



>>Entry Name: Tributylmethoxystannane, 9CI

Synonym(s): Tributyltin methoxide

CAS Registry Number: 1067-52-3

$(\text{H}_3\text{CCH}_2\text{CH}_2\text{CH}_2)_3\text{SnOMe}$

Molecular Formula: $\text{C}_{13}\text{H}_{30}\text{OSn}$

Molecular Weight: 321.089

Accurate Mass: 320.131865

Percentage Composition: C 48.63%; H 9.42%; O 4.98%; Sn 36.97%

Source/Synthesis: Synth. from Bu_3SnCl and NaOMe in MeOH

Use/Importance: Catalyst for many addn. and polym. reactions; converts enol acetates to tin enolates; catalyses *trans*-addn. of MeOH across activated $\text{C}\equiv\text{C}$ bonds; used to convert halohydrins to epoxides and 3-haloalcohols to oxetanes, 4-haloalcohols give tetrahydrofurans

Physical Description: Liq.

Boiling Point: Bp_{15} 148°. Bp_2 101-102°. $\text{Bp}_{0.1}$ 90°

Other Data: Hydrol. in air

Hazard & Toxicity: Fl. p. 98°

Aldrich: 22924-5

Rare Chemicals Library: S61692-3

Other: Gelest SNT8110

References:

Aldrich Library of FT-IR Spectra, 1st edn., 1985, **2**, 1145A, (*ir*)

Aldrich Library of ^{13}C and ^1H FT NMR Spectra, 1992, **3**, 742A, (*nmr*)

Ingham, R.K. *et al.*, *Chem. Rev.*, 1960, **60**, 459, (*rev*)

Davies, A.G. *et al.*, *Chem. Ind. (London)*, 1967, 229, (*synth*)

Smith, P.J., *Organomet. Chem. Rev., Sect. A*, 1970, **5**, 373, (*Mössbauer*)

Smith, P.J. *et al.*, *J. Organomet. Chem.*, 1972, **40**, 341, (*Sn-119 nmr*)

Odic, Y. *et al.*, *J. Organomet. Chem.*, 1973, **55**, 273, (*use, reaction with enol acetates*)

Mitchell, T.N., *J. Organomet. Chem.*, 1973, **59**, 189, (*cmr*)

Gassend, R. *et al.*, *C. R. Hebd. Seances Acad. Sci.*, 1975, **281**, 945, (*synth*)

Compr. Organomet. Chem., Pergamon, 1982, **2**, 577, (*rev*)

Pereyre, M. *et al.*, *Tin in Organic Synthesis*, Butterworths, 1987, (*rev, uses*)