



>>Entry Name: Diiodotriphenylphosphorane, 9CI

Synonym(s): Triphenylphosphinic diiodide

CAS Registry Number: 6396-07-2

Type of Compound Code(s): AC0700

Ph₃PI₂

Molecular Formula: C₁₈H₁₅I₂P

Molecular Weight: 516.099

Accurate Mass: 515.900083

Percentage Composition: C 41.89%; H 2.93%; I 49.18%; P 6.00%

General Statement: Thought to possess ionic struct. in soln. but linear struct. in solid state with P-I 248.1, I-I 316.1

Use/Importance: Iodates αβ-unsatd. ketones in β-posn. Primary and secondary alcs. (but not tertiary) converted into alkyl iodides

Physical Description: Cryst. (Et₂O at 0°)

Melting Point: Mp 172-175 dec.°

Aldrich: 41918-4

Fluka: 93096

>>Derivative: I₂ adduct

Synonym(s): Iodotriphenylphosphonium triiodide

Type of Compound Code(s): AC0600

Molecular Formula: C₁₈H₁₅I₄P

Molecular Weight: 769.908

Accurate Mass: 769.709029

Percentage Composition: C 28.08%; H 1.96%; I 65.93%; P 4.02%

Melting Point: Mp 132°

References:

Beveridge, A.B. *et al.*, *J.C.S.(A)*, 1966, 520

Parrett, F.W., *Spectrochim. Acta A*, 1970, **26**, 1271, (*ir, Raman*)

Romanenko, V.D. *et al.*, *Synthesis*, 1980, 823, (*synth*)

Mokovetskii, Yu.P. *et al.*, *Zh. Obshch. Khim.*, 1980, **50**, 2436; *J. Gen. Chem. USSR (Engl. Transl.)*, 1980, **50**, 1967

Haynes, R.K. *et al.*, *Aust. J. Chem.*, 1982, **35**, 517, (*use*)

Piers, E. *et al.*, *Can. J. Chem.*, 1982, **60**, 210, (*use*)

Gomelya, N.D. *et al.*, *Zh. Obshch. Khim.*, 1984, **54**, 1242; *J. Gen. Chem. USSR (Engl. Transl.)*, 1984, **54**, 1111, (*synth, P-31 nmr*)

Mitel'man, I.E. *et al.*, *Zh. Obshch. Khim.*, 1984, **54**, 1245; *J. Gen. Chem. USSR (Engl. Transl.)*, 1984, **54**, 1114, (*synth*)

Ylagan, L. *et al.*, *Synth. Commun.*, 1988, **18**, 285, (*synth, props, use*)

Godfrey, S.M. *et al.*, *Chem. Comm.*, 1991, 1163, (*synth, Raman, P-31 nmr, cryst struct*)