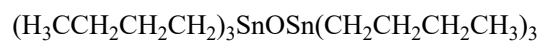




>>Entry Name: Hexabutyl-distannoxane, 9CI

Synonym(s): Bis(tributyltin) oxide. Bis(tributylstannyl) oxide

CAS Registry Number: 56-35-9



Molecular Formula: $\text{C}_{24}\text{H}_{54}\text{OSn}_2$

Molecular Weight: 596.11

Accurate Mass: 594.221865

Percentage Composition: C 48.36%; H 9.13%; O 2.68%; Sn 39.83%

Source/Synthesis: Synth. by base hydrol. of Bu_3SnCl using aq. NaOH

Use/Importance: Algicide; fungicide, wood-preserving agent; with Br_2 , mild oxidising agent: oxidises secondary, allylic, benzylic alcohols to carbonyl compds., primary alcohols are unreactive; sulfides $\rightarrow$ sulfoxides without overoxidn. to sulfones; sulfenamides $\rightarrow$ sulfinamides; used in alkylation of alcohols via tributylstannyl ethers; reagent for desulfurisation of propargyl or allyl sulfides via $\text{S}_{\text{H}}^{\text{I}}$ process under radical conditions; protects vicinal diols, carboxyl groups; converts primary thioamides to nitriles; alkyl iodides, bromides $\rightarrow$ alcohols in the presence of $\text{Ag}^{(+)}/\text{DMF}$; with $\text{MoO}_2(\text{acac})_2$ catalyst for alkene epoxidation by H_2O_2 ; with $\text{PhSeSePh}/\text{Br}_2$, oxidises alkenes to α -phenylseleno carbonyl compds.; deacylates polyacyl carbohydrates selectively at the anomeric position; 1-alkenes give mainly the α -phenylselenoketone with some of the α -phenylselenoaldehyde; reagent for tributylstannylation of carbohydrates

Physical Description: Air-sensitive liq.

Melting Point: Mp -45°

Boiling Point: Bp₁₀ 220-230 $^\circ$

Density: d_4^{20} 1.17

Other Data: n_{D} 1.4870

Hazard & Toxicity: Fl. p. 168 $^\circ$. LD₅₀ (rat, orl) 148 mg/kg

Aldrich: B5338-3

Fluka: 15210

Other: Gelest SNB1800

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