

Australian statement of hazardous nature : Classified as hazardous according to criteria of Safe Work Australia

## Section 1 - Identification

<b>Product Name</b>	<u>Chromium(III) nitrate nonahydrate</u>
<b>Synonyms</b>	Chromic nitrate
<b>Product Code</b>	ACR21920, ALF011565, ALF043182
<b>Address</b>	ThermoFisher Scientific Australia Pty Ltd 5 Caribbean Drive, Scoresby VICTORIA 3179, Australia
<b>Emergency Tel.</b>	<b>CHEMTREC®</b> <b>03 9757 4559 or +613 9757 4559</b>
<b>Telephone / Fax Numbers</b>	Tel: 1300 735 292 Fax: 1800 067 639
<b>E-mail address</b>	<a href="mailto:auinfo@thermofisher.com">auinfo@thermofisher.com</a>
<b>Recommended Use</b>	Laboratory chemicals.

## Section 2 - Hazard(s) Identification

### Classification under Safe Work Australia

Classified as hazardous according to criteria of Safe Work Australia

<b><u>Physical hazards</u></b>	
Oxidizing solids	Category 2
<b><u>Health hazards</u></b>	
Skin Corrosion/irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2
<b><u>Environmental hazards</u></b>	
No hazards identified	

### Label Elements



Flame Over Circle



Exclamation Mark

**Signal Word**                      **Danger**

### **Hazard Statements**

H272 - May intensify fire; oxidizer  
H315 - Causes skin irritation  
H319 - Causes serious eye irritation

**Precautionary Statements**

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  
 P261 - Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray  
 P264 - Wash face, hands and any exposed skin thoroughly after handling  
 P271 - Use only outdoors or in a well-ventilated area  
 P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection  
 P302 + P352 - IF ON SKIN: Wash with plenty of soap and water  
 P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing  
 P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 P312 - Call a POISON CENTER or doctor/ physician if you feel unwell  
 P362 - Take off contaminated clothing and wash before reuse  
 P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction  
 P403 + P233 - Store in a well-ventilated place. Keep container tightly closed  
 P501 - Dispose of contents/ container to an approved waste disposal plant

**Other information**

No information available

## Section 3 - Composition and Information on Ingredients

Component	CAS-No	Weight %
Chromium(III) nitrate nonahydrate	7789-02-8	>95

## Section 4 - First Aid Measures

<b>Inhalation</b>	Move to fresh air. Obtain medical attention. If not breathing, give artificial respiration.
<b>Ingestion</b>	Do not induce vomiting. Obtain medical attention.
<b>Skin Contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention.
<b>Eye Contact</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.
<b>Protection of First-aiders</b>	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.
<b>First Aid Facilities</b>	Eyewash, safety shower and washroom.
<b>Most important symptoms/effects</b>	Breathing difficulties. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting
<b>Notes to Physician</b>	Treat symptomatically. Symptoms may be delayed.

## Section 5 - Fire Fighting Measures

**Suitable Extinguishing Media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Extinguishing media which must not be used for safety reasons**

Do not use a solid water stream as it may scatter and spread fire.

**Hazardous Decomposition Products**

Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Nitrogen oxides (NO<sub>x</sub>).

**Decomposition Temperature**

100 °C

**Specific Hazards Arising from the Chemical**

Oxidizer: Contact with combustible/organic material may cause fire. May ignite combustibles (wood paper, oil, clothing, etc.).

**Special protective equipment and precautions for fire fighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

**Section 6 - Accidental Release Measures****Emergency procedures**

Ensure adequate ventilation. Use personal protective equipment. Avoid dust formation. Remove all sources of ignition. Take precautionary measures against static discharges.

**Environmental Precautions**

Should not be released into the environment. See Section 12 for additional ecological information.

**Methods for Containment and Clean Up**

Sweep up or vacuum up spillage and collect in suitable container for disposal. Keep away from clothing and other combustible materials. Avoid dust formation. Remove all sources of ignition. Take precautionary measures against static discharges. Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Sweep up and shovel into suitable containers for disposal.

**Reference to Other Sections**

Refer to protective measures listed in Sections 8 and 13.

**Section 7 - Handling and Storage****Precautions for Safe Handling**

Wear personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Do not ingest. Keep away from clothing and other combustible materials. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. Use explosion-proof equipment. Take precautionary measures against static discharges.

**Conditions for Safe Storage, Including any Incompatibilities**

Keep containers tightly closed in a dry, cool and well-ventilated place. Do not store near combustible materials. Keep away from heat and sources of ignition. Flammables area.

AS/NZS 2243.10:2004, Safety in laboratories - Storage of chemicals

**Section 8 - Exposure Controls and Personal Protection****Exposure limits**

**AUS** - Exposure Standards for Atmospheric Contaminants in the Occupational Environment - Guidance Note on the Interpretation of Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:3008(1995)]

Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995)]

updated in August, 2005. Safe Work Australia **ACGIH** - Threshold Limit Values - Ceiling (TLV-C) guidelines by the American Conference of Governmental Industrial Hygienists (ACGIH) for controlling worker exposure to airborne chemical concentrations in the workplace. **UK** - EH40/2005 Containing the workplace exposure limits (WELs) for use with the Control of Substances Hazardous to Health Regulations (COSHH) 2002 (as amended). Updated by September 2006 official press release and October 2007 Supplement. **DE** - MAK and BAT values of Hazardous Chemical Compounds in the Work Area. Published by German Research Foundation on July 1, 2011

Component	Australia	New Zealand WEL	ACGIH TLV	The United Kingdom	Germany
Chromium(III) nitrate nonahydrate	TWA: 0.5 mg/m <sup>3</sup>		TWA: 0.5 mg/m <sup>3</sup>	STEL: 1.5 mg/m <sup>3</sup> 15 min TWA: 0.5 mg/m <sup>3</sup> 8 hr	TWA: 2 mg/m <sup>3</sup> (8 Stunden). AGW - exposure factor 1

**Biological limit values**

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies

**Exposure Controls****Engineering Measures**

Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

**Personal protective equipment****Eye Protection**

Safety glasses with side-shields Goggles (Australian/New Zealand Standard AS/NZS 1337 - Eye protectors for Industrial applications)

**Hand Protection**

Protective gloves

Glove material	Breakthrough time	Glove thickness	AUS/NZ Standard	Glove comments
Nitrile rubber Viton (R)	See manufacturers recommendations	-	AS/NZS 2161.1	(minimum requirement)

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves.

(Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatibility, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

**Skin and body protection**

Wear appropriate protective gloves and clothing to prevent skin exposure

**Respiratory Protection**

Use an AS/NZS 1716 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained in line with AS/NZS 1715 on the use and maintenance of respiratory protective devices

**Recommended Filter type:**

low boiling organic solvent Type AX Brown conforming to EN371 Type A Brown (or AUS/NZ equivalent)

**Recommended half mask:-**

Valve filtering: EN405 or Half mask: EN140 plus filter, EN 141 (or AUS/NZ equivalent)  
When RPE is used a face piece Fit Test should be conducted

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice.

**Environmental exposure controls**

No information available.

## Section 9 - Physical and Chemical Properties

**Information on basic physical and chemical properties**

<b>Appearance</b>	Black	
<b>Physical State</b>	Solid	
<b>Odor</b>	Odorless	
<b>Odor Threshold</b>	No data available	
<b>pH</b>	2.0-3.0	5% aq.sol
<b>Melting Point/Range</b>	60 °C / 140 °F	
<b>Softening Point</b>	No data available	
<b>Boiling Point/Range</b>	No information available	
<b>Flash Point</b>	No information available	<b>Method -</b> No information available
<b>Evaporation Rate</b>	Not applicable	Solid
<b>Flammability (solid,gas)</b>	No information available	
<b>Explosion Limits</b>	No data available	
<b>Vapor Pressure</b>	No data available	
<b>Vapor Density</b>	Not applicable	Solid
<b>Specific Gravity / Density</b>	No data available	
<b>Bulk Density</b>	No data available	
<b>Water Solubility</b>	1 g/L (20°C)	
<b>Solubility in other solvents</b>	No information available	
<b>Partition Coefficient (n-octanol/water)</b>		

<b>Autoignition Temperature</b>	Not applicable	
<b>Decomposition Temperature</b>	100 °C	
<b>Viscosity</b>	Not applicable	Solid
<b>Explosive Properties</b>	No information available	
<b>Oxidizing Properties</b>	Oxidizer	

**Other information**

<b>Molecular Formula</b>	Cr N3 O9 . 9 H2 O
<b>Molecular Weight</b>	400.14

## Section 10 - Stability and Reactivity

<b>Reactivity</b>	Yes
<b>Stability</b>	Oxidizer: Contact with combustible/organic material may cause fire.
<b>Conditions to Avoid</b>	Incompatible products, Excess heat, Combustible material, Avoid dust formation, Keep away from open flames, hot surfaces and sources of ignition.
<b>Incompatible Materials</b>	Strong oxidizing agents, Reducing agents, Metals, Strong reducing agents, Combustible material.
<b>Hazardous Decomposition Products</b>	Carbon monoxide (CO). Carbon dioxide (CO <sub>2</sub> ). Nitrogen oxides (NO <sub>x</sub> ).
<b>Hazardous Polymerization</b>	Hazardous polymerization does not occur.

## Section 11 - Toxicological Information

**Information on Toxicological Effects****Product Information****(a) acute toxicity;**

<b>Oral</b>	Based on available data, the classification criteria are not met
<b>Dermal</b>	No data available
<b>Inhalation</b>	No data available

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Chromium(III) nitrate nonahydrate	LD50 = 3250 mg/kg ( Rat )		

<b>(b) skin corrosion/irritation;</b>	Category 2
<b>(c) serious eye damage/irritation;</b>	Category 2
<b>(d) respiratory or skin sensitization;</b>	
<b>Respiratory</b>	No data available
<b>Skin</b>	No data available
<b>(e) germ cell mutagenicity;</b>	No data available
<b>(f) carcinogenicity;</b>	No data available
<b>(g) reproductive toxicity;</b>	May cause cancer
<b>(h) STOT-single exposure;</b>	No data available
<b>(i) STOT-repeated exposure;</b>	No data available
<b>Target Organs</b>	None known.
<b>(j) aspiration hazard;</b>	Not applicable

Solid

**Other Adverse Effects** The toxicological properties have not been fully investigated.

**Symptoms / effects, both acute and delayed** Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting delayed

## Section 12 - Ecological Information

**Ecotoxicity effects** Do not empty into drains. .

**Persistence and Degradability**

**Persistence** Soluble in water, Persistence is unlikely, based on information available.

**Bioaccumulative Potential** Bioaccumulation is unlikely

**Mobility** The product is water soluble, and may spread in water systems. Will likely be mobile in the environment due to its water solubility Highly mobile in soils

**Endocrine Disruptor Information** This product does not contain any known or suspected endocrine disruptors

**Persistent Organic Pollutant** This product does not contain any known or suspected substance

**Ozone Depletion Potential** This product does not contain any known or suspected substance

## Section 13 - Disposal Considerations

**Waste from Residues / Unused Products** Do not allow into drains or watercourses or dispose of where ground or surface waters may be affected. Wastes, including emptied containers, are controlled wastes and should be disposed of in accordance with all federal, E.P.A., state and local regulations. Assure conformity with all applicable regulations.

**Contaminated Packaging** Dispose of this container to hazardous or special waste collection point.

**Other Information** Chemical wastes should be disposed through a licensed commercial waste collection service. Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains.

## Section 14 - Transport Information

### IMDG/IMO

**UN-No** UN2720  
**Proper Shipping Name** Chromium nitrate  
**Technical Shipping Name** Chromium(III) nitrate nonahydrate  
**Hazard Class** 5.1  
**Packing Group** III

### ADG

**UN-No** UN2720  
**Proper Shipping Name** Chromium nitrate  
**Technical Shipping Name** Chromium(III) nitrate nonahydrate  
**Hazard Class** 5.1  
**Packing Group** III

### IATA

**UN-No** UN2720  
**Proper Shipping Name** Chromium nitrate  
**Technical Shipping Name** Chromium(III) nitrate nonahydrate  
**Hazard Class** 5.1  
**Packing Group** III

**Environmental hazards** No hazards identified  
**Special Precautions** No special precautions required  
**Additional information** None known

## Section 15 - Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

### International Inventories

X = listed

Component	AICS	NZIoC	EINECS	ELINCS	TSCA	DSL	NDSL	PICCS	ENCS	IECSC	KECL
Chromium(III) nitrate nonahydrate	X	X	-	-	-	-	-	-	X	X	-

### Standard for the Uniform Scheduling of Medicines and Poisons

Not Scheduled

Component	Standard for the Uniform Scheduling of Medicines and Poisons	Health Surveillance
Chromium(III) nitrate nonahydrate		Listed Demographic, medical and occupational history Physical examination with emphasis on the respiratory system and skin Weekly skin inspection of hands and forearms by a competent person

**Prohibition or notification/licensing requirements** Shown below are details of specific prohibition/notifications or licencing requirements when they apply.

## Section 16 - Other Information

### Legend

<b>AICS</b> - Australian Inventory of Chemical Substances	<b>NZIoC</b> - New Zealand Inventory of Chemicals
<b>TSCA</b> - United States Toxic Substances Control Act Section 8(b) Inventory	<b>EINECS/ELINCS</b> - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
<b>DSL/NDSL</b> - Canadian Domestic Substances List/Non-Domestic Substances List	<b>ENCS</b> - Japanese Existing and New Chemical Substances
<b>IECSC</b> - Chinese Inventory of Existing Chemical Substances	<b>KECL</b> - Korean Existing and Evaluated Chemical Substances
<b>PICCS</b> - Philippines Inventory of Chemicals and Chemical Substances	<b>CAS</b> - Chemical Abstracts Service
<b>TWA</b> - Time Weighted Average	<b>ACGIH</b> - American Conference of Governmental Industrial Hygienists
<b>IARC</b> - International Agency for Research on Cancer	<b>PNEC</b> - Predicted No Effect Concentration
<b>ICAO/IATA</b> - International Civil Aviation Organization/International Air Transport Association	<b>IMO/IMDG</b> - International Maritime Organization/International Maritime Dangerous Goods Code
<b>MARPOL</b> - International Convention for the Prevention of Pollution from Ships	<b>ADG</b> Australian Code for the Transport of Dangerous Goods by Road and Rail
<b>NZS 5433:2012</b> - Transport of Dangerous Goods on Land	<b>OECD</b> - Organisation for Economic Co-operation and Development
<b>LD50</b> - Lethal Dose 50%	<b>LC50</b> - Lethal Concentration 50%
<b>EC50</b> - Effective Concentration 50%	<b>ATE</b> - Acute Toxicity Estimate
<b>WEL</b> - Workplace Exposure Limit	<b>RPE</b> - Respiratory Protective Equipment
<b>DNEL</b> - Derived No Effect Level	<b>NOEC</b> - No Observed Effect Concentration
<b>POW</b> - Partition coefficient Octanol:Water	<b>BCF</b> - Bioconcentration factor
<b>vPvB</b> - very Persistent, very Bioaccumulative	<b>PBT</b> - Persistent, Bioaccumulative, Toxic
<b>VOC</b> - Volatile Organic Compounds	

### Key literature references and sources for data

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

### Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

Fire prevention and fighting, identifying hazards and risks, static electricity, explosive atmospheres posed by vapours and dusts.

Chemical incident response training.

<b>Creation Date</b>	05-Oct-2010
<b>Revision Date</b>	11-Oct-2016
<b>Revision Summary</b>	Update to Format.

This safety data sheet complies with the requirements of Safe Work Australia WHS

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**Regulation****Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of Safety Data Sheet**