



## MATERIAL SAFETY DATA SHEET

### SECTION 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Product Name:** ALODINE 1200L  
**Proper Shipping Name:** CHROMIC ACID, 1% SOLUTION  
**Product Code(s):** 647974 (5 litres), 169307 (20 litres), 213010 (200 litres)  
**Use:** Chromate conversion coating for aluminium and its alloys.  
**Supplier:** HENKEL AUSTRALIA PTY. LIMITED ABN 82 001 302 998  
 TECHNOLOGIES  
 136-141 Canterbury Road, Kilsyth, Victoria. (03) 9728 7200  
 24 HOUR EMERGENCY CONTACT NUMBER: 1800 032 379

### SECTION 2. HAZARDS IDENTIFICATION

#### STATEMENT OF HAZARDOUS NATURE:

Hazardous according to the criteria of NOHSC. This material has been classified as Toxic (T) and Irritant (Xi).

#### Risk Phrase(s):

R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.  
 R32 Contact with acids liberates very toxic gas.  
 R36/38 Irritating to eyes and skin.  
 R43 May cause sensitisation by skin contact.  
 R49(1) May cause cancer by inhalation (Category 1 Carcinogen).  
 R52 Harmful to aquatic organisms.  
 R53 May cause long term adverse effects in the aquatic environment.

#### Safety phrase(s):

S28 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
 S28 After contact with skin, wash immediately with plenty of soap suds.  
 S37/39 Wear suitable gloves and eye/face protection.  
 S46 If swallowed, seek medical advice immediately and show this container or label.  
 S61 Avoid release to the environment. Refer to special instructions / safety data sheets.

#### DANGEROUS GOODS INFORMATION:

Classified as Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code).

Class: 8 - Corrosive substance

SUSDP POISON SCHEDULE: 6

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### INGREDIENTS:

CHEMICAL ENTITY	CAS NO.	PROPORTION
Chromic acid	[7738-94-5]	1% w/w
Potassium ferricyanide	[13746-66-2]	very low, less than 1% w/w
Hydrofluoric acid		0.1% w/w
Water		to 100%

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**PROPRIETARY PRODUCT:**

**ALODINE 1200L**



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### SECTION 4. FIRST AID MEASURES

- Ingestion:** If swallowed, do not induce vomiting. Rinse mouth with water. For advice, contact a Poisons Information Centre (Phone 13 11 26) or a doctor.
- Skin:** Remove contaminated clothing and wash affected areas with running water. If irritation, redness or blistering occurs, seek medical attention.
- Eyes:** Hold eyes open and flush with water for at least 15 minutes. Seek medical attention or contact a Poisons Information Centre (Phone 13 11 26).
- Inhalation:** If inhaled, remove from contaminated area. For all but the most minor symptoms, arrange for patient to be seen by a doctor as soon as possible.

**Advice to doctor:** Treat symptomatically, as for exposure to acidic substances.

**First Aid facilities:** Eye wash and safety shower

### SECTION 5. FIRE FIGHTING MEASURES

**Suitable extinguishing media:** Water fog.

**Hazardous decomposition products:** Non combustible. If heated to decomposition, it will emit toxic fumes of potassium oxide and cyanide.

**Precautions for fire fighters and special protective equipment:** If product is involved in a fire, then fire fighters must be warned of hazardous nature of material. In contact with organic matter and if allowed to evaporate to dryness, it may cause fire. Wear full protective clothing and self-contained breathing apparatus. Keep containers cool with water spray to minimize further damage.

**Hazchem code:** 2X

### SECTION 6. ACCIDENTAL RELEASE MEASURES

Wear protective PVC or butyl rubber gloves, chemical goggles and waterproof boots. Contain and collect spillage with absorbent materials (e.g. sand, earth, vermiculite). Transfer to sealable containers suitable for storing spilled material. Residual spill should be treated with suitable reducing agent such as dilute (1%) sodium bisulphite or ferrous sulphate solutions and then neutralised with lime. Clean and flush areas in contact with spilled material with adequate water to render the area safe for human contact. Wash down waters may still contain residues which require treatment through local effluent treatment plant. Do not allow to drain or watercourse. Dispose of solid residues in chemical waste disposal area in accordance with relevant State and Federal requirements.

### SECTION 7. HANDLING AND STORAGE

**Safe Handling:** Observe recommendations made under SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION. Wear impervious gloves<sup>1</sup> and chemical splash goggles.

**Storage:** Store indoors in a dry, well ventilated area. Keep containers sealed when not in use. Protect from physical damage. Store according to relevant State Dangerous Goods Storage Requirements.

### SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**National exposure standards:** TWA : 0.05 mg/m<sup>3</sup> as chromium (VI)

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**Engineering controls:** A local mechanical exhaust system is required where vapour or mist is being generated.

**Personal protective equipment:** Use good industrial hygiene. Avoid contact with skin and eyes. Wear overalls, safety footwear, PVC or butyl rubber gloves and chemical splash goggles. Use with adequate ventilation. If inhalation risk exists, wear a respirator which complies with the requirements of AS 1715 and AS 1716.

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical data:**

**Appearance:** Clear, orange solution  
**Specific gravity:** 1.00 -1.03 @ 20°C  
**Solubility:** Completely miscible with water  
**pH (1% solution):** 2 approximately  
**Boiling point:** Greater than 100°C

### SECTION 10. STABILITY AND REACTIVITY

**Chemical stability:** Stable under normal conditions of temperature and pressure.

**Conditions to avoid:** Avoid strong heat sources.

**Incompatible materials:** Keep away from alkalies, acids, organic, combustible or other readily oxidisable materials.

**Hazardous decomposition products:** When heated to decomposition, it will emit toxic fumes of potassium oxide and cyanide.

**Hazardous reactions:** Contact with acids will release toxic gases of hydrogen cyanide.

### SECTION 11. TOXICOLOGICAL INFORMATION

**HEALTH EFFECTS:**

**Acute:**

**Ingestion:** If swallowed, this product may cause burns to the mouth, throat and digestive tract. Ingestion effects may include nausea, vomiting, stomach pain and changes to blood leucocytes.

**Skin:** Contact with the skin can cause irritation. Skin sores may form, which are slow to heal. May cause skin sensitisation in susceptible individuals.

**Eyes:** Liquid contact with the eyes can cause severe irritation.

**Inhalation:** Inhalation of mists of this product may cause severe irritation to the respiratory tract.

**Chronic:** Repeated skin contact may lead to dermatitis. Absorption of chromic acid may be followed by hepatic and renal damage<sup>2</sup>. Frequent or prolonged inhalation of chromium (VI) compounds may lead to perforation of the nasal septum. Chromic acid may cause cancer by inhalation and is classified as a Category 1 Carcinogen.

**Toxicity information:** Oral LD<sub>50</sub> (rat) : 80 mg/kg as chromium trioxide  
 Oral LD<sub>50</sub> (rat) : 1600 mg/kg as potassium ferricyanide

### SECTION 12. ECOLOGICAL INFORMATION

Do not contaminate waterways and soil. Chromium (VI) ions are very toxic to aquatic organisms and may cause long term adverse effects in the aquatic environment.

**Fish toxicity:** 96 h LC<sub>50</sub> (fathead minnow) : 36.2 mg/l as chromic acid<sup>3</sup>

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### SECTION 13. DISPOSAL CONSIDERATIONS

Refer to State Land Waste Management Authority. Disposal of this material should be undertaken by a registered chemical disposal company. Empty containers should be triple rinsed with fresh water prior to return to supplier or disposal to drum reconditioner or approved landfill site. Rinse waters should be treated with a suitable reducing agent (e.g. ferrous sulphate), then neutralised with lime and the precipitate collected for chemical waste disposal.

### SECTION 14. TRANSPORT INFORMATION

UN Number: 1755  
 Proper Shipping Name: CHROMIC ACID, 1% SOLUTION  
 Class: 8, Corrosive  
 Packing Group: II  
 Hazchem code: 2X  
 Emergency Information: Dangerous Goods-Initial Emergency Response Guide (SAA/SNZ HB 76) or EPG 8D1

### SECTION 15. REGULATORY INFORMATION

SUSDP POISON SCHEDULE: 6.

### SECTION 16. OTHER INFORMATION

#### Abbreviations/acronyms:

NOHSC - National Occupational Health and Safety Commission  
 SUSDP - Standard for the Uniform Scheduling of Drugs and Poisons  
 TWA - Time-weighted average

#### Reference(s):

1. Quick Selection Guide to Chemical Protective Clothing, Fourth Edition, 2003: Forsberg and Mansdorf, Wiley-Interscience.
2. NIOSH Pocket Guides to Chemical Hazards, Chromic Acid and Chromates.
3. Ecological data obtained from Henkel U.S., MSDS for Bonderite 1402W, March 1999.

#### DISCLAIMER:

The percentage weight (% w/w) of ingredients is not to be taken as a specification guaranteed by Henkel Australia Pty. Limited, but only as an approximate guide to the content of hazardous ingredients in the material. The information contained herein does not constitute a guarantee by Henkel Australia Pty. Limited concerning the properties of the material.

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