



>>Entry Name: (3-Dimethylamino)propyltriphenylphosphonium(1+)

CAS Registry Number: 89207-40-9

Related CAS Registry Numbers(s): 27710-82-3

$\text{Ph}_3\text{P}^{(+)}\text{CH}_2\text{CH}_2\text{CH}_2\text{NMe}_2$

Molecular Formula: $\text{C}_{23}\text{H}_{27}\text{NP}^{(+)}$

Molecular Weight: 348.447

Accurate Mass: 348.188111

Percentage Composition: C 79.28%; H 7.81%; N 4.02%; P 8.89%

>>Derivative: Chloride

CAS Registry Number: 83300-00-9

Type of Compound Code(s): AC0600

Molecular Formula: $\text{C}_{23}\text{H}_{27}\text{ClNP}$

Molecular Weight: 383.899

Accurate Mass: 383.156963

Percentage Composition: C 71.96%; H 7.09%; Cl 9.23%; N 3.65%; P 8.07%

Use/Importance: Source of ylide

Physical Description: Cryst. (EtOAc)

Melting Point: Mp 206-208°

Other Data: Butyllithium → ylide

>>Derivative: Bromide

CAS Registry Number: 18355-96-9

Type of Compound Code(s): AC0600

Molecular Formula: $\text{C}_{23}\text{H}_{27}\text{BrNP}$

Molecular Weight: 428.351

Accurate Mass: 427.126447

Percentage Composition: C 64.49%; H 6.35%; Br 18.65%; N 3.27%; P 7.23%

Use/Importance: Source of ylide

Physical Description: Solid

Melting Point: Mp 270-278 dec.°

>>Derivative: Ylide

Synonym(s): [3-(Dimethylamino)propylidene]triphenylphosphorane. *N,N*-Dimethyl-3-(triphenylphosphoranylide)-1-propanamine, 11Cl

CAS Registry Number: 69808-28-2

Type of Compound Code(s): AC0800

Molecular Formula: $\text{C}_{23}\text{H}_{26}\text{NP}$

Molecular Weight: 347.439

Accurate Mass: 347.180286

Percentage Composition: C 79.51%; H 7.54%; N 4.03%; P 8.91%

Use/Importance: Wittig reagent. Used in synth. of 1,3-dienes

References:

De Castro Dantas, T.N. *et al.*, *Phosphorus Sulfur Relat. Elem.*, 1982, **13**, 97, (*synth*)

Reitz, A.B. *et al.*, *Synth. Commun.*, 1983, **13**, 845, (*ylide, use*)

De Castro Dantas, T.N. *et al.*, *Tetrahedron*, 1983, **39**, 3337, (*ylide, use*)

Maryanoff, B.E. *et al.*, *J.A.C.S.*, 1985, **107**, 217, (*bromide, synth, props*)

Corey, E.J. *et al.*, *Tet. Lett.*, 1985, **26**, 5747, (*synth, pmr, ylide*)

Dubourg, P.A. *et al.*, *Acta Cryst. C*, 1986, **42**, 112, (*cryst struct*)

Fieser and Fieser's Reagents for Organic Synthesis, Wiley, 1988, **13**, 119, (*use*)