MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF SUBSTANCE AND SUPPLIER

Name: A306 Hydrated Chromium Oxide

Chemical Characterisation: Pigment Green 18 - C.I. 77289
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 Hydrated chromium oxide
- 215-125-8 Boron oxide

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)

CO2
✓
Dry powder
✓

6. ACCIDENTAL RELEASE MEASURES

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/m³ / 8 hr TWA (as Cr)
Respirable dust: 10 mg/m³ / 8 hr TWA (B₂O₃)

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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⁻³
Bulk Density: 500 kg m⁻³
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: CrVl 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: Cr₂O₃ non irritating (rabbit). B₂O₃ slight irritation, no absorption.
Eye Contact: Cr₂O₃ irritating dust. B₂O₃ mild erythema (rabbit).
Ingestion: Cr₂O₃ no harmful effect. B₂O₃ low acute oral toxicity.
Inhalation: Cr₂O₃ long term overexposure may cause damage. B₂O₃ no effect.

Any Further Data: Cr₂O₃ Acute oral LD₅₀ > 5000 rat. B₂O₃ 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. LC₅₀ > 5000 mg/l.
Bacteriological Toxicity:
Fish Toxicity:
Biodegradability and Persistence:
Bioaccumulative Potential: Unlike from soil into plants. No evidence of biomagnification.
Mobility:

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.

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).

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