



>>Entry Name: Tributylethenylstannane, 10CI

Synonym(s): Tributylvinylstannane

CAS Registry Number: 7486-35-3



Molecular Formula: $\text{C}_{14}\text{H}_{30}\text{Sn}$

Molecular Weight: 317.101

Accurate Mass: 316.13695

Percentage Composition: C 53.03%; H 9.54%; Sn 37.44%

Source/Synthesis: Synth. from Bu_3SnCl and vinylmagnesium chloride

Use/Importance: Substitutes acyl, benzyl, vinyl, allyl halides and vinyl, aryl triflates in the presence of Pd or Rh complex catalysts; under CO, vinyl, allyl halides and aryl triflates → ketones; undergoes conjugate addn. to enals in the presence of $\text{Ni}(\text{cod})_2$ and R_3SiCl ; undergoes 1,4-coupling/ring opening of vinyl epoxides in the presence of Pd complex catalysts; reacts with PhSSPh → corresp. vinyl phenyl thioether

Physical Description: Colourless liq.

Boiling Point: Bp_3 114°. $\text{Bp}_{0.8}$ 88°

Aldrich: 27143-8

Fluka: 95085

References:

Aldrich Library of ^{13}C and ^1H FT NMR Spectra, 1992, **3**, 738B, (nmr)

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Rosenberg, S.D. *et al.*, *J.A.C.S.*, 1957, **79**, 2137, (synth)

Smolin, E.M., *Tet. Lett.*, 1961, 143, (synth)

Kosugi, M. *et al.*, *Chem. Lett.*, 1977, 1423, (use, subst of acyl halides)

Milstein, D. *et al.*, *J.O.C.*, 1979, **44**, 1613, (use, subst of acyl halides)

Russell, G.A. *et al.*, *J.A.C.S.*, 1980, **102**, 7603, (use, reaction with PhSSPh)

Pereyre, M. *et al.*, *Pure Appl. Chem.*, 1981, **53**, 2407, (use, subst of acyl halides)

Beletskaya, I.P. *et al.*, *J. Organomet. Chem.*, 1983, **250**, 551, (use, subst of acyl halides)

Labadie, J.W. *et al.*, *J.O.C.*, 1983, **48**, 4634, (use, subst of acyl halides)

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Goure, W.F. *et al.*, *J.A.C.S.*, 1984, **106**, 6417, (use, subst of vinyl iodides)

Stille, J.K., *Angew. Chem., Int. Ed.*, 1986, **25**, 508, (use, subst of allyl, vinyl halides)

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Corey, E.J. *et al.*, *J.A.C.S.*, 1987, **109**, 287, (use, subst of acyl halides)

Echavarren, A.M. *et al.*, *J.A.C.S.*, 1987, **109**, 5478; 1988, **110**, 1557; 4039, (use, subst of aryl triflates, ring opening of epoxides)

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

Tueting, D.R. *et al.*, *Tetrahedron*, 1989, **45**, 979, (use, ring opening of epoxides)

Grisso, B.A. *et al.*, *J.A.C.S.*, 1992, **114**, 5160, (use, conjugate addn to enals)

Houpis, I.N., *Tet. Lett.*, 1992, **33**, 8039, (use, subst of vinyl triflates)

Boa, A.N. *et al.*, *Contemp. Org. Synth.*, 1994, 47, (use, subst of vinyl triflates)