Infosafe No™ 1CH1X	Issue Date :January 2021	RE-ISSUED by CHEMSUPP

Product Name **CHROMIUM TRIOXIDE**

Classified as hazardous

1. Identification

GHS Product Identifier	CHROMIUM TRIOXIDE
Company Name	CHEMSUPPLY AUSTRALIA PTY LTD (ABN 19 008 264 211)
Address	38 - 50 Bedford Street GILLMAN SA 5013 Australia
Telephone/Fax Number	Tel: (08) 8440-2000
Emergency phone number	CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)
E-mail Address	www.chemsupply.com.au
Recommended use of the chemical and restrictions on use	Chemicals (chromates, oxidising agents, catalysts), chromium-plating intermediate, medicine (caustic), process engraving, anodising, ceramic glazes, coloured glass, metal cleaning, inks, tanning, paints, textile mordant, etchant for plastics and laboratory reagent.

Other Names

Name	Product Code
CHROMIC TRIOXIDE LR Chromic anhydride, Chromium (VI) oxide, Chromic acid	CL097

Other Information

ChemSupply Australia Pty Ltd 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 ChemSupply Australia Pty Ltd 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 ChemSupply Australia Pty Ltd 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

Hazardous to the Aquatic Environment - Long-Term Hazard: Category 1
Carcinogenicity: Category 1
Acute Toxicity - Dermal: Category 3
Acute Toxicity - Inhalation: Category 2
Oxidizing Gases: Category 1
Acute Toxicity - Oral: Category 3
Specific target organ toxicity - Repeated Exposure Category 1
Sensitization - Respiratory: Category 1
Skin Corrosion/Irritation: Category 1A
Sensitization - Skin: Category 1
Toxic to Reproduction: Category 1B

Signal Word (s) DANGER

Hazard Statement (s)

H271 May cause fire or explosion; strong oxidiser.
H301 Toxic if swallowed.
H311 Toxic in contact with skin.
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
H330 Fatal if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H350 May cause cancer.
H360 May damage fertility or the unborn child.
H372 Causes damage to organs through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.

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Pictogram (s) Flame over circle, Skull and crossbones, Corrosion, Health hazard, Environment

Precautionary statement – Prevention

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P210 Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
P220 Keep/Store away from clothing/.../combustible materials.
P221 Take any precaution to avoid mixing with combustibles.
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.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P283 Wear fire/flame resistant/retardant clothing.

Precautionary statement – Response

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P301+P330+P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P302+P352 IF ON SKIN: Wash with plenty of soap and water.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P306+P360 IF ON CLOTHING: rinse immediately contaminated clothing and skin with plenty of water before removing clothes.
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.
P310 Immediately call a POISON CENTER or doctor/physician
Fire
P370+P378 In case of fire: Use flooding quantities of water for extinction.
P370+P380+P375 In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.

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 plant.

3. Composition/information on ingredients

Ingredients	Name	CAS	Proportion
	Chromium Trioxide	1333-82-0	100 %

4. First-aid measures

Inhalation If inhaled, remove from contaminated area to fresh air immediately, avoid becoming a casualty. Make patient comfortable, keep warm and at rest until fully recovered. If breathing is difficult (or develops a bluish skin discolouration), supply oxygen by a qualified person. Apply artificial respiration with a respiratory medical device if not breathing. Do not use mouth to mouth resuscitation. Immediately medical attention is required.

Ingestion Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek immediate medical advice.

Skin Wash affected area thoroughly with soap and water. Remove contaminated clothing and wash before reuse or discard. If symptoms develop seek medical attention.

Eye contact	Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. Seek immediate medical assistance.
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.

5. Fire-fighting measures

Hazards from Combustion Products	May literate toxic, irritant smoke and fumes in fire.
Specific Methods	Small fire: USE FLOODING QUANTITIES OF WATER. Do not use dry chemicals, CO2 or foam. If safe to do so, move undamaged containers from fire area. Do not move cargo if cargo has been exposed to heat. Large fire: Flood fire area with water from a protected position. Cool containers with flooding quantities of water until well after fire is out - If impossible, withdraw from area and let fire burn. Avoid getting water inside containers: a violent reaction may occur. Dam fire control water for later disposal.
Specific hazards arising from the chemical	Non combustible but will accelerate burning when involved in a fire due to the release of oxygen. May explode from heating, shock, friction or contamination. Can react explosively with hydrocarbons (fuels). May ignite combustibles (wood, paper, clothing, etc) spontaneously and may even explode. Fire may produce irritating, poisonous, and/or corrosive gases. Containers may explode when heated. Runoff may create fire or explosion hazard.
Hazchem Code	1W
Decomposition Temp.	250 °C (boiling point)
Precautions in connection with Fire	Wear SCBA and chemical splash suit. Structural firefighter's uniform will provide limited protection.

6. Accidental release measures

Spills & Disposal	Do not contaminate. Keep combustibles (wood, paper, clothing, oil, etc.) 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. Dry Spill Use clean non-sparking tools to transfer material to a clean, dry plastic container and cover loosely. Move container from spill area. 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. Avoid substance contact. Avoid generation of dusts: do not inhale dusts. Ensure supply of fresh air in enclosed rooms.
Personal Protection	Wear protective clothing specified for normal operations (see Section 8)
Environmental Precautions	Prevent further leakage or spillage and prevent from entering drains

7. Handling and storage

Precautions for Safe Handling	Avoid substance contact and generation and inhalation of dust. Under no circumstances eat, drink or smoke while handling this material. Contaminated clothing should be removed and washed before reuse. Wash hands and face thoroughly after working with material. Only use in well-ventilated areas.

Conditions for safe storage, including any incompatibilities	Store away from combustible materials. Store away from organic materials. Store away from halogenated materials, acids, metals and reducing agents. Keep container tightly closed and dry, away from direct sunlight. Store at room temperature (15 - 25 °C).
Storage Regulations	Refer Australian Standard AS 4326-1995 'The storage and handling of oxidizing agents'. Refer Australian Standard AS/NZS 2243.10:2004 'Safety in laboratories - Storage of chemicals'.

8. Exposure controls/personal protection

Occupational exposure limit values

Name	STEL		TWA		
	mg/m3	ppm	mg/m3	ppm	Footnote
Chromium Trioxide			0.05		Chromium (VI) compounds (as Cr), water soluble

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 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/m³. 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.
Appropriate engineering controls	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.
Respiratory 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.
Eye 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.
Hand Protection	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.
Personal Protective Equipment	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.
Footwear	Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection, care and use.
Body Protection	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.
Hygiene Measures	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	Solid
Appearance	Dark purplish-red crystals.
Odour	Odourless.
Decomposition Temperature	250 °C (boiling point)
Melting Point	197 °C
Solubility in Water	Very soluble.
Solubility in Organic Solvents	Soluble in alcohol and mineral acids.
Specific Gravity	2.7
pH	<1 (50 g/l H2O)
Flammability	Non combustible material. Fire-promoting. Keep away from combustible materials.
Explosion Properties	Explosive in contact with combustible material.
Molecular Weight	99.99
Oxidising Properties	Strongly oxidizing agent as a solid and in solution. Contact with organic materials, oils, greases or other readily oxidizable material should be avoided.

10. Stability and reactivity

Chemical Stability	Stable. Hygroscopic.
Conditions to Avoid	Strong heating.
Incompatible Materials	Oxidising agents, organic combustible substances (eg alcohols, amines, ethers, ketones, carboxylic acids), alkali metals, ammonia, nonmetals, hydrazine and derivatives, nitrates, reducing agents, combustible substances, acids and halogenated materials.
Hazardous Decomposition Products	Smoke and irritant fumes.
Possibility of hazardous reactions	Contact with combustible material may cause fire.
Hazardous Polymerization	Will not occur.

11. Toxicological Information

Toxicology Information	This substance should be treated with great care.
Acute Toxicity - Oral	LD50 Oral - Rat - male and female - 52 mg/kg
Ingestion	Toxic if swallowed. Corrosive. Symptoms include sore throat, vomiting, diarrhoea, dizziness, intense thirst, muscle cramps, shock, coma, abnormal bleeding, and fever. May cause irritation and burns of the digestive tract, liver and kidney damage. Ingestion of the substance leads to severe pain in the gastrointestinal tract.
Inhalation	May cause cancer by inhalation. Inhalation of dust or mist can cause irritation of the nasal septum and respiratory tract, sore throat, coughing, shortness of breath and labored breathing. Extremely destructive to tissues of the mucous membranes and upper respiratory tract. Prolonged or repeated exposure, or if inhaled in excessive quantities may cause ulceration and

	perforation of the nasal septum. The substance rapidly leads to sensitization and to allergic reactions of the respiratory tract (risk of pneumonia!) and to damage of the nasal mucous membranes (under given circumstances perforation of the septum) in predisposed persons.
Skin	Causes severe burns. Direct contact may cause skin irritation sensitisation or dermatitis. Contact with skin can cause external ulcers or ôchrome sores". These occur most commonly at breaks in the skin, nail roots, creases over knuckles, finger webs, backs of hands and forearms. Toxic quantities can be absorbed through the skin causing systemic poisoning and/or kidney/liver damage.
Eye	Causes severe burns. Risk of serious damage to eyes. May cause corneal burns.
Respiratory sensitisation	Sensitization - Respiratory: Category 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin Sensitisation	Sensitization - Respiratory: Category 1 H317 May cause an allergic skin reaction.
Germ cell mutagenicity	Not classified based on available information.
Carcinogenicity	Chromium[VI] compounds is evaluated as a group in the IARC Monographs (Vol. 49; 1990) as Group 1: Carcinogenic to humans. Carcinogenicity: Category 1. H350 May cause cancer.
Reproductive Toxicity	Toxic to Reproduction: Category 1B H360 May damage fertility or the unborn child.
STOT-single exposure	Not classified based on available information.
STOT-repeated exposure	Specific target organ toxicity - Repeated Exposure Category 1 H372 Causes damage to organs through prolonged or repeated exposure.
Chronic Effects	Prolonged or repeated exposure to chromic acid dust/mist may cause chronic eye irritation, skin ulceration and ulceration and perforation of the nasal septum, chronic rhinitis, pharyngitis, inflammation of the larynx, kidney and liver damage, changes in the blood, increased risk of developing respiratory cancer. Classified as a cause of asthma using EU criteria.
Serious eye damage/irritation	Rabbit: Draize test: burns.
Mutagenicity	Not classified based on available information.
Skin corrosion/irritation	Skin Corrosion/Irritation: Category 1A H314 Causes severe skin burns and eye damage.

12. Ecological information

Ecotoxicity	Harmful effect due to pH shift.
Persistence and degradability	Methods for the determination of biodegradability are not applicable to inorganic substances.
Bioaccumulative Potential	Concentration in organisms possible. BCF: 125 - 192.
Known Harmful Effects on the Environment	May cause long-term adverse effects in the aquatic environment.
Other Precautions	Do not allow to enter waters, waste water, or soil!
Environmental Protection	Hazardous to the Aquatic Environment - Long-Term Hazard: Category 1

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.

14. Transport information

Transport Information	Dangerous goods of Class 5.1 (Oxidizing Agent) are incompatible in a placard load with any of the following: Class 1, Class 2.1, Class 2.3, Class 3, Class 4, Class 5.2, Class 7, Class 8, Fire risk substances and Combustible liquids. The sub-risk of Class 8 (Corrosive) are incompatible in a placard load with any of the following: Class 1, Class 4.3, Class 5, Class 6, if the Class 6 dangerous goods are cyanides and the Class 8 dangerous goods are acids, Class 7; and are incompatible with food and food packaging in any quantity.
U.N. Number	1463
UN proper shipping name	CHROMIUM TRIOXIDE, ANHYDROUS
Transport hazard class(es)	5.1
Sub.Risk	6.1 8
Hazchem Code	1W
Packing Group	II
EPG Number	5C2
IERG Number	31
Environmental Hazards	Harmful effect due to pH shift. Highly toxic to aquatic organisms. May cause long term adverse effects in the aquatic environment.

15. Regulatory information

Regulatory Information	All of the significant ingredients in this formulation are compliant with Australian Industrial Chemicals Introduction Scheme (AICIS) regulations. 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 fot 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 in the Occupational Environment'.
Contact Person/Point	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. ChemSupply Australia Pty Ltd 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	Cr O3

...End Of MSDS...

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