



>>Entry Name: Hydrotris(1-methylpropyl)borate(1-), 12Cl, 9Cl

Synonym(s): Tri-*sec*-butylhydroborate. Tri-*sec*-butylborohydride. Selectride



Molecular Formula: C₁₂H₂₈B⁽⁻⁾

Molecular Weight: 183.164

Accurate Mass: 183.228405

Percentage Composition: C 78.69%; H 15.41%; B 5.90%

>>Derivative: Li salt

Synonym(s): L-Selectride

CAS Registry Number: 38721-52-7

Molecular Formula: C₁₂H₂₈BLi

Molecular Weight: 190.105

Percentage Composition: C 75.82%; H 14.85%; B 5.69%; Li 3.65%

Use/Importance: Commercially available. Stereoselective reducing agent for cyclic and bicyclic ketones

Physical Description: Often prepd. *in situ*. Air- and moisture-sensitive

Solubility: Sol. THF, Et₂O

Hazard & Toxicity: Pyrophoric. Fl. p. of THF soln. -17°

Aldrich: 25704-4

Sigma: S2134

>>Derivative: Na salt

Synonym(s): N-Selectride

CAS Registry Number: 67276-04-4

Molecular Formula: C₁₂H₂₈BNa

Molecular Weight: 206.154

Percentage Composition: C 69.91%; H 13.69%; B 5.24%; Na 11.15%

Aldrich: 21340-3

>>Derivative: K salt

Synonym(s): K-Selectride

CAS Registry Number: 54575-49-4

Molecular Formula: C₁₂H₂₈BK

Molecular Weight: 222.263

Percentage Composition: C 64.85%; H 12.70%; B 4.86%; K 17.59%

Use/Importance: Commercially available as THF or Et₂O soln. Stereoselective reducing agent

Physical Description: Pure compd. not isol. Colourless to yellow soln. in THF, stable indefinitely under N₂ but air- and moisture-sensitive

Solubility: Sol. THF, Et₂O

Hazard & Toxicity: Flammable. Fl. p. of soln. -17°. Irritant, may cause burns

Aldrich: 22076-0

Fluka: 60605

Sigma: S3010

References:

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Ganem, B. *et al.*, *J.O.C.*, 1975, **40**, 146; 2846, (*use, props*)

Strouf, O. *et al.*, *Acta Chem. Scand., Ser. A*, 1977, **31**, 391, (*props*)

Inorg. Synth., 1977, **17**, 26, (*synth, ir*)

Dauben, W.G. *et al.*, *Tet. Lett.*, 1978, 4487, (*props*)

U.S. Pat., 1978, 4 082 810; *CA*, **89**, 109936y, (*synth*)

Yamamoto, Y. *et al.*, *CA*, 1980, **92**, 139884j, (*rev*)

Brown, H.C. *et al.*, *J. Organomet. Chem.*, 1980, **188**, 1, (*synth, nmr*)

Hubbard, J.L., *Chem. Comm.*, 1989, 1639, (*synth*)

Wittmann, S. *et al.*, *J. Prakt. Chem.*, 1996, **338**, 759, (*rev*)