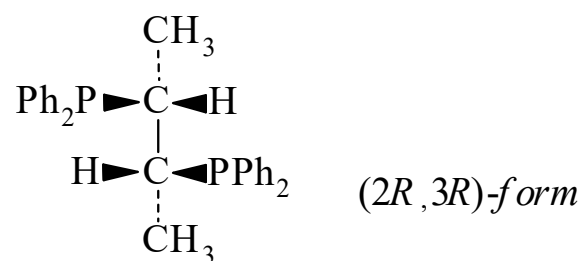




>>Entry Name: 2,3-Bis(diphenylphosphino)butane

Synonym(s): (1,2-Dimethyl-1,2-ethanediyl)bis[diphenylphosphine], 10CI. Chiraphos



Related CAS Registry Numbers(s): 94665-46-0 110115-68-9

Molecular Formula: C₂₈H₂₈P₂

Molecular Weight: 426.477

Accurate Mass: 426.166624

Percentage Composition: C 78.86%; H 6.62%; P 14.53%

Use/Importance: Bidentate ligand. Pd and Rh complexes used in asymm. cyclizations

>>Variant: (2*R*,3*R*)-form

CAS Registry Number: 74839-84-2

Molecular Formula: C₂₈H₂₈P₂

Molecular Weight: 426.477

Accurate Mass: 426.166624

Percentage Composition: C 78.86%; H 6.62%; P 14.53%

Physical Description: Cryst. (EtOH)

Melting Point: Mp 106-107°

Optical Rotation: [α]_D²⁷+197 (c, 1.5 in CHCl₃)

Aldrich: 34793-0

Fluka: 14802

>>Variant: (2*S*,3*S*)-form

CAS Registry Number: 64896-28-2

Molecular Formula: C₂₈H₂₈P₂

Molecular Weight: 426.477

Accurate Mass: 426.166624

Percentage Composition: C 78.86%; H 6.62%; P 14.53%

Physical Description: Plates (EtOH)

Melting Point: Mp 108-109° (sealed tube) (101-103°)

Optical Rotation: [α]_D²⁷-211 (c, 1.5 in CHCl₃). [α]_D²⁷-266

Aldrich: 25909-8

Fluka: 14803

References:

Aldrich Library of 13C and 1H FT NMR Spectra, 1992, **2**, 1660B, (*nmr*)

Aldrich Library of FT-IR Spectra, 1st edn., 1985, **2**, 541C, (*ir*)

Fryzuk, M.D. *et al.*, *J.A.C.S.*, 1977, **99**, 6262, (*synth*)

Koettner, J. *et al.*, *Chem. Ber.*, 1980, **113**, 2323, (*synth*, *pmr*)

Payne, N.C. *et al.*, *J. Organomet. Chem.*, 1981, **221**, 203, (*pmr*, *P-31 nmr*, *complexes*)

Trost, B.M. *et al.*, *Tet. Lett.*, 1981, **22**, 4929, (*use*)

Maciel, G.E. *et al.*, *Adv. Chem. Ser.*, 1982, **196**, 389, (*use*)

Yamamoto, K. *et al.*, *Tet. Lett.*, 1982, **23**, 3089, (*use*)

Consiglio, G. *et al.*, *J. Organomet. Chem.*, 1985, **279**, 193, (*use*)

Fieser and Fieser's Reagents for Organic Synthesis, Wiley, 1990, **15**, 35