



>>Entry Name: Potassium bis(trimethylsilyl)amide

Synonym(s): Bis(trimethylsilyl)amine, potassium salt. Potassium hexamethyldisilazide, 8Cl. 1,1,1-Trimethyl-*N*-(trimethylsilyl)silanamine, potassium salt, 9Cl. KTSA

CAS Registry Number: 40949-94-8

$\text{KN}(\text{SiMe}_3)_2$

Molecular Formula: $\text{C}_6\text{H}_{18}\text{KNSi}_2$

Molecular Weight: 199.484

Accurate Mass: 199.061485

Percentage Composition: C 36.13%; H 9.09%; K 19.60%; N 7.02%; Si 28.16%

Source/Synthesis: Synth. by metallation of bis(trimethylsilyl)amine e.g. with a suspension of KH in THF

Use/Importance: Commercially available as solid or in toluene (0.5*M*). Sterically hindered base

Physical Description: Moisture-sensitive solid

Melting Point: Fp 158-162°

Solubility: Sol. THF, toluene

Other Data: Reacts with H_2O forming the amine and KOH. aq. Forms mixed complex with Li analogue

Hazard & Toxicity: Flammable, corrosive

Aldrich: 27730-4

Fluka: 60067

References:

Stork, G. *et al.*, *J.A.C.S.*, 1973, **95**, 2014, (*synth, use*)

Fieser and Fieser's Reagents for Organic Synthesis, Wiley, 1974, **4**, 407; 1981, **9**, 229; 1988, **13**, 257; **15**, 286; 1986, **12**, 320; 1982, **10**, 326; 1981, **9**, 370; 385; 1986, **12**, 392; 407; 472; 1977, **6**, 482; 1975, **5**, 557, (*synth, use*)

Brown, C.A., *J.O.C.*, 1974, **39**, 3913, (*synth, use*)

Marshall, J.A. *et al.*, *J.A.C.S.*, 1983, **105**, 5679, (*use*)

Williard, P.G. *et al.*, *J.A.C.S.*, 1986, **108**, 462, (*reaction*)

Nichols, M.A. *et al.*, *J.A.C.S.*, 1991, **113**, 6222; 1994, **116**, 1153, (*mixed complex, Li-6 nmr, N-15 nmr*)

Lopez-Tudanca, P. *et al.*, *J.C.S. Perkin I*, 1992, 533, (*use*)