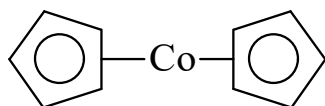




>>Entry Name: Cobaltocene, 11Cl

Synonym(s): Di- π -cyclopentadienylcobalt, 8Cl. Bis(cyclopentadienyl)cobalt



CAS Registry Number: 1277-43-6

Molecular Formula: C₁₀H₁₀Co

Molecular Weight: 189.122

Accurate Mass: 189.011448

Percentage Composition: C 63.51%; H 5.33%; Co 31.16%

Source/Synthesis: Synth. from NaCp and either CoCl₂ or [Co(NH₃)₆]Cl₂ in refluxing THF

Use/Importance: Commercially available. Catalyses synth. of pyridines from alkynes and nitriles

Physical Description: V. air-sensitive black-purple cryst.

Melting Point: Mp 173-174°

Boiling Point: Subl._{0.1} 40°

Other Data: Paramagnetic. Readily oxid. → cobaltocenium cation

Hazard & Toxicity: Toxic

Aldrich: 33916-4

Rare Chemicals Library: S44342-5

References:

Wilkinson, G. *et al.*, *J.A.C.S.*, 1954, **76**, 1970, (*synth, ir, uv*)

Furlani, L. *et al.*, *Chem. Ber.*, 1962, **95**, 2928, (*synth*)

Organomet. Synth., 1965, **1**, 70, (*synth*)

Hunt, C.C. *et al.*, *Inorg. Nucl. Chem. Lett.*, 1966, **2**, 283, (*synth*)

Buender, W. *et al.*, *J. Organomet. Chem.*, 1975, **92**, 65-68, (*cryst struct*)

Koehler, F.H., *J. Organomet. Chem.*, 1976, **110**, 235; 1978, **160**, 299, (*synth, cmr, pmr*)

Fieser and Fieser's Reagents for Organic Synthesis, Wiley, 1975, **5**, 145; 1977, **6**, 128; 1986, **12**, 180, (*use*)

Sheats, J.E., *J. Organomet. Chem. Libr.*, 1979, **7**, 461, (*props, rev*)

Gross, M.E. *et al.*, *J. Organomet. Chem.*, 1981, **209**, 407, (*photochem*)

Zagorevskii, D.V. *et al.*, *J. Organomet. Chem.*, 1985, **284**, 109, (*ms*)

Encyclopaedia of Reagents for Organic Synthesis, (ed. Paquette, L.A.), Wiley, 1995, **1**, 460-462, (*rev, use*)

Synthetic Methods of Organometallic and Inorganic Chemistry, (ed. Hermann, W.A.), Thieme, 1997, **8**, 13, (*synth*)

Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., Van Nostrand Reinhold, 1992, BIR529