



>>Entry Name: (4-Methylphenyl)diphenylphosphine, 9CI

Synonym(s): Diphenyl-*p*-tolylphosphine

CAS Registry Number: 1031-93-2

Molecular Formula: C₁₉H₁₇P

Molecular Weight: 276.317

Accurate Mass: 276.106787

Percentage Composition: C 82.59%; H 6.20%; P 11.21%

Use/Importance: Ligand for Cd, Cu, and Ag, and the metals of Group VIII

Physical Description: Prisms (EtOH or EtOH/Et₂O)

Melting Point: Mp 67-68°

Boiling Point: Bp₁₄ 250°

Aldrich: 15503-9

>>Derivative: Oxide

CAS Registry Number: 6840-28-4

Molecular Formula: C₁₉H₁₇OP

Molecular Weight: 292.316

Accurate Mass: 292.101702

Percentage Composition: C 78.07%; H 5.86%; O 5.47%; P 10.60%

Physical Description: Cryst. (Me₂CO/cyclohexane or C₆H₆/hexane)

Melting Point: Mp 132.5-133.5°

>>Derivative: Sulfide

CAS Registry Number: 5587-39-3

Molecular Formula: C₁₉H₁₇PS

Molecular Weight: 308.383

Accurate Mass: 308.078857

Percentage Composition: C 74.00%; H 5.56%; P 10.04%; S 10.40%

Physical Description: Needles (EtOH)

Solubility: Insol. Et₂O

References:

Aldrich Library of 13C and 1H FT NMR Spectra, 1992, **2**, 1655A, (*nmr*)

Aldrich Library of Infrared Spectra, 3rd edn., 1981, 1182B, (*ir*)

Geotz, H. *et al.*, *Annalen*, 1963, **665**, 1, (*synth, ir*)

Dmitriev, V.I. *et al.*, *Zh. Obshch. Khim.*, 1978, **48**, 52; *J. Gen. Chem. USSR (Engl. Transl.)*, 1978, **48**, 42, (*synth*)

Shvets, A.A. *et al.*, *Zh. Obshch. Khim.*, 1978, **48**, 2185; *J. Gen. Chem. USSR (Engl. Transl.)*, 1978, **48**, 1986, (*oxide, synth, struct*)

Schwartz, J.E. *et al.*, *J.O.C.*, 1979, **44**, 340

Streitweiser, A. *et al.*, *J.O.C.*, 1982, **47**, 768, (*props, oxide*)

Tunney, S.E. *et al.*, *J.O.C.*, 1987, **52**, 748, (*synth, pmr, cmr, P-31 nmr*)