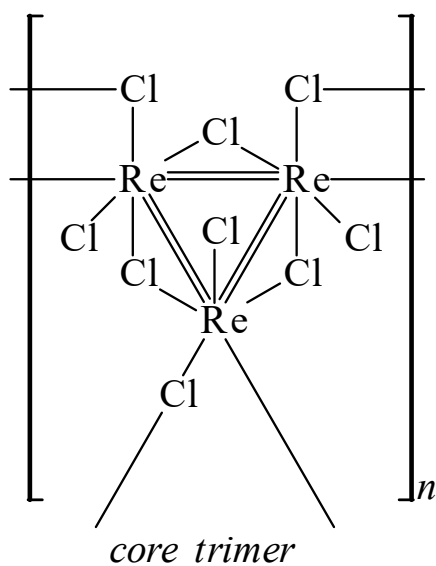




>>Entry Name: Rhenium(III) chloride (ReCl_3), 9Cl

Synonym(s): Rhenium trichloride



CAS Registry Number: 13569-63-6

Molecular Formula: Cl_3Re

Molecular Weight: 292.565

Accurate Mass: 291.8623

Percentage Composition: Cl 36.35%; Re 63.65%

Source/Synthesis: Synth. (i) from $\text{Re}_2(\text{OAc})_4 + \text{HCl}$ at 340° , (ii) by refluxing ReCl_5 under N_2 , (iii) by reaction of ReCl_5 with SnCl_2 in a sealed tube at 250° for 40h, (iv) from $\text{Re}_2\text{Cl}_8^{2(-)}$ and AcOH

Use/Importance: Starting material for Re_3 cluster compds.

Boiling Point: Subl. *ca.* 450°

Solubility: Sol. Me_2CO , MeOH , EtOH , HCl aq.

Aldrich: 30918-4

>>Derivative: Trimer

Synonym(s): Tri- μ -chlorohexachlorotrirhenium(III), 9Cl

CAS Registry Number: 14973-59-2

Other Data: Trimeric units are linked to form infinite sheets

References:

Cotton, F.A. *et al.*, *Inorg. Chem.*, 1964, **3**, 1402; 1966, **5**, 1798, (*cryst struct, synth*)

Edwards, D.A. *et al.*, *J.C.S.(A)*, 1970, 1617, (*synth*)

Inorg. Synth., 1972, **13**, 85; 1980, **20**, 44; 46, (*synth, props*)

Cotton, F.A., *Multiple Bonds Between Metal Atoms*, Wiley, New York, 1982, 265, (*struct, props*)

Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., Van Nostrand Reinhold, 1992, RGP000