

Infosafe No™ 3CHOV	Issue Date : February 2021	RE-ISSUED by ACR
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Product Name **POTASSIUM DICHROMATE 10% w/v solution**

Classified as hazardous

1. Identification

GHS Product Identifier POTASSIUM DICHROMATE 10% w/v solution

Product Code 0237

Company Name AUSTRALIAN CHEMICAL REAGENTS (ACR) (ABN 19 008 264 211)

Address 38 - 50 Bedford Street Gillman
S.A. 5013 Australia

Telephone/Fax Number Tel: (08) 8440 2000
Fax: (08) 8440 2001

Emergency phone number CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)

Recommended use of the chemical and restrictions on use Laboratory reagent.

Other Information EMERGENCY CONTACT NUMBER: +61 08 8440 2000
Business hours: 8:30am to 5:00pm, Monday to Friday.

Australian Chemical Reagents (ACR) does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon Australian Chemical Reagents (ACR) with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of Australian Chemical Reagents (ACR) is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

2. Hazard Identification

GHS classification of the substance/mixture Acute Toxicity - Oral: Category 4
Skin corrosion/irritation: Category 2
Sensitization - Skin: Category 1
Serious eye damage/irritation: Category 2A
Acute Toxicity - Inhalation: Category 2
Sensitization - Respiratory: Category 1
Germ Cell Mutagenicity: Category 1B
Carcinogenicity: Category 1A
Toxic to Reproduction: Category 1B

Hazardous to the Aquatic Environment - Acute Hazard: Category 1
Hazardous to the Aquatic Environment - Long-Term Hazard: Category 1

Signal Word (s) DANGER

Hazard Statement (s) H302 Harmful if swallowed.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H330 Fatal if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H340 May cause genetic defects.
H350 May cause cancer.
H360 May damage fertility or the unborn child.
H410 Very toxic to aquatic life with long lasting effects.

Pictogram (s) Skull and crossbones, Exclamation mark, Health hazard, Environment

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Precautionary statement – Prevention

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P281 Use personal protective equipment as required.
P284 Wear respiratory protection.

Precautionary statement – Response

P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P330 Rinse mouth.
P303+P361+P353 IF ON SKIN: Wash with plenty of soap and water.
P332 + P313 If skin irritation occurs: Get medical advice/attention.
P363 Wash contaminated clothing before reuse.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P310 Immediately call a POISON CENTER or doctor/physician.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: Get medical advice/attention.
P308+P313 IF exposed or concerned: Get medical advice/attention.

Precautionary statement – Storage

P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

Precautionary statement – Disposal

P501 Dispose of contents/container to an approved waste disposal site.

3. Composition/information on ingredients

Ingredients	Name	CAS	Proportion
	Potassium dichromate	7778-50-9	10 %
	Water to make a total of	7732-18-5	
	100%		

4. First-aid measures

Inhalation	If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Consult a physician.
Ingestion	Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek medical advice if effects persist.
Skin	Immediately remove contaminated clothing and wash affected area with water for at least 15 minutes. Ensure contaminated clothing is washed before re-use. Seek medical advice /attention depending on the severity.
Eye contact	Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. In all cases of eye contamination it is a sensible precaution to seek medical advice.
First Aid Facilities	Maintain eyewash fountain and safety shower in work area.
Advice to Doctor	Treat symptomatically based on judgement of doctor and individual reactions of the patient.
Other Information	For advice, contact a Poisons Information Centre (Phone eg Australia 13 1126; New Zealand 0800 764 766) or a doctor at once.

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5. Fire-fighting measures

Hazards from Combustion Products	Oxygen, irritating and toxic fumes and gases, oxides of potassium, chrome oxides.
Specific Methods	This product contains a substantial proportion of water therefore there are no restrictions on the type of extinguishing media which may be used. Use extinguishing media most appropriate for the surrounding fire.
Specific hazards arising from the chemical	Fire may produce irritating, toxic, and/or corrosive gases. Containers may explode when heated.
Hazchem Code	2X
Precautions in connection with Fire	Wear SCBA and chemical splash suit. Fully-encapsulating, gas-tight suits should be worn for maximum protection.

6. Accidental release measures

Spills & Disposal	Do not contaminate. Keep combustibles (wood, paper, clothing, oil, and so on) away from spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use water spray to knock down vapours or divert vapour clouds. Prevent entry into waterways, drains or confined areas. Prevent exposure to heat. Small liquid spill: Use a non-combustible material like vermiculite, sand or earth to soak up the product and place in a loosely-covered container for later disposal. Large liquid spill: SEEK EXPERT ADVICE ON HANDLING AND DISPOSAL.
Personal Precautions	Evacuate the area of all non-essential personnel. Follow precautions for safe handling described in this safety data sheet. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation. Keep unnecessary and unprotected personnel away from the spillage. Treat the spilled material according to the instructions in the clean-up section.
Personal Protection	Wear protective clothing specified for normal operations (see Section 8)

7. Handling and storage

Precautions for Safe Handling	Avoid contact with eyes, skin or clothing. Avoid breathing vapour, or spray mist. Ensure good ventilation/exhaustion at the workplace. In case of insufficient ventilation, wear suitable respiratory equipment. Wear special protective equipment (Sec. 8) when handling. If you feel unwell, seek medical attention and show the label when possible. Under no circumstances eat, drink or smoke while handling this material. Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Avoid cross-contamination of street clothes. Discard contaminated shoes. Open and handle container with care. Keep away from combustible material. Keep away from incompatibles such as reducing agents, combustible materials, organic materials. Remove and dispose of any spilled dichromates; do not return to original containers. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.
Conditions for safe storage, including any incompatibilities	Store in a cool, dry, well-ventilated area in suitable tightly closed containers. Keep well closed and protected from direct sunlight and moisture.
Storage Regulations	Refer Australian Standard AS/NZS 4452:1997 'The storage and handling of toxic substances'.
Storage Temperatures	Store at room temperature (15 to 25 °C recommended).

8. Exposure controls/personal protection

Other Exposure Information	These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of
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Appropriate engineering controls	chemicals. They are not a measure of relative toxicity. A time weighted average (TWA) has been established for Chromium (VI) compounds (as Cr), water soluble (Safe Work Australia) of 0.05 mg/m ³ . The exposure value at the TWA is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. Note: Substance is known to act as sensitiser. The substance can cause a specific immune response in some people. An affected individual may subsequently react to minute levels of that substance
Respiratory Protection	Maintain the concentrations values below the TWA. This may be achieved by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods.
Eye Protection	Where ventilation is not adequate, respiratory protection may be required. Avoid breathing dust, vapours or mists. Respiratory protection should comply with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. Filter capacity and respirator type depends on exposure levels. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.
Hand Protection	The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.
Personal Protective Equipment	Wear gloves of impervious material conforming to AS/NZS 2161: Occupational protective gloves - Selection, use and maintenance. Final choice of appropriate glove type will vary according to individual circumstances. This can include methods of handling, and engineering controls as determined by appropriate risk assessments. Avoid skin contact when removing gloves from hands, do not touch the gloves outer surface. Dispose of gloves as hazardous waste.
Footwear	Personal protective equipment should not solely be relied upon to control risk and should only be used when all other reasonably practicable control measures do not eliminate or sufficiently minimise risk. Guidance in selecting personal protective equipment can be obtained from Australian, Australian/New Zealand or other approved standards.
Body Protection	Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection, care and use.
Hygiene Measures	Flame retardant antistatic protective clothing. Clean clothing or protective clothing should be worn, preferably with an apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.
	Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

9. Physical and chemical properties

Form	Liquid
Appearance	Orange-red liquid.
Odour	Odourless.
Solubility in Water	Soluble.
pH	pH of 10% soln: 3.57.

10. Stability and reactivity

Chemical Stability	Stable under ordinary conditions of use and storage.
Conditions to Avoid	Heat, incompatibles.
Incompatible Materials	Reducing agents, acids.

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Hazardous Decomposition Products Irritating and toxic fumes and gases, oxides of potassium, chrome oxides.

Hazardous Polymerization Will not occur.

11. Toxicological Information

Ingestion	Harmful if swallowed. May cause irritation to the mouth, throat, gastrointestinal tract and stomach. Can cause sore throat, vomiting, diarrhoea. May cause violent gastroenteritis, peripheral vascular collapse, dizziness, intense thirst, muscle cramps, shock, coma, abnormal bleeding, fever, liver damage and acute renal failure. May cause methaemoglobinaemia, convulsions, and death. Methaemoglobinaemia is characterized by dizziness, drowsiness, headache, shortness of breath, cyanosis (bluish discolouration of skin due to deficient oxygenation of the blood), rapid heart rate and chocolate-brown coloured blood. Highly absorbed through the membrane in the digestive system.
Inhalation	Fatal if inhaled. May cause irritation with symptoms that may include sore throat, coughing, shortness of breath, and labored breathing. May produce pulmonary sensitization or allergic asthma due to allergic sensitization of the respiratory tract.
Skin	Causes skin irritation, with redness and pain. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material.
Eye	Causes serious eye irritation. Contact can cause blurred vision, redness and pain.
Respiratory sensitisation	Sensitization - Respiratory: Category 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin Sensitisation	Sensitization - Skin: Category 1 H317 May cause an allergic skin reaction.
Germ cell mutagenicity	Germ Cell Mutagenicity: Category 1B H340 May cause genetic defects.
Carcinogenicity	Chromium[VI] is evaluated in the IARC Monographs (Vol. 49; 1990) as Group 1: Carcinogenic to humans. Carcinogenicity: Category 1A H350 May cause cancer.
Reproductive Toxicity	Toxic to Reproduction: Category 1B H360 May damage fertility or the unborn child.
Chronic Effects	Chromium salts are recognised carcinogens of the lungs, nasal cavity and paranasal sinus. Repeated or prolonged exposure can cause ulceration and perforation of the nasal septum, respiratory irritation, liver and kidney damage and ulceration of the skin. Ulcerations at first may be painless, but may penetrate to the bone producing 'chrome holes.' Repeated or prolonged contact may cause skin sensitization and sensitization dermatitis. Repeated or prolonged inhalation exposure may cause asthma. Known to be a human carcinogen. May cause respiratory tract cancer. May cause heritable genetic damage to human germ cells. Effects may be delayed. Laboratory experiments have resulted in mutagenic effects. Repeated or prolonged exposure may cause erosion and discolouration of the teeth. Absorption may result in hepatic and renal damage.

12. Ecological information

Ecological Information	Chromium probably occurs as the insoluble (CrIII) oxide (Cr ₂ O ₃ .nH ₂ O) in the soil, as the organic matter in the soil is expected to reduce any soluble chromate to insoluble chromic oxide (Cr ₂ O ₃). Chromium in the soil can be transported to the atmosphere by way of aerosol formation. Chromium is also transported from the soil through runoff and leaching of water. Most of the chromium in surface waters may be present in particulate form as sediment. Some of the particulate chromium would remain as suspended matter and ultimately be deposited in the sediments. Chromium present usually as (CrIII) in the soil and is characterized by its lack of mobility, except in cases
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Ecotoxicity	where Cr(VI) is involved. Chromium (VI) of natural origin is rarely found. Highly toxic for aquatic organisms. May cause long-term adverse effects in the aquatic environment.
Persistence and degradability	Biologic degradation: Methods for the determination of biodegradability are not applicable to inorganic substances. Products of Biodegradation: Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise. Toxicity of the Products of Biodegradation: The products of degradation are more toxic.
Bioaccumulative Potential	Concentration in organisms possible. Bioconcentration factor for <i>Salmo gairdneri</i> (rainbow trout) of 2.8 (muscle), 180 days duration.
Environmental Protection	Do not allow to enter waters, waste water, or soil!
Other Information	H410 Very toxic to aquatic life with long lasting effects.

13. Disposal considerations

Disposal Considerations	Whatever cannot be saved for recovery or recycling should be disposed of according to relevant local, state and federal government regulations.
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14. Transport information

Transport Information	Dangerous Goods of Class 6 (Toxic and Infectious Substances) are incompatible in a placard load with any of the following: -Class 1, Class 3, if the Class 3 dangerous goods are nitromethane, Class 8, if the Class 6 dangerous goods are cyanides and the Class 8 dangerous goods are acids; and are incompatible with food and food packaging in any quantity.
U.N. Number	2810
UN proper shipping name	TOXIC LIQUID, ORGANIC, N.O.S. - (Potassium chromate 10%)
Transport hazard class(es)	6.1
Hazchem Code	2X
Packing Group	II
EPG Number	6A1
IERG Number	36
Environmental Hazards	Highly toxic to aquatic organisms. May cause long term adverse effects in the aquatic environment. Concentration in organisms possible.

15. Regulatory information

Regulatory Information	All the constituents of this product are listed on the Australian Inventory of Chemical Substances (AICS), or exempted. Not listed under WHS Regulation 2011, Schedule 10 - Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals.
Poisons Schedule	S6

16. Other Information

Literature References	'Standard for the Uniform Scheduling of Medicines and Poisons .', Commonwealth of Australia. National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.'. Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals'. Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand. Safe Work Australia, 'Hazardous Chemical Information System'. Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances'. Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants
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Contact Person/Point	in the Occupational Environment'. Paul McCarthy Ph. (08) 8440 2000 DISCLAIMER STATEMENT: All information provided in this data sheet or by our technical representatives is compiled from the best knowledge available to us. However, since data, safety standards and government regulations are subject to change and the conditions of handling and use, or misuse, are beyond our control, we make no warranty either expressed or implied, with respect to the completeness or accuracy to the information contained herein. Australian Chemical Reagents (ACR) accepts no responsibility whatsoever for its accuracy or for any results that may be obtained by customers from using the data and disclaims all liability for reliance on information provided in this data sheet or by our technical representatives.
Empirical Formula & Structural Formula	Empirical Formula: K ₂ Cr ₂ O ₇ plus H ₂ O ...End Of MSDS...

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