



>>Entry Name: Pentacarbonylchlororhenium, 9Cl, 8Cl

Synonym(s): Chloropentacarbonylrhenium. Rhenium pentacarbonyl chloride

CAS Registry Number: 14099-01-5

$\text{Re}(\text{CO})_5\text{Cl}$ (C_{4v})

Molecular Formula: $\text{C}_5\text{ClO}_5\text{Re}$

Molecular Weight: 361.712

Accurate Mass: 361.899171

Percentage Composition: C 16.60%; Cl 9.80%; O 22.12%; Re 51.48%

Source/Synthesis: Synth. from $\text{Re}_2(\text{CO})_{10}$ and Cl_2 or uv irradiation or from $\text{Re}(\text{CO})_5\text{I}$ and Cl_2

Use/Importance: Precursor to catalyst for metathesis with EtAlCl_2

Physical Description: White air-stable cryst. (C_6H_6)

Boiling Point: Subl. 140°. Subl._{0.1} 80-85°

Aldrich: 32761-1

References:

Kirkham, W.J. *et al.*, *J.C.S.*, 1965, 550, (*synth*)

Kaes, H.D. *et al.*, *J.A.C.S.*, 1967, **89**, 2844, (*ir*)

Junk, G.A. *et al.*, *J.A.C.S.*, 1968, **90**, 5758, (*ms*)

Colton, R. *et al.*, *Aust. J. Chem.*, 1972, **25**, 9, (*synth, ir*)

Higginson, B.R. *et al.*, *J.C.S. Faraday 2*, 1975, **71**, 1913, (*pe*)

Greenlee, W.S. *et al.*, *Inorg. Chem.*, 1976, **15**, 2129

Wrighton, M.S. *et al.*, *J.A.C.S.*, 1976, **98**, 1111, (*uv*)

Inorg. Synth., 1985, **23**, 41, (*synth, ir*)

Klahn, A.H. *et al.*, *J. Organomet. Chem.*, 1997, **548**, 121-122, (*synth, ir*)

Synthetic Methods of Organometallic and Inorganic Chemistry, (ed. Hermann, W.A.), Thieme, 1997, **7**, 38-39, (*synth, ir*)