



>>Entry Name: 1,2-Ethanediybis[triphenylphosphonium](2+), 9Cl

Synonym(s): 1,2-Ethylenebis[triphenylphosphonium](2+). 1,2-Bis(triphenylphosphonio)ethane

CAS Registry Number: 13275-02-0



Molecular Formula: $\text{C}_{38}\text{H}_{34}\text{P}_2^{2(+)}$

Molecular Weight: 552.634

Accurate Mass: 552.213574

Percentage Composition: C 82.59%; H 6.20%; P 11.21%

>>Derivative: Dibromide

CAS Registry Number: 1519-45-5

Molecular Formula: $\text{C}_{38}\text{H}_{34}\text{Br}_2\text{P}_2$

Molecular Weight: 712.442

Accurate Mass: 710.090246

Percentage Composition: C 64.06%; H 4.81%; Br 22.43%; P 8.70%

Use/Importance: Used as 0.5% aq. soln. for extraction-photometric detn. of Co, Nb, Mn (as $\text{MnO}_4^{(-)}$)

Physical Description: Cryst. ($\text{CHCl}_3/\text{EtOAc}$)

Melting Point: Mp 297-300°. Mp 313-314°

Solubility: Sol. H_2O

Hazard & Toxicity: Exhibits anticholinesterase activity towards vertebrates and schistosomes. Can explode at 80-90°

Rare Chemicals Library: S53682-2

>>Derivative: Bis(tribromide)

CAS Registry Number: 104785-67-3

Molecular Formula: $\text{C}_{38}\text{H}_{34}\text{Br}_6\text{P}_2$

Molecular Weight: 1032.058

Accurate Mass: 1025.84359

Percentage Composition: C 44.22%; H 3.32%; Br 46.45%; P 6.00%

Use/Importance: Brominating agent for ketones

Physical Description: Solid

Melting Point: Mp 186-188°

>>Derivative: Bis(hexafluorophosphate)

CAS Registry Number: 91533-51-6

Molecular Formula: $\text{C}_{38}\text{H}_{34}\text{F}_{12}\text{P}_4$

Molecular Weight: 842.562

Accurate Mass: 842.141934

Percentage Composition: C 54.17%; H 4.07%; F 27.06%; P 14.70%

Physical Description: Solid

Melting Point: Mp 208-215°

References:

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Schweizer, E.E. *et al.*, *J.O.C.*, 1973, **38**, 3069, (*synth, use*)
Swartz, W.E. *et al.*, *Spectrochim. Acta A*, 1974, **30**, 1561, (*pe*)
Wood, G.W. *et al.*, *J.O.C.*, 1975, **40**, 636, (*ms*)
Leddy, B.P. *et al.*, *Tet. Lett.*, 1980, **21**, 2261, (*props*)
Willcockson, W.S. *et al.*, *Comp. Biochem. Physiol., C: Comp. Pharmacol.*, 1982, **72**, 101, (*tox*)
Bowmaker, G.A. *et al.*, *Z. Naturforsch., B*, 1984, **39**, 618, (*hexafluorophosphate, pmr, cmr, P-31 nmr*)
Cristau, H.-J., *Phosphorus Sulfur Relat. Elem.*, 1985, **25**, 355, (*bistribromide, synth, use*)
Burns, D.T. *et al.*, *Anal. Chim. Acta*, 1987, **199**, 241; 1988, **204**, 365; 1989, **225**, 123, (*detn, Mn, Nb, Co*)