



The Soap Kitchen  
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## MATERIAL SAFETY DATA SHEET

Issue No. 5  
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### 1. IDENTIFICATION OF SUBSTANCE AND SUPPLIER

Name:

**A306 Hydrated Chromium Oxide**

Chemical Characterisation:

Pigment Green 18 - C.I. 77289  
Boron oxide

Function: Cosmetic colour

Supplier: The Soap Kitchen

### 2. HAZARDS IDENTIFICATION

No serious environmental concerns with this material. It has a high thermal stability and there is no possibility of oxidation to chromium (VI) under natural conditions. Under highly acid conditions (pH 1-2) only a few ppm of Cr(III) will be released. Cr(VI) is released if heated under alkaline conditions. Airborne dust should be avoided with efficient dust extraction and other GMP.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Contains: Hydrated chromium oxide, boron oxide.

FDA Description: Chromium hydroxide green.

Japan Reference: Hydrated chromium oxide.

EINECS:

215-160-9

215-125-8

Hydrated chromium oxide

Boron oxide

EU Number:

EU Reference: Annex IV Pt 1

Hazardous components:

S-phrases: S22, S36/37/39

CAS Number:

12001-99-9

1303-86-2

### 4. FIRST AID MEASURES

Eye Contact: Irrigate with copious amounts of water. Seek medical attention.

Inhalation: Remove patient to fresh air. Seek medical attention. Keep under observation.

Skin Contact: Wash with soap and water.

Ingestion:

### 5. FIRE FIGHTING MEASURES

Extinguishing Media:



water mist



foam

(✓ recommended

× must not be used)



CO<sub>2</sub>



dry powder

Special Exposure Hazards:

Special Fire Fighting Precautions: This product does not burn or support combustion.

### 6. ACCIDENTAL RELEASE MEASURES

Personal Protection: See section 8. Control dust. Provide sufficient ventilation.

Disposal Considerations: See sections 8/13.

Measures for Containing Spillage: Cover with inert material (eg sand).

Measures for Cleaning up: Vacuum or sweep up without generation of dust clouds.

Environmental Precautions: Advise local river or water authority if spillage has entered water course or sewer.

### 7. HANDLING AND STORAGE

Store at room temperature (15-25°C recommended) in original resealed containers and protected from direct sunlight and moisture.

Use LEV throughout handling processes.

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

When handling dry powder, local exhaust ventilation (LEV) is essential to minimise worker exposure. UK limits (long term total dust and respirable dust) on exposure are published annually in Guidance Note EH40, HSE.

Dust: Long term total dust: 0.5 mg/m<sup>3</sup> / 8 hr TWA (as Cr)

Respirable dust: 10 mg/m<sup>3</sup> / 8 hr TWA (B<sub>2</sub>O<sub>3</sub>)

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**Respiratory Protection:** P3 filters

- ☒ goggles  
☒ nitrile gloves (2 mm)  
 (Breakthrough NK)

- ☒ aprons, boots  
☐

**9. PHYSICAL & CHEMICAL PROPERTIES**

**Melting / Softening Point:** °C  
**Boiling Point:**  
**Flash Point:**  
**Density:** 5.0 g.cm<sup>-3</sup>  
**Bulk Density:** 500 kg.m<sup>-3</sup>  
**Solubility in Water:** Insoluble  
**Solubility in Oil:**  
**pH:**  
**Partition Coefficient (n-octanol-water):**  
**Flammability:**  
**Explosive Properties:**  
**Oxidising Properties:**  
**Evaporation Rate:**  
**Appearance:** Green powder  
**Odour:** None

**10. STABILITY AND REACTIVITY**

**Stability:** Stable  
**Conditions to avoid:** Molten alkali at high temperatures.  
**Materials to avoid:** Water can lead to slow formation of boric acid.  
**Hazardous Decomposition Products:** CrVI slow formation at high temperatures.  
**Hazardous Exothermic Reaction:**

**11. TOXICOLOGY**

**General Comments:** Trivalent chromium is an important trace element in the human organism. Deficiency results in diabetes, arteriosclerosis and growth defects.  
**Skin Contact:** Cr<sub>2</sub>O<sub>3</sub> non irritating (rabbit). B<sub>2</sub>O<sub>3</sub> slight irritation, no absorption.  
**Eye Contact:** Cr<sub>2</sub>O<sub>3</sub> irritating dust. B<sub>2</sub>O<sub>3</sub> mild erythema (rabbit).  
**Ingestion:** Cr<sub>2</sub>O<sub>3</sub> no harmful effect. B<sub>2</sub>O<sub>3</sub> low acute oral toxicity.  
**Inhalation:** Cr<sub>2</sub>O<sub>3</sub> long term overexposure may cause damage. B<sub>2</sub>O<sub>3</sub> no effect.  
**Any Further Data:** Cr<sub>2</sub>O<sub>3</sub> Acute oral LD<sub>50</sub> > 5000 rat. B<sub>2</sub>O<sub>3</sub> not listed as carcinogen by EPA or IARC. No observed mutagenic activity, possible reproductive effect shown by some studies.

**12. ECOLOGY**

**General Comments:** Trivalent chromium is a widely occurring natural substance. Concentrations of up to 200 mg/kg are not uncommon in soils. Because of their insolubility chromium(III) oxides are carried in suspension with clay minerals in rivers. Even higher concentrations do not harm aquatic flora and fauna. LC<sub>50</sub> > 5000 mg/l.  
**Bacteriological Toxicity:**  
**Fish Toxicity:**  
**Biodegradability and Persistence:**  
**Bioaccumulative Potential:** Unlikely from soil into plants. No evidence of biomagnification.  
**Mobility:**  
**Other Effects:** Groundwater directive 80/68/EEC List II substances. Aquatic discharge directive 76/464/EEC List II substances.

**13. DISPOSAL**

National or regional laws will determine the appropriate method of disposal. It is recommended that you refer to your local authority.

**14. TRANSPORT INFORMATION**

**UN Number:**  
**IMDG (sea):**  
**ADR (road):**  
**General:** Not considered hazardous for transport purposes.

**RID (rail):**  
**ICAO/IATA (air):**  
**Packaging Group:** Not regulated

**15. REGULATORY INFORMATION**

**Labelling Information:** No risk/safety phrases.  
**World Regulations:**

**16. OTHER INFORMATION**

**S-phrases:** S22 - Do not breathe dust.  
 S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.  
**Non Statutory Recommendations:**  
**Source Information:**  
**Notes:** NA (not applicable), NK (not known), NR (not relevant). \* (revised since last issue).