



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

Synonym(s): 1,2-Ethanediyibis[diphenylphosphine], 9Cl. **Diphos**‡

CAS Registry Number: 1663-45-2

Ph₂PCH₂CH₂PPh₂

Molecular Formula: C₂₆H₂₄P₂

Molecular Weight: 398.423

Accurate Mass: 398.135324

Percentage Composition: C 78.38%; H 6.07%; P 15.55%

General Statement: The name Diphos is also used for the disodium salt of 1-Hydroxy-1,1-ethanediphosphonic acid [BPC55-N](#)

Use/Importance: Ligand for metals of Groups IB, IIB, VIB, VIIB and VIII

Physical Description: Air-stable cryst. (C₆H₆ or 1-propanol)

Melting Point: Mp 143-144°

Hazard & Toxicity: Exhibits cytotoxic activity

Aldrich: 10649-6

Fluka: 14823

Sigma: E4757

>>Derivative: Methiodide (1:2)

Synonym(s): 1,2-Ethanediyibis[methyldiphenylphosphonium] diiodide

CAS Registry Number: 16001-94-8

Molecular Formula: C₂₈H₃₀I₂P₂

Molecular Weight: 682.301

Accurate Mass: 681.99122

Percentage Composition: C 49.29%; H 4.43%; I 37.20%; P 9.08%

Physical Description: Cryst. (MeOH)

Melting Point: Mp 305-307°

>>Derivative: Monooxide

Synonym(s): [(2-Diphenylphosphinyl)diphenylethyl]phosphine, 9Cl

CAS Registry Number: 984-43-0

Molecular Formula: C₂₆H₂₄OP₂

Molecular Weight: 414.422

Accurate Mass: 414.130239

Percentage Composition: C 75.35%; H 5.84%; O 3.86%; P 14.95%

Physical Description: Cryst.

Melting Point: Mp 190.5-193°

>>Derivative: Dioxide

Synonym(s): 1,2-Bis(diphenylphosphinyl)ethane. 1,2-Ethanediyibis[diphenylphosphine oxide]

CAS Registry Number: 4141-50-8

Molecular Formula: C₂₆H₂₄O₂P₂

Molecular Weight: 430.422

Accurate Mass: 430.125154

Percentage Composition: C 72.55%; H 5.62%; O 7.43%; P 14.39%

Use/Importance: Used as a 0.025*M* soln. in CHCl₃ for extraction separation of Am, Bk, Cf, Cm, Eu. Ligand for wide range of metals

Physical Description: Needles (toluene or DMF), plates (C₆H₆ or EtOAc/CH₂Cl₂)

Melting Point: Mp 252-254°. Mp 276-278°