



>>Entry Name: Trimethylsilyl (diethoxyphosphinyl)acetate, 10CI

Synonym(s): Diethyl(trimethylsilyloxycarbonylmethyl)phosphonate

CAS Registry Number: 66130-90-3

$(\text{EtO})_2\text{P}(\text{O})\text{CH}_2\text{COOSiMe}_3$

Molecular Formula: $\text{C}_9\text{H}_{21}\text{O}_5\text{PSi}$

Molecular Weight: 268.321

Accurate Mass: 268.089589

Percentage Composition: C 40.29%; H 7.89%; O 29.81%; P 11.54%; Si 10.47%

Source/Synthesis: Synth. from $(\text{EtO})_2\text{P}(\text{O})\text{CH}_2\text{COOH} + \text{Me}_3\text{SiCl}$

Use/Importance: Reagent for the prep. of α,β -unsatd. acids from aldehydes and ketones; hydrol. enables the prep. of diethylcarboxymethanephosphonate, a versatile Wittig-Horner reagent

Physical Description: Liq.

Boiling Point: $\text{Bp}_{0.0005} 93^\circ$

Aldrich: 27021-0

Fluka: 79520

References:

Lombardo, L. *et al.*, *Synth. Commun.*, 1978, **8**, 463, (use)

Lombardo, L. *et al.*, *Synthesis*, 1978, 131, (synth, pmr, use)

Controt, P. *et al.*, *Synthesis*, 1978, 133, (use)