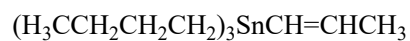




>>Entry Name: Allyltributylstannane

Synonym(s): Tributyl-1-propenylstannane, 9Cl. 1-(Tributylstannyl)-1-propene

CAS Registry Number: 105494-65-3



Molecular Formula: C₁₅H₃₂Sn

Molecular Weight: 331.128

Accurate Mass: 330.1526

Percentage Composition: C 54.41%; H 9.74%; Sn 35.85%

Source/Synthesis: Synth. from H₃CCH=CHMgBr + Hexabutyldistannoxane [GGH50-Z](#)

Use/Importance: Couples with allyl derivs. in the presence of Pd complex catalysts, regioselective for less hindered site of allyl group; reacts with acyl halides in the presence of Lewis acid catalysts; with vinyl halides in the presence of CO and Pd(0) → vinyl ketones; undergoes conjugate addn. to enals in the presence of Ni(cod)₂ and R₃SiCl

Physical Description: Liq.

Boiling Point: Bp_{0.4} 90-92°

>>Variant: (E)-form

CAS Registry Number: 66680-85-1

Molecular Formula: C₁₅H₃₂Sn

Molecular Weight: 331.128

Accurate Mass: 330.1526

Percentage Composition: C 54.41%; H 9.74%; Sn 35.85%

Physical Description: Liq.

>>Variant: (Z)-form

CAS Registry Number: 66680-84-0

Molecular Formula: C₁₅H₃₂Sn

Molecular Weight: 331.128

Accurate Mass: 330.1526

Percentage Composition: C 54.41%; H 9.74%; Sn 35.85%

Physical Description: Liq.

Boiling Point: Bp_{0.25} 77-78°

References:

Saihi, M.L. *et al.*, *Bull. Soc. Chim. Fr.*, 1977, 1251, (*E,Z-mixt, synth*)

Labadie, J.W. *et al.*, *J.A.C.S.*, 1983, **105**, 6129, (*Z-form, synth, pmr, use, subst of acyl halides*)

Sheffy, F.K. *et al.*, *J.A.C.S.*, 1983, **105**, 7173; 1984, **106**, 4833, (*Z-form, synth, use, subst of allyl halides*)

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

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

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

Duboudin, J.G. *et al.*, *J. Organomet. Chem.*, 1987, **331**, 181, (*E,Z-mixt, synth*)

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

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