



>>Entry Name: Diisopropylphosphine, 8Cl
Synonym(s): Bis(1-methylethyl)phosphine, 9Cl

CAS Registry Number: 20491-53-6
Related CAS Registry Numbers(s): 21502-53-4
Type of Compound Code(s): AC0200
HP[CH(CH₃)₂]₂

Molecular Formula: C₆H₁₅P
Molecular Weight: 118.158
Accurate Mass: 118.091137
Percentage Composition: C 60.99%; H 12.80%; P 26.21%
Physical Description: Liq.
Boiling Point: Bp 118-119°

>>Derivative: Oxide

CAS Registry Number: 53753-58-5
Type of Compound Code(s): AC0210
Molecular Formula: C₆H₁₅OP
Molecular Weight: 134.158
Accurate Mass: 134.086052
Percentage Composition: C 53.72%; H 11.27%; O 11.93%; P 23.09%
Physical Description: Liq.
Boiling Point: Bp_{1.5} 54-55°
Refractive Index: n_D²⁰ 1.4538
Other Data: Tautomeric with Diisopropylphosphinous acid [DRP55-K](#)

>>Derivative: Sulfide

CAS Registry Number: 68836-92-0
Type of Compound Code(s): AC0230
Molecular Formula: C₆H₁₅PS
Molecular Weight: 150.224
Accurate Mass: 150.063207
Percentage Composition: C 47.97%; H 10.06%; P 20.62%; S 21.35%
Boiling Point: Bp₁ 70-72°
pKa Value: pK_a 18.9 (DMSO)
Refractive Index: n_D²⁰ 1.5205
Other Data: Tautomeric with diisopropylphosphinothious acid

References:

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Issleib, K. *et al.*, *J. Organomet. Chem.*, 1968, **13**, 283, (synth, deriv)
Kostyanovskii, R.G. *et al.*, *Org. Mass Spectrom.*, 1972, **6**, 1199; 1976, **11**, 23, (synth, ms)
Grim, S.O. *et al.*, *Phosphorus Relat. Group V Elem.*, 1974, **4**, 189, (P-31 nmr)
Mosbo, J.A. *et al.*, *Phosphorus Sulfur Relat. Elem.*, 1981, **11**, 11, (struct)
Foss, V.L. *et al.*, *Zh. Obshch. Khim.*, 1982, **52**, 1034; *J. Gen. Chem. USSR (Engl. Transl.)*, 1982, **52**, 916, (sulfide, synth, P-31 nmr, props)
Zschunke, A. *et al.*, *Phosphorus Sulfur Relat. Elem.*, 1985, **22**, 349, (Li salt, Li-7 nmr, P-31 nmr)
Yarkevich, A.N. *et al.*, *Zh. Obshch. Khim.*, 1990, **60**, 1511; *J. Gen. Chem. USSR (Engl. Transl.)*, 1990, **60**, 1351, (oxide, P-31 nmr)