



>>Entry Name: Molybdenum(IV) oxide (MoO₂)

Synonym(s): Molybdenum dioxide

CAS Registry Number: 18868-43-4

Related CAS Registry Numbers(s): 11098-99-0

MoO₂

Molecular Formula: MoO₂

Molecular Weight: 127.939

Accurate Mass: 129.895236

Percentage Composition: Mo 74.99%; O 25.01%

Source/Synthesis: Obt. by reduction of MoO₃ at 600° using H₂ or NH₃

Use/Importance: Catalyst e.g. in desulfurisation and reforming of naphthas

Physical Description: Brown-black powder or dark violet blue cryst.

Solubility: Insol. H₂O, acids, alkalis

Other Data: Dissoc. on heating, weakly paramagnetic

Aldrich: 23476-1

References:

Mellor Compr. Treat. Inorg. Theor. Chem., 1931, **11**, 526, (rev, bibl)

Magneli, A., *Acta Chem. Scand.*, 1955, **9**, 1378, (struct)

Brandt, B.G. *et al.*, *Acta Chem. Scand.*, 1967, **21**, 661; 1968, **24**, 699, (struct)

Brauer, G., *Handbuch Prap. Anorg. Chem.*, 3rd edn., Ferdinand Enke Verlag, 1975, **3**, 1542, (synth)

Kirk-Othmer Encycl. Chem. Technol., 3rd edn., Wiley, 1978, **15**, 685, (props)

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