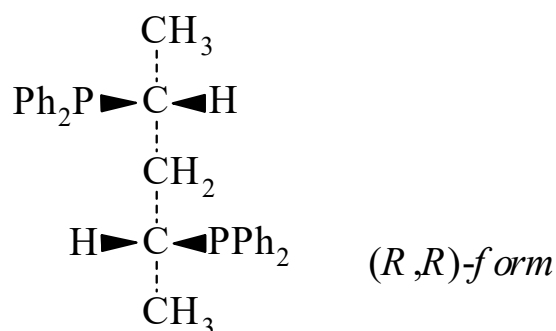




>>Entry Name: 2,4-Bis(diphenylphosphino)pentane

Synonym(s): (1,3-Dimethyl-1,3-propanediyl)bis[diphenylphosphine], 9Cl. Skewphos



Molecular Formula: C₂₉H₃₀P₂

Molecular Weight: 440.503

Accurate Mass: 440.182274

Percentage Composition: C 79.07%; H 6.86%; P 14.06%

Use/Importance: Chiral ligand for hydrogenations and hydroborations of alkenes

>>Variant: (R,R)-form

CAS Registry Number: 96183-46-9

Molecular Formula: C₂₉H₃₀P₂

Molecular Weight: 440.503

Accurate Mass: 440.182274

Percentage Composition: C 79.07%; H 6.86%; P 14.06%

Physical Description: Oil or solid

Melting Point: Mp 78°

Optical Rotation: $[\alpha]_{\text{D}}^{25} +81$ (c, 1.3 in CHCl₃). $[\alpha]_{\text{D}}^{20} +124$ (c, 4.0 in CHCl₃)

Other Data: Not v. air-sensitive

>>Variant: (S,S)-form

CAS Registry Number: 77876-39-2

Molecular Formula: C₂₉H₃₀P₂

Molecular Weight: 440.503

Accurate Mass: 440.182274

Percentage Composition: C 79.07%; H 6.86%; P 14.06%

Physical Description: Oil or solid

Melting Point: Mp 81°

Optical Rotation: $[\alpha]_{\text{D}}^{25} -81$ (c, 1.3 in CHCl₃). $[\alpha]_{\text{D}}^{20} -124$ (c, 3.0 in CHCl₃)

Other Data: Not v. air-sensitive

References:

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Bakos, J. *et al.*, *J. Organomet. Chem.*, 1985, **279**, 23; 1989, **370**, 263, (*synth, ms, pmr, cmr, P-31 nmr, use*)

Kollar, L. *et al.*, *J. Organomet. Chem.*, 1988, **350**, 277, (*use*)

Szalontai, G. *et al.*, *Magn. Reson. Chem.*, 1991, **29**, 449, (*pmr, complexes*)

Buser, H.P. *et al.*, *Tetrahedron*, 1991, **47**, 5709, (*use*)

Burgess, K. *et al.*, *Tetrahedron: Asymmetry*, 1991, **2**, 613, (*use*)