



>>Entry Name: (Trimethylsilyl)methyl trifluoromethanesulfonate, 10Cl

Synonym(s): Trimethylsilylmethyl triflate. Trifluoromethanesulfonic acid (trimethylsilyl)methyl ester, 12Cl

CAS Registry Number: 64035-64-9

$\text{Me}_3\text{SiCH}_2\text{OSO}_2\text{CF}_3$

Molecular Formula: $\text{C}_5\text{H}_{11}\text{F}_3\text{O}_3\text{SSi}$

Molecular Weight: 236.287

Accurate Mass: 236.015026

Percentage Composition: C 25.42%; H 4.69%; F 24.12%; O 20.31%; S 13.57%; Si 11.89%

Source/Synthesis: Synth. from $\text{Me}_3\text{SiCH}_2\text{OH}$ + triflic anhydride/Py complex

Use/Importance: Commercially available Wittig reagent; converts lithium salts of 1-alkynes to propargyl trimethylsilanes; reacts with imines and aldehyde oxime → iminium salts which may be desilylated to azomethine ylides for 1,3-dipolar cycloaddns. with electron-deficient alkenes

Physical Description: Moisture-sensitive colourless oil, stable to refrigerator storage

Boiling Point: Bp_9 49-51°

Refractive Index: n_D^{20} 1.3760

Aldrich: 32623-2

Fluka: 91744

References:

Aldrich Library of ^{13}C and ^1H FT NMR Spectra, 1992, **3**, 697C, (nmr)

Baum, K. *et al.*, *J.O.C.*, 1978, **43**, 203, (synth, ir, pmr, F-19 nmr)

Vedejs, E. *et al.*, *J.A.C.S.*, 1979, **101**, 6452, (synth, pmr)

Ambasht, S. *et al.*, *Synthesis*, 1980, 318, (synth, pmr)

Ambasht, S. *et al.*, *Tet. Lett.*, 1980, **21**, 4047, (use, reaction with alkynes)

Fieser and Fieser's Reagents for Organic Synthesis, Wiley, 1982, **10**, 434; **13**, 329; **14**, 332, (synth, use)

Padwa, A. *et al.*, *Tet. Lett.*, 1983, **24**, 4303, (props)

Padwa, A. *et al.*, *J.O.C.*, 1984, **49**, 3314; 1987, **52**, 3944, (use, cycloaddn)

Aono, M. *et al.*, *Chem. Lett.*, 1987, 1851, (use)