



>>Entry Name: 1,2-Bis(diethylphosphino)ethane

Synonym(s): 1,2-Ethanediylbis[diethylphosphine], 9CI

CAS Registry Number: 6411-21-8

$\text{Et}_2\text{PCH}_2\text{CH}_2\text{PEt}_2$

Molecular Formula: $\text{C}_{10}\text{H}_{24}\text{P}_2$

Molecular Weight: 206.247

Accurate Mass: 206.135324

Percentage Composition: C 58.24%; H 11.73%; P 30.04%

Physical Description: Air-sensitive liq.

Boiling Point: Bp 220-230°. Bp 250-255°. Bp₁₀ 124-126°

Refractive Index: n_D^{20} 1.5100

Other Data: Forms complexes with Au, Ir, Fe, Mo and W compds.

>>Derivative: Hydrobromide (1:2)

Melting Point: Mp 85 dec.°

>>Derivative: Hydroiodide (1:2)

Melting Point: Mp 181-183°

>>Derivative: Dioxide

Synonym(s): 1,2-Bis(diethylphosphinyl)ethane

CAS Registry Number: 13337-10-5

Molecular Formula: $\text{C}_{10}\text{H}_{24}\text{O}_2\text{P}_2$

Molecular Weight: 238.246

Accurate Mass: 238.125154

Percentage Composition: C 50.41%; H 10.15%; O 13.43%; P 26.00%

Physical Description: Solid

Melting Point: Mp 125-126°

Boiling Point: Bp_{2.5} 228-229°

>>Derivative: Disulfide

Synonym(s): 1,2-Bis(diethylphosphinothioyl)ethane

Molecular Formula: $\text{C}_{10}\text{H}_{24}\text{P}_2\text{S}_2$

Molecular Weight: 270.379

Accurate Mass: 270.079464

Percentage Composition: C 44.42%; H 8.95%; P 22.91%; S 23.72%

Physical Description: Cryst. (Me₂CO or EtOH)

Melting Point: Mp 84-85°

References:

Chatt, J. *et al.*, *J.C.S.*, 1960, 1378, (*synth, complexes*)

Meriwether, L.S. *et al.*, *J.A.C.S.*, 1961, **83**, 3192, (*P-31 nmr*)

Issleib, K. *et al.*, *Chem. Ber.*, 1963, **96**, 1544; 2186

Tsivunin, V.S. *et al.*, *Zh. Obshch. Khim.*, 1966, **36**, 1430; *J. Gen. Chem. USSR (Engl. Transl.)*, 1966, **36**, 1436, (*dioxide, disulfide*)

Burt, R.J. *et al.*, *J. Organomet. Chem.*, 1979, **182**, 203, (*synth, P-31 nmr*)