



>>Entry Name: Chromium hydroxide (Cr(OH)₃)

Synonym(s): Chromium(III) hydroxide hydrate. Chromic oxide gel

CAS Registry Number: 1308-14-1

Related CAS Registry Numbers(s): 12626-43-6

Cr(OH)₃·3H₂O or Cr₂O₃·9H₂O

Molecular Formula: CrH₃O₃

Molecular Weight: 103.018

Accurate Mass: 102.948729

Percentage Composition: Cr 50.47%; H 2.94%; O 46.59%

General Statement: Considered to be a mixt. of hydrates. Depending on synth., props. vary widely. Also proposed as colloidal hydrated oxide

Use/Importance: Pigment; used in tanning industry as mordant; catalyst for org. reactions; precursor to LiCrO₂

Physical Description: Green flocculent solid or cryst. Readily hydrol.

Solubility: Pract. insol. H₂O; sol. mineral acids

References:

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Nouveau Traite de Chimie Minerale, Pascal, P., (Ed.) Masson, 1959, **14**, 180; 184, (rev, bibl)

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Brauer, G., *Handbuch Prap. Anorg. Chem.*, 3rd edn., Ferdinand Enke Verlag, 1975, **3**, 1491, (synth)

Merck Index, 11th edn., 1989, No. 2227, (props, uses)

Allen, J.L. et al., *Polyhedron*, 1994, **13**, 1301, (use, powder struct)

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