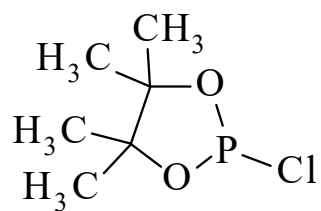




>>Entry Name: 2-Chloro-4,4,5,5-tetramethyl-1,3,2-dioxaphospholane, 9Cl

Synonym(s): 2-Chloro-4,4,5,5-tetramethyl-1,3-dioxaphosphacyclopentane. Tetramethylethylene chlorophosphite



CAS Registry Number: 14812-59-0

Molecular Formula: C₆H₁₂ClO₂P

Molecular Weight: 182.586

Accurate Mass: 182.026344

Percentage Composition: C 39.47%; H 6.62%; Cl 19.42%; O 17.53%; P 16.96%

Use/Importance: Used in characterisation of phenols (e.g. in lignins and coals) alcohols, carboxylic acids, amines, thiols, etc. by P-31 nmr

Physical Description: Fuming liq.

Boiling Point: Bp₉ 78-81°

Refractive Index: n_D²² 1.4723

Aldrich: 44753-6

>>Derivative: 2-Oxide

Synonym(s): Tetramethylethylene chlorophosphate. Tetramethylethylene phosphoryl chloride

CAS Registry Number: 60146-70-5

Molecular Formula: C₆H₁₂ClO₃P

Molecular Weight: 198.585

Accurate Mass: 198.021259

Percentage Composition: C 36.29%; H 6.09%; Cl 17.85%; O 24.17%; P 15.60%

Physical Description: No phys. props. reported

>>Derivative: 2-Sulfide

Synonym(s): Tetramethylethylene chlorothiophosphate. Tetramethylethylene thiophosphoryl chloride

CAS Registry Number: 59523-65-8

Molecular Formula: C₆H₁₂ClO₂PS

Molecular Weight: 214.652

Accurate Mass: 213.998414

Percentage Composition: C 33.57%; H 5.63%; Cl 16.52%; O 14.91%; P 14.43%; S 14.94%

Physical Description: Cryst. (petrol at 0°)

Melting Point: Mp 62-64°

References:

- Fontal, B. *et al.*, *Tetrahedron*, 1966, **22**, 3275, (*synth, pmr*)
Shagidullin, R.R. *et al.*, *Zh. Obshch. Khim.*, 1975, **45**, 1257; 1976, **46**, 1021; *J. Gen. Chem. USSR (Engl. Transl.)*, 1975, **45**, 1235; 1976, **46**, 1021, (*ir, Raman*)
Mikolajczyk, M. *et al.*, *J.C.S. Perkin I*, 1976, 371, (*sulfide*)
Plyamovoyti, A.Kh. *et al.*, *Dokl. Akad. Nauk SSSR, Ser. Khim.*, 1977, **235**, 124; *Dokl. Chem. (Engl. Transl.)*, 1977, **235**, 388, (*struct*)
Arshinova, R.P. *et al.*, *Izv. Akad. Nauk SSSR, Ser. Khim.*, 1978, 609; 609; *Bull. Acad. Sci. USSR, Div. Chem. Sci. (Engl. Transl.)*, 1978, 524, (*derivs, ir, P-31 nmr, conformn*)
Besserre, D. *et al.*, *Org. Magn. Reson.*, 1980, **13**, 235; 313, (*cmr, conformn*)
Kubayashi, S. *et al.*, *Polym. Bull. (Berlin)*, 1980, **3**, 585, (*synth*)
Tromelin, A. *et al.*, *Phosphorus Sulfur Relat. Elem.*, 1986, **27**, 301, (*synth, pmr, P-31 nmr*)
Wroblewski, A.E. *et al.*, *Energy Fuels*, 1988, **2**, 765; 1991, **5**, 491, (*P-31 nmr, use*)
Mohan, T. *et al.*, *Energy Fuels*, 1993, **7**, 222, (*P-31 nmr, use*)
Granada, A. *et al.*, *J. Agric. Food Chem.*, 1995, **43**, 1538, (*P-31 nmr, use*)