



**>>Entry Name: 4-Diphenylphosphino-*N,N*-dimethylaniline**

**Synonym(s):** 4-Diphenylphosphino-*N,N*-dimethylbenzenamine, 9Cl. (4-Dimethylaminophenyl)diphenylphosphine

**CAS Registry Number:** 739-58-2

**Type of Compound Code(s):** AC0300

Structure by analogy with 2-(Diphenylphosphino)-*N,N*-dimethylaniline, [DLZ41-L](#)

**Molecular Formula:** C<sub>20</sub>H<sub>20</sub>NP

**Molecular Weight:** 305.358

**Accurate Mass:** 305.133336

**Percentage Composition:** C 78.67%; H 6.60%; N 4.59%; P 10.14%

**Use/Importance:** Ligand for Pt

**Physical Description:** Cryst. (EtOH or EtOH/Et<sub>2</sub>O)

**Melting Point:** Mp 153° (147°)

**Aldrich:** 39502-1

**Fluka:** 39280

**>>Derivative: Oxide**

**Synonym(s):** 4-Diphenylphosphinyl-*N,N*-dimethylaniline

**CAS Registry Number:** 797-72-8

**Type of Compound Code(s):** AC0310

**Molecular Formula:** C<sub>20</sub>H<sub>20</sub>NOP

**Molecular Weight:** 321.358

**Accurate Mass:** 321.128251

**Percentage Composition:** C 74.75%; H 6.27%; N 4.36%; O 4.98%; P 9.64%

**Physical Description:** Cryst. (MeOH aq. or toluene or toluene/hexane)

**Melting Point:** Mp 182-183° (174-176°)

**>>Derivative: Sulfide**

**Synonym(s):** 4-Diphenylphosphinothioyl-*N,N*-dimethylaniline

**CAS Registry Number:** 1041-99-2

**Type of Compound Code(s):** AC0330

**Molecular Formula:** C<sub>20</sub>H<sub>20</sub>NPS

**Molecular Weight:** 337.424

**Accurate Mass:** 337.105406

**Percentage Composition:** C 71.19%; H 5.97%; N 4.15%; P 9.18%; S 9.50%

**Physical Description:** Cryst. (MeOH or EtOH)

**Melting Point:** Mp 183°

**References:**

Goetz, H. *et al.*, *Annalen*, 1967, **665**, 1, (*synth, derivs, ir, uv*)

Dreissig, W. *et al.*, *Z. Kristallogr., Kristallgeom., Kristallphys., Kristallchem.*, 1972, **135**, 294, (*cryst struct*)

Schiemenz, G.P. *et al.*, *Annalen*, 1976, 2126, (*derivs*)

Herner, L. *et al.*, *Phosphorus Sulfur Relat. Elem.*, 1983, **15**, 165

Brune, H.A. *et al.*, *Chem. Ber.*, 1984, **117**, 2791, (*synth, ir, pmr*)

Cairns, S.M. *et al.*, *Heteroat. Chem.*, 1990, **1**, 9, (*synth, uv, ir, pmr, cmr, P-31 nmr*)

Von Itzstein, M. *et al.*, *Synth. Commun.*, 1990, **20**, 2049, (*oxide, synth*)