



>>Entry Name: Sodium bis(trimethylsilyl)amide

Synonym(s): 1,1,1-Trimethyl-*N*-(trimethylsilyl)silanamine, sodium salt, 8Cl. *N*-Sodiohexamethyldisilazane. Sodium hexamethyldisilazide. Sodium hexamethyldisilylamide

CAS Registry Number: 1070-89-9

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

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

Molecular Weight: 183.376

Accurate Mass: 183.087545

Percentage Composition: C 39.30%; H 9.89%; N 7.64%; Na 12.54%; Si 30.63%

Source/Synthesis: Synth. from $(\text{Me}_3\text{Si})_2\text{NH}$ and sodamide or NaH

Use/Importance: Commercially available non-nucleophilic base and electron transfer agent; reagent for enolate formn.; useful base for prep. of salt-free Wittig reagents; substitutes primary alkyl bromides, iodides or tosylates $\rightarrow$ *N,N*-bis(trimethylsilyl)amine $\rightarrow$ primary amine on hydrol. Used for selective cleavage of aryl alkyl ethers

Physical Description: Moisture-sensitive white monoclinic cryst.

Melting Point: Mp 171-175°

Boiling Point: Bp₂ 170°

Solubility: Sol. THF, hydrocarbons

Other Data: Forms characterised mixed aggregate with ester sodium enolate

Hazard & Toxicity: Corrosive

Aldrich: 24558-5

Fluka: 71304

>>Derivative: Et₂O complex (1:1)

Molecular Formula: $\text{C}_{10}\text{H}_{28}\text{NNaOSi}_2$

Molecular Weight: 257.498

Percentage Composition: C 46.65%; H 10.96%; N 5.44%; Na 8.93%; O 6.21%; Si 21.81%

Physical Description: Solid

Melting Point: Mp 72-74°

>>Derivative: THF complex (1:1)

Molecular Formula: $\text{C}_{10}\text{H}_{26}\text{NNaOSi}_2$

Molecular Weight: 255.482

Percentage Composition: C 47.01%; H 10.26%; N 5.48%; Na 9.00%; O 6.26%; Si 21.99%

Physical Description: Solid

Melting Point: Mp 70-85 dec.°

>>Derivative: 1,4-Dioxan complex (1:2)

CAS Registry Number: 18616-68-7

Extra CAS Registry Numbers(s): 143446-27-9

Molecular Formula: $\text{C}_{14}\text{H}_{34}\text{NNaO}_4\text{Si}_2$

Molecular Weight: 359.588

Percentage Composition: C 46.76%; H 9.53%; N 3.90%; Na 6.39%; O 17.80%; Si 15.62%

Source/Synthesis: Prepd. by dissolving base-free $\text{NaN}(\text{SiMe}_3)_2$ in minimum amount of hot 1,4-dioxan

Physical Description: Colourless cryst. (1,4-dioxan)

References: