



>>>Entry Name: Dichlorophenylborane, 12Cl, 9Cl

Synonym(s): Phenylboron dichloride. Phenyl dichloroborane

CAS Registry Number: 873-51-8

PhBCl₂

Molecular Formula: C₆H₅BCl₂

Molecular Weight: 158.822

Accurate Mass: 157.986134

Percentage Composition: C 45.38%; H 3.17%; B 6.81%; Cl 44.64%

Source/Synthesis: Synth. from BCl₃ + SnPh₄

Use/Importance: Lewis acid used for ether cleavage and selective condensations; phenylating agent

Physical Description: Moisture-sensitive liq.

Melting Point: Mp 7°

Boiling Point: Bp 175°

Hazard & Toxicity: Fumes in air. Pyrophoric when hot

Aldrich: 10134-6

Fluka: 78373

>>>Derivative: Et₃N complex

Synonym(s): Dichlorophenyl(triethylamine)boron. Dichloro(*N,N*-diethylethanamine)phenylboron, 10Cl. Dichlorophenylborane *N,N*-diethylethanamine, 9Cl, 8Cl. Dichlorophenylborane triethylamine

CAS Registry Number: 17520-47-7

Molecular Formula: C₁₂H₂₀BCl₂N

Molecular Weight: 260.013

Accurate Mass: 259.106583

Percentage Composition: C 55.43%; H 7.75%; B 4.16%; Cl 27.27%; N 5.39%

Physical Description: Solid

Melting Point: Mp 88-90°

References:

- Aldrich Library of Infrared Spectra*, 3rd edn., 1981, 1552D, (ir)
Currell, B.R. *et al.*, *J. Organomet. Chem.*, 1967, **8**, 411, (deriv, synth)
Treichel, P.M. *et al.*, *Inorg. Chem.*, 1971, **10**, 32, (synth)
Sheikh, S.U., *J. Math. Sci.*, 1974, **1**, 131, (deriv, ms)
Wrackmeyer, B. *et al.*, *Chem. Ber.*, 1976, **109**, 1075, (nmr)
Sheikh, S.U., *Pak. J. Sci. Ind. Res.*, 1976, **19**, 48, (deriv)
Barlos, K. *et al.*, *Chem. Ber.*, 1977, **110**, 2774, (nmr)
Gragg, B.R. *et al.*, *J. Organomet. Chem.*, 1977, **132**, 29, (nmr)
Ramsey, B.G. *et al.*, *J. Organomet. Chem.*, 1977, **141**, 257, (uv, pmr, struct)
Odom, J.D. *et al.*, *J. Organomet. Chem.*, 1979, **173**, 15, (nmr)
Sheikh, S.U., *J. Therm. Anal.*, 1980, **18**, 299, (deriv)
Ramsey, B.G. *et al.*, *J.O.C.*, 1980, **45**, 1332, (nmr, struct)
Inorg. Synth., 1983, **22**, 207, (synth)
Haubold, W. *et al.*, *J. Organomet. Chem.*, 1986, **315**, 1, (synth, pmr)
Encyclopaedia of Reagents for Organic Synthesis, (ed. Paquette, L.A.), Wiley, 1995, **6**, 3964-3965, (rev, use)
Synthetic Methods of Organometallic and Inorganic Chemistry, (ed. Hermann, W.A.), Thieme, 1996, **2**, 79, (synth)
Bretherick, L., *Handbook of Reactive Chemical Hazards*, 4th edn., Butterworths, 1990, 2087