



Safety Data Sheet

Infosafe No™ 3CHJW Issue Date : November 2019 RE-ISSUED by ABS

Product Name : **CHROMIUM TRIOXIDE 5%**

Classified as hazardous

1. Identification

GHS Product Identifier	CHROMIUM TRIOXIDE 5%
Product Code	ACRO
Company Name	AUSTRALIAN BIOSTAIN Pty Ltd
Address	24 - 28 Stratton Drive, Traralgon, Victoria, Australia, 3844 www.australianbiostain.com.au
Telephone/Fax Number	Tel: (03) 5176 2855
Emergency phone number	CHEMCALL (24 hours): 1800 127 406 (Australia) / +64-4-917-9888 (International)
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 Information	Australian Biostain 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 Australian Biostain 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 Australian Biostain 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	Acute Toxicity - Dermal: Category 4 Acute Toxicity - Inhalation: Category 4 Skin Corrosion/Irritation: Category 1A Sensitization - Respiratory: Category 1 Sensitization - Skin: Category 1 Germ Cell Mutagenicity: Category 1B Carcinogenicity: Category 1A Toxic to Reproduction: Category 2 Specific Target Organ Toxicity Repeated Exposure Category: 1 Hazardous to the Aquatic Environment - Long-Term Hazard: Category 2
Signal Word (s)	DANGER
Hazard Statement (s)	H312 Harmful in contact with skin. H332 Harmful if inhaled. H314 Causes severe skin burns and eye damage. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H317 May cause an allergic skin reaction. H340 May cause genetic defects. H350 May cause cancer (inhalation). H361 Suspected of damaging fertility or the unborn child. H372 Causes damage to organs (kidneys, liver, respiratory system, skin, eyes) through prolonged or repeated exposure. H411 Toxic to aquatic life with long lasting effects.
Pictogram (s)	Skull and crossbones, Corrosion, Health hazard, Environment





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Precautionary statement – Prevention	<p>P201 Obtain special instructions before use.</p> <p>P202 Do not handle until all safety precautions have been read and understood.</p> <p>P260 Do not breathe dust/fume/gas/mist/vapours/spray.</p> <p>P264 Wash thoroughly after handling.</p> <p>P270 Do not eat, drink or smoke when using this product.</p> <p>P271 Use only outdoors or in a well-ventilated area.</p> <p>P272 Contaminated work clothing should not be allowed out of the workplace.</p> <p>P273 Avoid release to the environment.</p> <p>P280 Wear protective gloves/protective clothing/eye protection/face protection.</p> <p>P281 Use personal protective equipment as required.</p> <p>P285 In case of inadequate ventilation wear respiratory protection.</p>
Precautionary statement – Response	<p>P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.</p> <p>P330 Rinse mouth.</p> <p>P302+P352 IF ON SKIN: Wash with plenty of soap and water.</p> <p>P312 Call a POISON CENTER or doctor/physician if you feel unwell.</p> <p>P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.</p> <p>P363 Wash contaminated clothing before reuse.</p> <p>P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.</p> <p>P310 Immediately call a POISON CENTER or doctor/physician</p> <p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P308+P313 IF exposed or concerned: Get medical advice/attention.</p> <p>P314 Get medical advice/attention if you feel unwell.</p> <p>P405 Store locked up.</p>
Precautionary statement – Storage	
Precautionary statement – Disposal	P501 Dispose of contents/container to an approved waste disposal plant.

3. Composition/information on ingredients

Ingredients	Name	CAS	Proportion	Hazard Symbol	Risk Phrase
	Chromium Trioxide	1333-82-0	5 %		
	Water to make a total of 100%	7732-18-5	-		

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	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.

5. Fire-fighting measures

Suitable extinguishing media	Foam, dry powder, carbon dioxide, water spray or sand. Do not use water in a jet.
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Hazards from Combustion Products	May irritate toxic, irritant smoke and fumes in fire. Corrosive vapours.
Hazchem Code	2X
Precautions in connection with Fire	Wear SCBA and chemical splash suit. Structural firefighter's uniform will provide limited protection.

6. Accidental release measures

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)
Clean-up Methods - Small Spillages	Absorb with dry earth, sand or other non-combustible material. Use clean nonsparking tools to collect and seal in properly labelled drums for disposal in an area approved by local authority bylaws. Wash area down with excess water to remove residual material.
Environmental Precautions	Prevent further leakage or spillage and prevent from entering drains H411 Toxic to aquatic life with long lasting effects.

7. Handling and storage

Precautions for Safe Handling	Do not eat, drink or smoke when using this product. Eye wash facilities and emergency shower must be available when handling this product. Good personal hygiene procedures should be implemented. Take off contaminated clothing and wash it before reuse. Wash promptly with soap and water if skin becomes contaminated.
Storage Regulations	Refer Australian Standard AS 3780-1994 'The storage and handling of corrosive substances'. 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		Footnote
		mg/m ³	ppm	mg/m ³	ppm	
	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/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.
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.
Hand Protection	Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336. Hand protection should comply with AS 2161, Occupational protective gloves - Selection, use and maintenance. Avoid skin contact when removing gloves from hands, do not touch the gloves outer surface. Dispose of gloves as hazardous waste.



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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

Appearance	Amber liquid.
Odour	Odourless.
Solubility in Water	Completely miscible
Specific Gravity	1.1
Flammability	Non combustible material.
Oxidising Properties	May intensify fire.

10. Stability and reactivity

Chemical Stability	Stable under normal use conditons.
Conditions to Avoid	Extremes of temperature and direct sunlight.
Incompatible Materials	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	May react violently with reducing agents.
Hazardous Polymerization	Will not occur.

11. Toxicological Information

Acute Toxicity - Oral	LD50 oral rat: 50 mg/kg - Chromic acid
Acute Toxicity - Dermal	LD50 dermal rat: 55 mg/kg - Chromic acid
Acute Toxicity - Inhalation	LD50 inhalation rat: 0.217 mg/L/4h - Chromic acid
Ingestion	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. Harmful if inhaled. 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. Harmful in contact with skin. 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.



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Respiratory sensitisation	H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin Sensitisation	Risk of sensitization. Patch test (humans): positive.
Germ cell mutagenicity	H340 May cause genetic defects.
Carcinogenicity	Group 1: The agent is carcinogenic to humans. This category is used when there is sufficient evidence of carcinogenicity in humans. Exceptionally, an agent may be placed in this category when evidence of carcinogenicity in humans is less than sufficient but there is sufficient evidence of carcinogenicity in experimental animals and strong evidence in exposed humans that the agent acts through a relevant mechanism of carcinogenicity. Chromium[VI] compounds is evaluated as a group in the IARC Monographs (Vol. 49; 1990) as Group 1: Carcinogenic to humans.
Reproductive Toxicity	H361 Suspected of damaging fertility or the unborn child.
STOT-single exposure	Not classified based on available information.
STOT-repeated exposure	H372 Causes damage to organs (kidneys, liver, respiratory system, skin, eyes) through prolonged or repeated exposure.
Aspiration Hazard	Not classified based on available information.
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.
Serious eye damage/irritation	Not classified based on available information.
Skin corrosion/irritation	H314 Causes severe skin burns and eye damage.

12. Ecological information

Ecological Information	H411 Toxic to aquatic life with long lasting effects.
Ecotoxicity	Harmful effect due to pH shift.
Persistence and degradability	Methods for the determination of biodegradability are not applicable to inorganic substances.
Bioaccumulative Potential	Not bioaccumulative.
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!

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 8 Corrosives 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 and Class 7.
U.N. Number	1755
UN proper shipping name	CHROMIC ACID SOLUTION
Transport hazard class(es)	8
Hazchem Code	2X
Packaging Method	3.8.8RT8
Packing Group	II



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EPG Number	8D1
IERG Number	37
IMDG Marine pollutant	Yes

15. Regulatory information

Regulatory Information	All of the significant ingredients in this formulation are compliant with NICNAS 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. Lewis, Richard J. Sr. 'Hawley's Condensed Chemical Dictionary 13th. Ed.', Rev., John Wiley and Sons, Inc., NY, 1997. National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.', 2007. Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals', 2011. Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand, 2010. Safe Work Australia, 'Approved Criteria for Classifying Hazardous Substances [NOHSC:1008 (2004)]'. Safe Work Australia, 'Hazardous Chemical Information System, 2005'. Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances (2011)'. Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995) 3rd Edition]'. ...End Of MSDS...
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