



# SAFETY DATA SHEET ALLANTOIN REVISION 3, DATE 03 DEC 19

## 1. IDENTIFICATION

Product Name	Allantoin
Other Names	5-Ureidohydantoin
Uses	Pharmaceutical & cosmetic applications.
Chemical Family	No Data Available
Chemical Formula	C <sub>4</sub> H <sub>6</sub> N <sub>4</sub> O <sub>3</sub>
Chemical Name	Urea, (2,5-dioxo-4-imidazolidinyl)-
Product Description	No Data Available

### Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Redox Ltd	2 Swettenham Road Minto NSW 2566 Australia	+61-2-97333000
Redox Ltd	11 Mayo Road Wiri Auckland 2104 New Zealand	+64-9-2506222
Redox Inc.	3960 Paramount Boulevard Suite 107 Lakewood CA 90712 USA	+1-424-675-3200
Redox Chemicals Sdn Bhd	Level 2, No. 8, Jalan Sapir 33/7 Seksyen 33, Shah Alam Premier Industrial Park 40400 Shah Alam Sengalor, Malaysia	+60-3-5614-2111

### Emergency Contact Details

*For emergencies only; DO NOT contact these companies for general product advice.*

Organisation	Location	Telephone
Poisons Information Centre	Westmead NSW	1800-251525 131126
Chemcall	Australia	1800-127406 +64-4-9179888
Chemcall	Malaysia	+64-4-9179888
Chemcall	New Zealand	0800-243622 +64-4-9179888
National Poisons Centre	New Zealand	0800-764766
CHEMTREC	USA & Canada	1-800-424-9300 CN723420 +1-703-527-3887

## 2. HAZARD IDENTIFICATION

Poisons Schedule (Aust)

Not Scheduled



## Globally Harmonised System

<b>Hazard Classification</b>	NOT hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)
<b>Signal Word</b>	None

## National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road &amp; Rail (ADG Code)

<b>Dangerous Goods Classification</b>	NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)
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## 3. COMPOSITION/INFORMATION ON INGREDIENTS

## Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Allantoin	C4H6N4O3	97-59-6	100 %

## 4. FIRST AID MEASURES

## Description of necessary measures according to routes of exposure

<b>Swallowed</b>	IF SWALLOWED: Rinse mouth with water. Do not induce vomiting. Get medical advice/attention. Never give anything by mouth to an unconscious person.
<b>Eye</b>	IF IN EYES: Immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. If eye irritation persists, get medical advice/attention.
<b>Skin</b>	IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs, get medical advice/attention.
<b>Inhaled</b>	IF INHALED: Remove victim to fresh air and keep warm and at rest in a position comfortable for breathing. Remove contaminated clothing and loosen remaining clothing. If respiratory symptoms persist, get medical advice/attention. Give artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult.
<b>Advice to Doctor</b>	Treat symptomatically.
<b>Medical Conditions Aggravated by Exposure</b>	None known.

## 5. FIRE FIGHTING MEASURES

<b>General Measures</b>	If safe to do so, move undamaged containers from fire area. Cool containers with water spray until well after fire is out.
<b>Flammability Conditions</b>	May be combustible at high temperature.
<b>Extinguishing Media</b>	Use dry chemical, Carbon dioxide (CO <sub>2</sub> ), foam or water spray for extinction.
<b>Fire and Explosion Hazard</b>	Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
<b>Hazardous Products of Combustion</b>	Fire may produce irritating and/or toxic fumes, including Carbon oxides, Nitrogen oxides (NO <sub>x</sub> ).

<b>Special Fire Fighting Instructions</b>	Contain runoff from fire control or dilution water - Runoff may pollute waterways.
<b>Personal Protective Equipment</b>	Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.
<b>Flash Point</b>	No Data Available
<b>Lower Explosion Limit</b>	No Data Available
<b>Upper Explosion Limit</b>	No Data Available
<b>Auto Ignition Temperature</b>	No Data Available
<b>Hazchem Code</b>	No Data Available

## 6. ACCIDENTAL RELEASE MEASURES

<b>General Response Procedure</b>	Ensure adequate ventilation. ELIMINATE all ignition sources (if dust clouds can occur). Do not touch or walk through spilled material. Avoid generating dust. Avoid breathing dust and contact with eyes, skin and clothing.
<b>Clean Up Procedures</b>	Take up mechanically; Sweep or vacuum up, but avoid generating dust. Collect and seal in properly labelled containers for disposal (see SECTION 13). *Vacuuming or wet sweeping may be used to avoid dust dispersal.
<b>Containment</b>	Stop leak if safe to do so - Prevent entry into waterways, drains or confined areas. Prevent dust cloud. Cover powder spill with plastic sheet or tarp to minimize spreading.
<b>Decontamination</b>	No information available.
<b>Environmental Precautionary Measures</b>	Prevent entry into drains and waterways. If contamination of sewers or waterways has occurred advise local emergency services.
<b>Evacuation Criteria</b>	Spill or leak area should be isolated immediately. Keep unauthorised personnel away.
<b>Personal Precautionary Measures</b>	Wear protective equipment to avoid skin and eye contact and breathing in dust (see SECTION 8).

## 7. HANDLING AND STORAGE

<b>Handling</b>	Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Minimise dust generation and accumulation. Avoid breathing dust, mists and/or vapours and contact with eyes, skin and clothing. Do not ingest. Use personal protective equipment as required (see SECTION 8). <b>WARNING:</b> May form combustible dust concentrations in air. Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges.
<b>Storage</b>	Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep containers tightly closed when not in use - check regularly for spills. Keep away from heat and sources of ignition - No smoking. Keep away from incompatible materials (see SECTION 10).
<b>Container</b>	Keep only in the original container.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>General</b>	No value assigned for this specific material by Safe Work Australia. For dusts from solid substances without specific occupational exposure standards: - Safe Work Australia Exposure Standard (Nuisance dusts): 8 hr TWA = 10 mg/m <sup>3</sup> , measured as inhalable dust. - New Zealand WES (Particulates not otherwise classified): TWA = 10 mg/m <sup>3</sup> ; TWA = 3 mg/m <sup>3</sup> (respirable).
<b>Exposure Limits</b>	No Data Available
<b>Biological Limits</b>	No information available.
<b>Engineering Measures</b>	A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.

<b>Personal Protection Equipment</b>	<p>- Respiratory protection: Wear respiratory protection in case of inadequate ventilation or if an inhalation risk exists. Recommended: Dust mask/respirator. Use respirators and components tested and approved under appropriate government standards (refer to AS/NZS 1715 &amp; 1716).</p> <p>- Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Safety glasses. Use equipment for eye protection tested and approved under appropriate government standards.</p> <p>- Hand protection: Handle with gloves. Recommended: Impervious gloves, e.g. Nitrile rubber.</p> <p>- Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Overalls, safety shoes. The type of protective equipment must be selected according to the concentration and amount of the hazardous substance(s) at the specific workplace.</p>
<b>Special Hazards Precautions</b>	No information available.
<b>Work Hygienic Practices</b>	Do not eat, drink or smoke when using this product. Wash thoroughly with soap and water after handling. Take off contaminated clothing and wash it before reuse. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b>	Solid
<b>Appearance</b>	Crystalline powder
<b>Odour</b>	Odourless
<b>Colour</b>	White
<b>pH</b>	4.5 - 6.0 (5 g/L)
<b>Vapour Pressure</b>	No Data Available
<b>Relative Vapour Density</b>	No Data Available
<b>Boiling Point</b>	No Data Available
<b>Melting Point</b>	225 - 236 °C
<b>Freezing Point</b>	No Data Available
<b>Solubility</b>	Slightly soluble in water
<b>Specific Gravity</b>	No Data Available
<b>Flash Point</b>	No Data Available
<b>Auto Ignition Temp</b>	No Data Available
<b>Evaporation Rate</b>	No Data Available
<b>Bulk Density</b>	Approx. 800 kg/m <sup>3</sup>
<b>Corrosion Rate</b>	No Data Available
<b>Decomposition Temperature</b>	>225 °C
<b>Density</b>	Approx. 1.7 g/cm <sup>3</sup>
<b>Specific Heat</b>	No Data Available
<b>Molecular Weight</b>	No Data Available
<b>Net Propellant Weight</b>	No Data Available
<b>Octanol Water Coefficient</b>	No Data Available
<b>Particle Size</b>	No Data Available
<b>Partition Coefficient</b>	No Data Available
<b>Saturated Vapour Concentration</b>	No Data Available
<b>Vapour Temperature</b>	No Data Available
<b>Viscosity</b>	No Data Available
<b>Volatile Percent</b>	No Data Available
<b>VOC Volume</b>	No Data Available
<b>Additional Characteristics</b>	No information available.

<b>Potential for Dust Explosion</b>	Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
<b>Fast or Intensely Burning Characteristics</b>	No information available.
<b>Flame Propagation or Burning Rate of Solid Materials</b>	No information available.
<b>Non-Flammables That Could Contribute Unusual Hazards to a Fire</b>	No information available.
<b>Properties That May Initiate or Contribute to Fire Intensity</b>	May be combustible at high temperature.
<b>Reactions That Release Gases or Vapours</b>	Fire/decomposition may produce irritating and/or toxic fumes, including Carbon oxides, Nitrogen oxides (NOx).
<b>Release of Invisible Flammable Vapours and Gases</b>	No information available.

## 10. STABILITY AND REACTIVITY

<b>General Information</b>	No hazardous reactions when stored and handled according to prescribed instructions.
<b>Chemical Stability</b>	Stable under normal conditions.
<b>Conditions to Avoid</b>	Avoid generating dust. Keep away from heat and sources of ignition.
<b>Materials to Avoid</b>	Incompatible/reactive with oxidising agents.
<b>Hazardous Decomposition Products</b>	Fire/decomposition may produce irritating and/or toxic fumes, including Carbon oxides, Nitrogen oxides (NOx).
<b>Hazardous Polymerisation</b>	Hazardous polymerisation will not occur.

## 11. TOXICOLOGICAL INFORMATION

<b>General Information</b>	Information on possible routes of exposure: <ul style="list-style-type: none"><li>- Ingestion: Not a hazard under normal use conditions. No adverse effects expected; however, large amounts may cause nausea and vomiting.</li><li>- Eye contact: Not a hazard under normal use conditions. Non-irritant (Rabbit). This material may cause eye irritation upon direct contact. May cause physical irritation to the eyes.</li><li>- Skin contact: Not a hazard under normal use conditions. This material may cause irritation upon prolonged or repeated skin contact.</li><li>- Inhalation: Not a hazard under normal use conditions. Breathing in vapours and dust may cause respiratory irritation.</li></ul> Chronic effects: Non-mutagenic. Non-teratogenic. No evidence of carcinogenic potential.
<b>Acute</b>	
<b>Ingestion</b>	Acute toxicity (Oral): <ul style="list-style-type: none"><li>- LD50, Rat: &gt;5,000 mg/kg [Supplier's SDS].</li></ul>
<b>Carcinogen Category</b>	None

## 12. ECOLOGICAL INFORMATION

<b>Ecotoxicity</b>	Aquatic toxicity: <ul style="list-style-type: none"><li>- LC50, Fish (Brachydanio rerio): &gt;5,000 mg/L [OECD 203].</li><li>- EC0, Bacteria (Pseudomonas putida): &gt;10 g/L [IRCHA].</li></ul>
<b>Persistence/Degradability</b>	Biodegradability: >80 % [OECD 302 B].

<b>Mobility</b>	No information available.
<b>Environmental Fate</b>	Prevent entry into drains and waterways.
<b>Bioaccumulation Potential</b>	No information available.
<b>Environmental Impact</b>	No Data Available

### 13. DISPOSAL CONSIDERATIONS

<b>General Information</b>	Dispose of contents/container in accordance with local/regional/national regulations.
<b>Special Precautions for Land Fill</b>	Offer surplus and non-recyclable solutions to a licensed disposal company. Dispose of contaminated packaging as unused product.

### 14. TRANSPORT INFORMATION

#### Land Transport (Australia)

ADG Code

<b>Proper Shipping Name</b>	Allantoin
<b>Class</b>	No Data Available
<b>Subsidiary Risk(s)</b>	No Data Available
	No Data Available
<b>UN Number</b>	No Data Available
<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	No Data Available
<b>Special Provision</b>	No Data Available
<b>Comments</b>	NON-DANGEROUS GOODS: Not regulated for LAND transport.

#### Land Transport (Malaysia)

ADR Code

<b>Proper Shipping Name</b>	Allantoin
<b>Class</b>	No Data Available
<b>Subsidiary Risk(s)</b>	No Data Available
	No Data Available
<b>UN Number</b>	No Data Available
<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	No Data Available
<b>Special Provision</b>	No Data Available
<b>Comments</b>	NON-DANGEROUS GOODS: Not regulated for LAND transport.

#### Land Transport (New Zealand)

NZS5433

<b>Proper Shipping Name</b>	Allantoin
<b>Class</b>	No Data Available
<b>Subsidiary Risk(s)</b>	No Data Available
	No Data Available

<b>UN Number</b>	No Data Available
<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	No Data Available
<b>Special Provision</b>	No Data Available
<b>Comments</b>	NON-DANGEROUS GOODS: Not regulated for LAND transport.

**Land Transport (United States of America)**

US DOT

<b>Proper Shipping Name</b>	Allantoin
<b>Class</b>	No Data Available
<b>Subsidiary Risk(s)</b>	No Data Available
	No Data Available
<b>UN Number</b>	No Data Available
<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	No Data Available
<b>Special Provision</b>	No Data Available
<b>Comments</b>	NON-DANGEROUS GOODS: Not regulated for LAND transport.

**Sea Transport**

IMDG Code

<b>Proper Shipping Name</b>	Allantoin
<b>Class</b>	No Data Available
<b>Subsidiary Risk(s)</b>	No Data Available
<b>UN Number</b>	No Data Available
<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	No Data Available
<b>Special Provision</b>	No Data Available
<b>EMS</b>	No Data Available
<b>Marine Pollutant</b>	No
<b>Comments</b>	NON-DANGEROUS GOODS: Not regulated for SEA transport.

**Air Transport**

IATA DGR

<b>Proper Shipping Name</b>	Allantoin
<b>Class</b>	No Data Available
<b>Subsidiary Risk(s)</b>	No Data Available
<b>UN Number</b>	No Data Available
<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	No Data Available
<b>Special Provision</b>	No Data Available
<b>Comments</b>	NON-DANGEROUS GOODS: Not regulated for AIR transport.

**National Transport Commission (Australia)**

Australian Code for the Transport of Dangerous Goods by Road &amp; Rail (ADG Code)

<b>Dangerous Goods Classification</b>	NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)
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## 15. REGULATORY INFORMATION

General Information No Data Available

Poisons Schedule (Aust) Not Scheduled

**Environmental Protection Authority (New Zealand)**

Hazardous Substances and New Organisms Amendment Act 2015

Approval Code Not Hazardous

**National/Regional Inventories**

Australia (AIC)	Listed
Canada (DSL)	Listed
Canada (NDSL)	Not Determined
China (IECSC)	Not Determined
Europe (EINECS)	202-592-8
Europe (REACH)	Not Determined
Japan (ENCS/METI)	Listed
Korea (KECI)	Not Determined
Malaysia (EHS Register)	Not Determined
New Zealand (NZIoC)	Listed
Philippines (PICCS)	Not Determined
Switzerland (Giftliste 1)	Not Determined
Switzerland (Inventory of Notified Substances)	Not Determined
Taiwan (NCSR)	Not Determined
USA (TSCA)	Listed

## 16. OTHER INFORMATION

Related Product Codes	ALLANT1000, ALLANT1001, ALLANT1002, ALLANT1003, ALLANT1100, ALLANT2000, ALLANT2200, ALLANT3000
Revision	3
Revision Date	03 Dec 2019
Key/Legend	<p>&lt; Less Than</p> <p>&gt; Greater Than</p> <p><b>AICS</b> Australian Inventory of Chemical Substances</p> <p><b>atm</b> Atmosphere</p> <p><b>CAS</b> Chemical Abstracts Service (Registry Number)</p>



**cm<sup>2</sup>** Square Centimetres

**CO<sub>2</sub>** Carbon Dioxide

**COD** Chemical Oxygen Demand

**deg C (°C)** Degrees Celcius

**EPA (New Zealand)** Environmental Protection Authority of New Zealand

**deg F (°F)** Degrees Farenheit

**g** Grams

**g/cm<sup>3</sup>** Grams per Cubic Centimetre

**g/l** Grams per Litre

**HSNO** Hazardous Substance and New Organism

**IDLH** Immediately Dangerous to Life and Health

**immiscible** Liquids are insoluable in each other.

**inHg** Inch of Mercury

**inH<sub>2</sub>O** Inch of Water

**K** Kelvin

**kg** Kilogram

**kg/m<sup>3</sup>** Kilograms per Cubic Metre

**lb** Pound

**LC<sub>50</sub>** LC stands for lethal concentration. LC<sub>50</sub> is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.

**LD<sub>50</sub>** LD stands for Lethal Dose. LD<sub>50</sub> is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals.

**ltr or L** Litre

**m<sup>3</sup>** Cubic Metre

**mbar** Millibar

**mg** Milligram

**mg/24H** Milligrams per 24 Hours

**mg/kg** Milligrams per Kilogram

**mg/m<sup>3</sup>** Milligrams per Cubic Metre

**Misc or Miscible** Liquids form one homogeneous liquid phase regardless of the amount of either component present.

**mm** Millimetre

**mmH<sub>2</sub>O** Millimetres of Water

**mPa.s** Millipascals per Second

**N/A** Not Applicable

**NIOSH** National Institute for Occupational Safety and Health

**NOHSC** National Occupational Heath and Safety Commission

**OECD** Organisation for Economic Co-operation and Development

**Oz** Ounce

**PEL** Permissible Exposure Limit

**Pa** Pascal

**ppb** Parts per Billion

**ppm** Parts per Million

**ppm/2h** Parts per Million per 2 Hours

**ppm/6h** Parts per Million per 6 Hours

**psi** Pounds per Square Inch

**R** Rankine

**RCP** Reciprocal Calculation Procedure

**STEL** Short Term Exposure Limit

**TLV** Threshold Limit Value

**tne** Tonne

**TWA** Time Weighted Average

**ug/24H** Micrograms per 24 Hours

**UN** United Nations

**wt** Weight