



>>Entry Name: Rhenium sulfide (Re₂S₇), 10CI

Synonym(s): Rhenium(VII) sulfide

CAS Registry Number: 12038-67-4

Re₂S₇

Molecular Formula: Re₂S₇

Molecular Weight: 596.876

Accurate Mass: 597.715978

Percentage Composition: Re 62.39%; S 37.61%

Source/Synthesis: Synth. by action of H₂S in 2M HCl on ReO₄ or by the action of H₂S on Re₂O₇ . Followed by drying *in vacuo* over P₂O₅

Physical Description: Dark brown or black amorphous powder which is difficult to purify completely. Readily loses sulfur on heating to give ReS₂

Solubility: Sol. oxidising solvs.

Other Data: Reduced by H₂ at 1000° to Re

Aldrich: 22103-1

References:

Compr. Inorg. Chem., Pergamon, Oxford, 1973, **3**, 949, (*rev, bibl*)

Brauer, G., *Handbuch Prap. Anorg. Chem.*, 3rd edn., Ferdinand Enke Verlag, 1975, 1619, (*synth*)

Diemann, E., *Z. Anorg. Allg. Chem.*, 1977, **431**, 273, (*synth, struct, props*)

Nirsha, B.M. *et al.*, *Izv. Akad. Nauk SSSR, Neorg. Mater.*, 1984, **20**, 164; *CA*, **100**, 167081x, (*props*)

Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., Van Nostrand Reinhold, 1992, RGK000