



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

Synonym(s): 1,2-Ethanediylbis[dimethylphosphine], 9Cl. DMPE. 2,5-Dimethyl-2,5-diphosphahexane. 1,2-Ethylenebis(dimethylphosphine)

CAS Registry Number: 23936-60-9

$\text{Me}_2\text{PCH}_2\text{CH}_2\text{PMe}_2$

Molecular Formula: $\text{C}_6\text{H}_{16}\text{P}_2$

Molecular Weight: 150.14

Accurate Mass: 150.072724

Percentage Composition: C 48.00%; H 10.74%; P 41.26%

Use/Importance: Ligand for metals of Groups VB, VIB, and VIII

Physical Description: Air-sensitive liq., not spontaneously flammable

Melting Point: Mp -1°

Boiling Point: Bp 188.1° . Bp₂₆ $81-82^\circ$

Aldrich: 26193-9

Fluka: 14796

>>Derivative: Monoxide

Molecular Formula: $\text{C}_6\text{H}_{16}\text{OP}_2$

Molecular Weight: 166.139

Accurate Mass: 166.067639

Percentage Composition: C 43.38%; H 9.71%; O 9.63%; P 37.29%

Physical Description: Cryst.

Melting Point: Mp $97-100^\circ$

>>Derivative: Dioxide

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

CAS Registry Number: 18724-97-5

Molecular Formula: $\text{C}_6\text{H}_{16}\text{O}_2\text{P}_2$

Molecular Weight: 182.139

Accurate Mass: 182.062554

Percentage Composition: C 39.57%; H 8.85%; O 17.57%; P 34.01%

Physical Description: Solid

Melting Point: Mp $232-233^\circ$

Other Data: Subl. *in vacuo*

>>Derivative: Monosulfide

Molecular Formula: $\text{C}_6\text{H}_{16}\text{P}_2\text{S}$

Molecular Weight: 182.206

Accurate Mass: 182.044794

Percentage Composition: C 39.55%; H 8.85%; P 34.00%; S 17.60%

Physical Description: Solid

Melting Point: Mp $87-89^\circ$

>>Derivative: Disulfide

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

CAS Registry Number: 25900-25-8

Molecular Formula: $\text{C}_6\text{H}_{16}\text{P}_2\text{S}_2$

Molecular Weight: 214.272

Accurate Mass: 214.016864

Percentage Composition: C 33.63%; H 7.53%; P 28.91%; S 29.93%

Physical Description: Cryst. (CH_2Cl_2 or DMF)

Melting Point: Mp $257-258^\circ$. Mp $273-275^\circ$