>>**Entry Name: Tributyl-2-propenylstannane,** 10CI
Synonym(s): Allyltributylstannane

CAS Registry Number: 24850-33-7

BB0350 BB0330 BA0555
$(H_3CCH_2CH_2CH_2)_3SnCH_2CH{=}CH_2$

Molecular Formula: $C_{15}H_{32}Sn$
Molecular Weight: 331.128
Accurate Mass: 330.1526
Percentage Composition: C 54.41%; H 9.74%; Sn 35.85%
Source/Synthesis: Synth. from Bu_3SnCl and allyllithium in Et_2O
Use/Importance: Reacts with RI and CO in the presence of AIBN → β,γ-unsatd. enones; couples with aryl, allyl, vinyl halides, vinyl, aryl triflates in the presence of Pd complex catalysts, and with allyl palladium complexes in the presence of maleic anhydride; substitutes acyl halides in the presence of Rh or Pd complex catalysts → allyl ketones; adds to aldehydes at the γ-position in the presence of Lewis acids, stereochem. depends on Lewis acid used; adds to ketones; allylates chiral dioxan acetals with good selectivity; substitutes α-haloketones in the presence of AIBN; adds to the carbonyl of α-haloketones in the presence of $Pd(PPh_3)_4$ → epoxide after elimination of organotin halide; substitutes α-haloesters in the presence of Pd catalysts; reacts with alcohols or HOAc in the presence of Tl^{III} → allyl ethers or acetates; in the presence of Lewis acids adds to aldimines → homoallyl amines and monosubstitutes selenoacetals with allylic inversion → homoallyl selenides; in the presence of $[Me_2S.SMe]BF_4$, reacts with dimethyl thioketals; allylates quinones in the presence of $BF_3.Et_2O$ → allylated hydroquinones; with $ZnCl_2$, adds to acyl silanes bearing an α-alkoxy β-siloxy group with high *syn*-selection; used in allylation/acylation of isoquinolines → 1,2-adducts which undergo Diels-Alder cyclisation, and in photolytic allylation of α-phenylselenoketones; adds to *N*-alkoxycarbonyl pyridinium salts; α-allylates pyridinium salts → α-allyl-1,2-dihydropyridines; used in [3+2] cycloaddn. reactions with Fe compds./ $AlCl_3$ → cyclopentane deriv; allylates org. halides and boron halides
Physical Description: Colourless oil
Boiling Point: Bp_{17} 155°

Aldrich: 27141-1
Fluka: 6068
Other: Gelest SNA 5

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