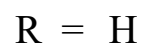
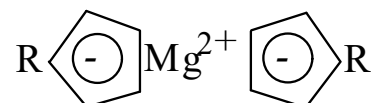




>>Entry Name: **Magnesocene**, 12Cl

Synonym(s): Bis(η^5 -2,4-cyclopentadien-1-yl)magnesium, 9Cl. Dicyclopentadienylmagnesium, 8Cl. Magnesium cyclopentadienide



CAS Registry Number: 1284-72-6

Extra CAS Registry Numbers(s): 63757-86-8

Molecular Formula: C₁₀H₁₀Mg

Molecular Weight: 154.494

Accurate Mass: 154.063292

Percentage Composition: C 77.74%; H 6.52%; Mg 15.73%

Source/Synthesis: Synth. e.g. from CpH and Mg

Use/Importance: Commercially available; used as source of dopant e.g. in gallium arsenide

Physical Description: Air- and moisture-sensitive solid

Melting Point: Mp 176°

Boiling Point: Subl. 100° *in vacuo*

Solubility: Sol. C₆H₆, cyclohexane

Other Data: Forms complexes with ethers, amines. Several others descr. by Lehmkuhl

Hazard & Toxicity: Pyrophoric in air

Aldrich: 37913-1

>>Derivative: Bis-Py complex

CAS Registry Number: 103474-96-0

Molecular Formula: C₂₀H₂₀MgN₂

Molecular Weight: 312.696

Accurate Mass: 312.14769

Percentage Composition: C 76.82%; H 6.45%; Mg 7.77%; N 8.96%

Physical Description: Yellow cryst. (toluene)

>>Derivative: DME complex

CAS Registry Number: 103474-99-3

Molecular Formula: C₁₄H₂₀MgO₂

Molecular Weight: 244.616

Accurate Mass: 244.131372

Percentage Composition: C 68.74%; H 8.24%; Mg 9.94%; O 13.08%

Physical Description: Cryst. (toluene)

References:

- Inorg. Synth.*, 1960, **6**, 11, (*synth, props*)
Saito, T., *Chem. Comm.*, 1971, 1422, (*synth*)
Bejun, G.M. *et al.*, *J. Chem. Phys.*, 1973, **58**, 2271, (*ms*)
Weiss, E. *et al.*, *J. Organomet. Chem.*, 1975, **92**, 1, (*cryst struct*)
Fischer, P. *et al.*, *J. Organomet. Chem.*, 1976, **116**, 65, (*pmr, cmr*)
Aleksanyan, V.T. *et al.*, *J. Organomet. Chem.*, 1977, **129**, 139, (*ir, Raman*)
Benn, R. *et al.*, *Angew. Chem., Int. Ed.*, 1984, **23**, 534, (*nmr*)
Blom, R. *et al.*, *Chem. Comm.*, 1985, 266, (*ed, struct*)
Duff, A.W. *et al.*, *J. Organomet. Chem.*, 1985, **293**, 271, (*synth*)
Clec'h, G. *et al.*, *Mol. Cryst. Liq. Cryst.*, 1985, **128**, 305, (*props*)
Lehmkuhl, H. *et al.*, *Chem. Ber.*, 1986, **119**, 1054, (*cmr, Mg-25 nmr, struct, derivs*)
Organomet. Synth., 1986, **3**, 400, (*synth, props*)
Djemilev, O.M. *et al.*, *Izv. Akad. Nauk SSSR, Ser. Khim.*, 1988, 428, (*synth, cmr*)
Rask, M. *et al.*, *J. Electron. Mater.*, 1988, **17**, 311, (*use*)
Zorin, A.D. *et al.*, *Zh. Anal. Khim.*, 1991, **46**, 1188, (*anal*)
Mackey, O.N.D. *et al.*, *J. Organomet. Chem.*, 1992, **426**, 279, (*reactions*)
Abernathy, C.R. *et al.*, *Appl. Phys. Lett.*, 1993, **62**, 258, (*use*)
Synthetic Methods of Organometallic and Inorganic Chemistry, (ed. Hermann, W.A.), Thieme, 1996, **1**, 53-54; **2**, 53, (*synth*)