidifies; turns yellow on standing

Melting Point: Mp 55-61°

Boiling Point: Bp_{0.6} 122-126°. Bp_{0.1} 102-105°

Other Data: Reacts with H₂O or O₂

Aldrich: 39207-3

>>Derivative: Sulfide

Molecular Formula: C₁₅H₁₉PSSi

Molecular Weight: 290.44

Accurate Mass: 290.071434

Percentage Composition: C 62.03%; H 6.59%; P 10.66%; S 11.04%; Si 9.67%

Physical Description: Solid

Melting Point: Mp 113-114°

References:

- Becher, H.J. *et al.*, *Chem. Ber.*, 1973, **106**, 177, (*synth, ir, use*)
Appel, R. *et al.*, *J. Organomet. Chem.*, 1976, **112**, 61, (*synth, props, P-31 nmr*)
Inorg. Synth., 1977, **17**, 186, (*synth*)
Schumann, H. *et al.*, *Z. Naturforsch., B*, 1977, **32**, 513, (*P-31 nmr*)
Kunze, U. *et al.*, *Z. Anorg. Allg. Chem.*, 1979, **456**, 155, (*ir, pmr, props*)
Lindner, E. *et al.*, *Chem. Ber.*, 1982, **115**, 2478, (*use*)
Brunner, H. *et al.*, *Z. Naturforsch., B*, 1982, **37**, 404, (*use*)
Horn, H.-G. *et al.*, *Chem.-Ztg.*, 1985, **109**, 77; 1988, **112**, 195, (*reactions, sulfide*)
Tunney, S.E. *et al.*, *J.O.C.*, 1987, **52**, 748, (*synth, cmr, P-31 nmr, pmr, props*)
Organomet. Synth., 1988, **4**, 511, (*synth, rev, cmr, pmr*)