



>>Entry Name: Chromium(IV) oxide (CrO₂)

Synonym(s): Chromium dioxide

CAS Registry Number: 12018-01-8

Related CAS Registry Numbers(s): 11118-57-3

CrO₂

Molecular Formula: CrO₂

Molecular Weight: 83.995

Accurate Mass: 83.930339

Percentage Composition: Cr 61.90%; O 38.10%

General Statement: Possesses rutile struct.

Source/Synthesis: Synth. from Cr₂O₃ and O₂ at 250°

Use/Importance: Catalyst. Used in magnetic recording tapes

Physical Description: Black cryst. or powder. Metastable in air

Solubility: Sol. acids, forming Cr³⁽⁺⁾ and Cr⁶⁽⁺⁾

Other Data: Ferromagnetic. Dec. to Cr₂O₃ on warming; conductor

References:

Gmelin Handbook Inorg. Chem., Syst. No. 52, 1962, 90, (rev, bibl)

Compr. Inorg. Chem., Pergamon, Oxford, 1973, 3, 689, (rev)

Kirk-Othmer Encycl. Chem. Technol., 3rd edn., Wiley, 1978, 6, 89; 14, 737, (props, use)