



>>Entry Name: Tetra-2-propenylstannane, 9Cl

Synonym(s): Tetraallyltin, 8Cl. Tetrallylstannane

CAS Registry Number: 7393-43-3



Molecular Formula: C₁₂H₂₀Sn

Molecular Weight: 283

Accurate Mass: 282.0587

Percentage Composition: C 50.93%; H 7.12%; Sn 41.95%

Source/Synthesis: Synth. from allylmagnesium chloride and SnCl₄ in Et₂O

Use/Importance: Source of allyllithium; couples with allyl halides, allyl acetates, propargyl acetates in the presence of Pd complex catalysts, mostly at γ-position; also with allyl alcohols, ethers in the presence of Lewis acids; adds to aldehydes, ketones → homoallyl alcohols. Catalyst for polym. of alkenes.

Physical Description: Liq.

Boiling Point: Bp 128-130°. Bp_{1.5} 69-70°

Density: d²⁰ 1.18

Hazard & Toxicity: Fl.p. 76°

Aldrich: 27144-6

Fluka: 86721

Other: Gelest SNT7040

References:

Aldrich Library of FT-IR Spectra: Vapor Phase, 1989, **3**, 1683C, (ir)

Seyferth, D. *et al.*, *J.O.C.*, 1961, **26**, 4797, (use)

Seyferth, D. *et al.*, *J.A.C.S.*, 1962, **84**, 311, (use)

Seyferth, D. *et al.*, *J. Organomet. Chem.*, 1967, **8**, P13, (use)

Fishwick, M. *et al.*, *J. Organomet. Chem.*, 1970, **25**, 69, (synth, pmr, ir)

Fishwick, M. *et al.*, *J.C.S.(A)*, 1971, 57, (ms)

Inorg. Synth., 1972, **13**, 73, (synth)

Davidson, G. *et al.*, *Spectrochim. Acta A*, 1973, **29**, 1265, (ir, Raman)

Kuivila, H.G. *et al.*, *J. Organomet. Chem.*, 1976, **111**, 179, (cmr)

Brubaker, D. *et al.*, *J. Organomet. Chem.*, 1977, **136**, 147, (use)

Petrosyan, V.S., *Prog. Nucl. Magn. Reson. Spectrosc.*, 1977, **11**, 115, (pmr, cmr, Sn-119 nmr)

Daudé, G. *et al.*, *J. Organomet. Chem.*, 1980, **190**, 43, (use, addn to carbonyl compds)

Trost, B.M. *et al.*, *Tet. Lett.*, 1980, **21**, 2595, (use, subst of allyl acetates)

Godschalx, J. *et al.*, *Tet. Lett.*, 1980, **21**, 2599, (use, coupling with allyl bromide)

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

Fukuzawa, S. *et al.*, *Chem. Comm.*, 1990, 939, (reactions)

Encyclopaedia of Reagents for Organic Synthesis, (ed. Paquette, L.A.), Wiley, 1995, **7**, 4716-4717, (rev, use)

Synthetic Methods of Organometallic and Inorganic Chemistry, (ed. Hermann, W.A.), Thieme, 2000, **9**, 17-18, (synth)