



>>Entry Name: 1,6-Bis(diphenylphosphino)hexane

Synonym(s): 1,6-Hexanediylbis[diphenylphosphine], 9Cl. Hexamethylenebis[diphenylphosphine]

CAS Registry Number: 19845-69-3

$\text{Ph}_2\text{P}(\text{CH}_2)_6\text{PPh}_2$

Molecular Formula: $\text{C}_{30}\text{H}_{32}\text{P}_2$

Molecular Weight: 454.53

Accurate Mass: 454.197924

Percentage Composition: C 79.28%; H 7.10%; P 13.63%

Use/Importance: Ligand for Au, Ir, Pt, Pd, Rh, V, Cu, Mn and Ni

Physical Description: Solid

Melting Point: Mp 124°

Aldrich: 28798-9

>>Derivative: Dioxide

Synonym(s): 1,6-Bis(diphenylphosphinyl)hexane

CAS Registry Number: 35387-44-1

Molecular Formula: $\text{C}_{30}\text{H}_{32}\text{O}_2\text{P}_2$

Molecular Weight: 486.529

Accurate Mass: 486.187754

Percentage Composition: C 74.06%; H 6.63%; O 6.58%; P 12.73%

Use/Importance: Metal extractant

Physical Description: Solid

Melting Point: Mp 196-198°

Boiling Point: Bp_{0.2} 292-294°

>>Derivative: Disulfide

Synonym(s): 1,6-Bis(diphenylphosphinothioyl)hexane

CAS Registry Number: 61894-27-7

Molecular Formula: $\text{C}_{30}\text{H}_{32}\text{P}_2\text{S}_2$

Molecular Weight: 518.662

Accurate Mass: 518.142064

Percentage Composition: C 69.47%; H 6.22%; P 11.94%; S 12.36%

Physical Description: Solid

Melting Point: Mp 225°

>>Derivative: Diselenide

Synonym(s): 1,6-Bis(diphenylphosphinoselenoyl)hexane

CAS Registry Number: 61894-30-2

Molecular Formula: $\text{C}_{30}\text{H}_{32}\text{P}_2\text{Se}_2$

Molecular Weight: 612.45

Accurate Mass: 614.030964

Percentage Composition: C 58.83%; H 5.27%; P 10.11%; Se 25.78%

Physical Description: Solid

Melting Point: Mp 207°

References:

Aldrich Library of ^{13}C and ^1H FT NMR Spectra, 1992, **2**, 1661A, (nmr)

Sandhu, S.S. *et al.*, *Transition Met. Chem. (Weinheim, Ger.)*, 1976, **1**, 155, (derivs)

Levason, W. *et al.*, *J. Organomet. Chem.*, 1977, **125**, 209, (ms)

Clark, P.W., *J. Organomet. Chem.*, 1977, **137**, 235, (synth, complexes)

Hill, W.E. *et al.*, *J.C.S. Perkin 2*, 1982, 327, (cmr, P-31 nmr)

Philp, D. *et al.*, *Chem. Eur. J.*, 2000, **6**, 2338-2349, (dioxide, synth, pmr, cmr, P-31 nmr, cryst struct)