



>>Entry Name: Rhenium(VII) chloride oxide (ReClO₃)

Synonym(s): Rhenium chloride trioxide. Chlorotrioxorhenium, 10Cl

CAS Registry Number: 42246-25-3

ReO₃Cl (C_{3v})

Molecular Formula: ClO₃Re

Molecular Weight: 269.658

Accurate Mass: 269.909341

Percentage Composition: Cl 13.15%; O 17.80%; Re 69.05%

Source/Synthesis: Synth. (i) by reaction of Re₃Cl₉ with O₂, (ii) from ReO₃ and Cl₂, (iii) by reaction of ReCl₅ with Cl₂O

Physical Description: Colourless liq. hydrolysing immediately in air

Melting Point: Mp 4.5°

Boiling Point: Bp 128-131°

References:

Amble, E. *et al.*, *J. Chem. Phys.*, 1952, **20**, 192, (*struct*)

Wolf, C.J. *et al.*, *J.A.C.S.*, 1957, **79**, 4257, (*synth, ir, props*)

Drobat, D.V. *et al.*, *Russ. J. Inorg. Chem. (Engl. Transl.)*, 1971, **16**, 1223, (*vp*)

Dehnicke, K. *et al.*, *Chem. Ber.*, 1977, **110**, 3959, (*synth*)

Edwards, P.G. *et al.*, *J.C.S. Dalton*, 1980, 2467, (*synth*)