



>>Entry Name: Rhenium(VII) oxide (Re₂O₇)

Synonym(s): Dirhenium heptoxide

CAS Registry Number: 1314-68-7

Related CAS Registry Numbers(s): 12624-27-0

Re₂O₇

Molecular Formula: O₇Re₂

Molecular Weight: 484.41

Accurate Mass: 485.875893

Percentage Composition: O 23.12%; Re 76.88%

tetrahedral Re

Source/Synthesis: Synth. from Re and excess of O₂ >150°

Use/Importance: Important starting material for mixed metal oxides, oxo-compds. and Re complexes

Physical Description: Canary yellow, deliquescent solid, which is hydrol. immediately by H₂O to HReO₄ aq.

Melting Point: Mp 300.3°

Boiling Point: Bp 360.3°

Solubility: Sol. THF, ethers, alcohols, amines

Aldrich: 26195-5

Fluka: 83680

>>Derivative: Dihydrate

References:

Inorg. Synth., 1950, **3**, 188, (*synth, props*)

Krebs, B. *et al.*, *Chem. Comm.*, 1968, 263, (*cryst struct*)

Vinogradov, V.S. *et al.*, *Zh. Strukt. Khim.*, 1972, **13**, 715, (*ed*)

Compr. Inorg. Chem., Pergamon, Oxford, 1973, **3**, 940, (*rev*)

Brauer, G., *Handbuch Prap. Anorg. Chem.*, 3rd edn., Ferdinand Enke Verlag, 1975, **3**, 1615, (*synth*)

Edwards, P. *et al.*, *J.C.S. Dalton*, 1984, 2695, (*synth*)