



>>Entry Name: Potassium diphenylphosphide

Synonym(s): (Diphenylphosphino)potassium. Diphenylphosphine, potassium salt, 8Cl

CAS Registry Number: 15475-27-1

KPPh₂

Molecular Formula: C₁₂H₁₀KP

Molecular Weight: 224.283

Accurate Mass: 224.015719

Percentage Composition: C 64.26%; H 4.49%; K 17.43%; P 13.81%

Source/Synthesis: Normally prepd. in the presence of coord. solvs. (Et₂O, 1,4-dioxan) when adducts are invariably formed

Use/Importance: Commercially available in THF. Polym. catalyst (2-cyano-1,3-butadiene; ethylene, styrene). Used for the production of unsymmetrical diphosphines of type Ph₂PPR₂

Aldrich: 38076-8

Fluka: 60233

>>Derivative: Bis(1,4-dioxan) complex

CAS Registry Number: 36521-94-5

Molecular Formula: C₂₀H₂₆KO₄P

Molecular Weight: 400.495

Accurate Mass: 400.120579

Percentage Composition: C 59.98%; H 6.54%; K 9.76%; O 15.98%; P 7.73%

Source/Synthesis: Obt. by refluxing either Ph₂PCl, Ph₃P or Ph₂POR (R = Me, Et) with potassium metal in 1,4-dioxan for 6-7 h.

Physical Description: Orange-red cryst. (1,4-dioxan)

References:

Issleib, K. *et al.*, *Chem. Ber.*, 1959, **92**, 1118; 1965, **98**, 1093, (*synth, 1,4-dioxan complex, uses*)

U.S. Pat., 1967, 3 300 461; *CA*, **66**, 66028, (*uses*)

Japan. Pat., 1972, 72 13 049; *CA*, **77**, 127246, (*uses*)

Japan. Pat., 1972, 72 47 014; *CA*, 1973, **79**, 53548, (*synth, 1,4-dioxan complex*)

Müller, E. *et al.*, *Adv. Chem. Ser.*, 1973, **129**, 1, (*uses*)

Schmidpeter, A. *et al.*, *Phosphorus Sulfur Relat. Elem.*, 1985, **22**, 323, (*reactions*)

Abicht, H.P. *et al.*, *Z. Chem.*, 1985, **25**, 150, (*reactions*)

Yokoyama, Y. *et al.*, *Bull. Chem. Soc. Jpn.*, 1987, **60**, 3485, (*pmr, cmr, P-31 nmr*)