



>>Entry Name: Dichloromethylsilane, 9CI

CAS Registry Number: 75-54-7

MeSiHCl₂

Molecular Formula: CH₄Cl₂Si

Molecular Weight: 115.034

Accurate Mass: 113.945931

Percentage Composition: C 10.44%; H 3.50%; Cl 61.64%; Si 24.42%

Source/Synthesis: Synth. from Cl₂MeSiSiMeCl₂ and HCl in presence of Pd(0)

Use/Importance: Hydrosilylating agent; hydrosilylates alkenes and ketones in presence of Pt complex catalysts, and dienes in presence of Pd complex catalysts; undergoes Ni complex catalysed 1,4-addn., or Pt complex catalysed 1,2-addn., to dienes. Catalyst for alkene polym. Monomer for polysilylenes and for polysilazanes used in ceramics

Physical Description: Liq.

Melting Point: Mp -93°

Boiling Point: Bp 41°

Density: d₄²⁰ 1.105

Refractive Index: n_D²⁰ 1.3980

Hazard & Toxicity: Powerful irritant. Highly flammable, fl.p. -30°

Aldrich: 44024-8

Fluka: 66630

Sigma: M6381

References:

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Fink, W., *Helv. Chim. Acta*, 1971, **54**, 1304, (use, 1,2-addn to dienes)

Yamamoto, K. *et al.*, *J. Organomet. Chem.*, 1971, **28**, C37; 1972, **46**, C65, (use, hydrosilylation of ketones, alkenes)

Kiso, Y. *et al.*, *J. Organomet. Chem.*, 1974, **76**, 95, (use, 1,4-addn to dienes)

De Cooker, M.G.R.T. *et al.*, *J. Organomet. Chem.*, 1975, **99**, 371, (synth)

Green, M. *et al.*, *Chem. Comm.*, 1976, 671, (use, hydrosilylation of alkenes)

Ojima, I. *et al.*, *Tet. Lett.*, 1977, 1385, (use, hydrosilylation of dienes)

Matsumoto, H. *et al.*, *Bull. Chem. Soc. Jpn.*, 1978, **51**, 1913, (synth)

Ojima, I. *et al.*, *J. Organomet. Chem.*, 1978, **157**, 359, (use, hydrosilylation of dienes)

Barlos, K. *et al.*, *Chem. Ber.*, 1980, **113**, 3716, (Cl-35 nmr, F-19 nmr)

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Soerensen, O.W. *et al.*, *J. Magn. Reson.*, 1981, **45**, 325, (cmr)

Seyforth, D. *et al.*, *NATO ASI Ser., Ser. E*, 1988, **141**, 133, (rev, polysilazanes)

Qiu, H. *et al.*, *J. Polym. Sci., Part A: Polym. Chem.*, 1989, **27**, 2849, (polysilylenes)

Okada, T. *et al.*, *Chem. Lett.*, 1990, 999, (use)

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