



# SAFETY DATA SHEET D-PANTHENOL REVISION 3, DATE 10 JUN 19

## 1. IDENTIFICATION

<b>Product Name</b>	<b>D-Panthenol</b>
<b>Other Names</b>	Dexpanthenol; Panthenol, (+)-; Pantothenol; Pantothenyl alcohol
<b>Uses</b>	Pharmaceuticals, cosmetics and personal-care products.
<b>Chemical Family</b>	No Data Available
<b>Chemical Formula</b>	C <sub>9</sub> H <sub>19</sub> NO <sub>4</sub>
<b>Chemical Name</b>	Butanamide, 2,4-dihydroxy-N-(3-hydroxypropyl)-3,3-dimethyl-, (R)-
<b>Product Description</b>	No Data Available

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

<b>Organisation</b>	<b>Location</b>	<b>Telephone</b>
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.*

<b>Organisation</b>	<b>Location</b>	<b>Telephone</b>
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
D-Panthenol	C9H19NO4	81-13-0	<=100 %

## 4. FIRST AID MEASURES

## Description of necessary measures according to routes of exposure

<b>Swallowed</b>	IF SWALLOWED: Rinse mouth, then drink plenty of water. Do not give milk or alcoholic beverages. Get medical advice/attention if you feel unwell. Do not induce vomiting unless directed to do so by medical personnel. 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. Protect unharmed eye. Remove contact lenses if present and easy to do. Continue rinsing for 10 - 15 minutes. If eye irritation persists, get medical advice/attention.
<b>Skin</b>	IF ON SKIN: Remove contaminated clothing and shoes immediately. Wash skin and hair with plenty of soap and running water. If skin irritation occurs, get medical advice/attention. Wash contaminated clothing and shoes before reuse.
<b>Inhaled</b>	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If respiratory symptoms persist, get medical advice/attention.
<b>Advice to Doctor</b>	In all cases of doubt, or when symptoms persist, seek medical attention. Treat symptomatically.
<b>Medical Conditions Aggravated by Exposure</b>	No information available.

## 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 burn but does not ignite readily.
<b>Extinguishing Media</b>	Use dry chemical, Carbon dioxide (CO2), alcohol-resistant foam or water spray for extinction - Do not use water jets.
<b>Fire and Explosion Hazard</b>	Containers may explode when heated.
<b>Hazardous Products of Combustion</b>	Fire may produce irritating, toxic and/or corrosive fumes, including Carbon oxides, Nitrogen oxides.  Contain runoff from fire control or dilution water - Runoff may pollute waterways.

**Special Fire Fighting Instructions**

<b>Personal Protective Equipment</b>	Wear self-contained breathing apparatus (SCBA) and chemical splash suit. SCBA and structural firefighter's uniform may provide limited protection.
<b>Flash Point</b>	150.5 °C
<b>Lower Explosion Limit</b>	No Data Available
<b>Upper Explosion Limit</b>	No Data Available
<b>Auto Ignition Temperature</b>	>400 °C
<b>Hazchem Code</b>	No Data Available

**6. ACCIDENTAL RELEASE MEASURES**

<b>General Response Procedure</b>	Ensure adequate ventilation. ELIMINATE all ignition sources. Do not touch or walk through spilled materials. Avoid breathing vapours and contact with eyes, skin and clothing.
<b>Clean Up Procedures</b>	Absorb with earth, sand or other non-combustible material and transfer to suitable, closed containers for disposal (see SECTION 13).
<b>Containment</b>	Stop leak if safe to do so – Prevent entry into waterways, drains or confined areas.
<b>Decontamination</b>	No information available.
<b>Environmental Precautionary Measures</b>	Prevent entry into drains and waterways.
<b>Evacuation Criteria</b>	Spill or leak area should be isolated immediately. Keep unauthorised personnel away.
<b>Personal Precautionary Measures</b>	Use personal protective equipment as required (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. Avoid breathing mist/vapours and contact with eyes, skin and clothing. Do not ingest. Use personal protective equipment as required (see SECTION 8). Keep away from flames and hot surfaces - No smoking. Avoid discharge into the environment.
<b>Storage</b>	Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep container tightly closed. Protect from moisture/humidity (hygroscopic). Keep away from heat and sources of ignition - No smoking. Keep away from incompatible materials (see SECTION 10).
<b>Container</b>	Keep in the original container.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

<b>General</b>	No specific exposure standards are available for this product.
<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>	<ul style="list-style-type: none"> <li>- Respiratory protection: No personal respiratory protective equipment normally required. Wear respiratory protection in case of inadequate ventilation or if exposed to high vapour concentrations. Recommended: Organic vapour/particulate filter respirator (refer to AS/NZS 1715 &amp; 1716).</li> <li>- Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Safety glasses with side-shields.</li> <li>- Hand protection: Handle with gloves. Recommended: Nitrile rubber.</li> </ul>

- Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Impervious clothing; Protective suit.

**Special Hazards Precautions**

No information available.

**Work Hygienic Practices**

Do not eat, drink or smoke when using this product. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas. Work clothes should be washed separately at the end of each work day.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Physical State</b>	Liquid
<b>Appearance</b>	Viscous liquid
<b>Odour</b>	Odourless
<b>Colour</b>	Colourless to slightly yellow
<b>pH</b>	No Data Available
<b>Vapour Pressure</b>	0.000056 Pa (@ 25 °C)
<b>Relative Vapour Density</b>	No Data Available
<b>Boiling Point</b>	235.6 °C
<b>Melting Point</b>	-25 °C
<b>Freezing Point</b>	No Data Available
<b>Solubility</b>	>509 g/L in water 22°C
<b>Specific Gravity</b>	No Data Available
<b>Flash Point</b>	150.5 °C
<b>Auto Ignition Temp</b>	>400 °C
<b>Evaporation Rate</b>	No Data Available
<b>Bulk Density</b>	No Data Available
<b>Corrosion Rate</b>	No Data Available
<b>Decomposition Temperature</b>	No Data Available
<b>Density</b>	1.2 g/cm <sup>3</sup>
<b>Specific Heat</b>	No Data Available
<b>Molecular Weight</b>	205.25
<b>Net Propellant Weight</b>	No Data Available
<b>Octanol Water Coefficient</b>	-1.06 at 22°C (log Po/w)
<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>	Not applicable.
<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 burn but does not ignite readily.
<b>Reactions That Release Gases or Vapours</b>	Fire/decomposition may produce irritating, toxic and/or corrosive fumes, including Carbon oxides, Nitrogen oxides.
<b>Release of Invisible Flammable Vapours and Gases</b>	No information available.

## 10. STABILITY AND REACTIVITY

<b>General Information</b>	No dangerous reactions known.
<b>Chemical Stability</b>	The substance is stable under normal storage and handling conditions.
<b>Conditions to Avoid</b>	Keep away from heat and sources of ignition.
<b>Materials to Avoid</b>	Incompatible/reactive with strong oxidising agents, strong acids and strong bases.
<b>Hazardous Decomposition Products</b>	Fire/decomposition may produce irritating, toxic and/or corrosive fumes, including Carbon oxides, Nitrogen oxides.
<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: The product is not classified as harmful to human health; large amounts may cause nausea and vomiting.</li><li>- Eye contact: Not irritating to eyes.</li><li>- Skin contact: Not irritating to skin.</li><li>- Inhalation: High vapour concentrations may irritate respiratory tract.</li></ul> Chronic effects: No information available.
<b>Acute</b>	
<b>Ingestion</b>	Acute toxicity (Oral): <ul style="list-style-type: none"><li>- LD50, Rat: &gt;10,000 mg/kg bw. [Supplier's SDS].</li></ul>
<b>Other</b>	Acute toxicity (Dermal): <ul style="list-style-type: none"><li>- LD50, Rat: &gt;2,000 mg/kg bw. [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: &gt;1,000 mg/L (96 h) [OECD 203].</li><li>- EC50, Daphnia: &gt;100 mg/L (48 h) [OECD 202].</li><li>- EC50, Algae: &gt;100 mg/L (72 h) [OECD 201].</li></ul>
<b>Persistence/Degradability</b>	Readily biodegradable.
<b>Mobility</b>	The product is soluble in water.
<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

General Information	The material should be disposed of by incineration and in accordance with local/regional/national regulations.
Special Precautions for Land Fill	If empty container retains product residues, all label precautions must be observed.

14. TRANSPORT INFORMATION

Land Transport (Australia)

ADG Code

Proper Shipping Name	D-Panthenol
Class	C2 Combustible Liquids - Flash Point >93°C, Closed Cup, Not Excluded Flammable
Subsidiary Risk(s)	No Data Available
	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
Comments	NON-DANGEROUS GOODS: Not regulated for LAND transport.

Land Transport (Malaysia)

ADR Code

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

Land Transport (New Zealand)

NZS5433

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

Land Transport (United States of America)

US DOT

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

Sea Transport

IMDG Code

Proper Shipping Name	D-Panthenol
Class	C1 Combustible Liquids - Flash Point >60°C - <=93°C, Closed Cup
Subsidiary Risk(s)	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	No Data Available
EMS	No Data Available
Marine Pollutant	No
Comments	NON-DANGEROUS GOODS: Not regulated for SEA transport.

Air Transport

IATA DGR

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

National Transport Commission (Australia)

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

Dangerous Goods Classification	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
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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)

Not Determined

Canada (NDSL)

Not Determined

China (IECSC)

Not Determined

Europe (EINECS)

Not Determined

Europe (REACH)

Not Determined

Japan (ENCS/METI)

Not Determined

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)

Not Determined

**16. OTHER INFORMATION**

Related Product Codes

VITBEA2000, VITBEA4000, VITBEA4050

Revision

3

Revision Date

10 Jun 2019

Key/Legend

&lt; Less Than

&gt; Greater Than

**AICS** Australian Inventory of Chemical Substances**atm** Atmosphere**CAS** Chemical Abstracts Service (Registry Number)**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 Fahrenheit



**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 insoluble 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  
**LC50** LC stands for lethal concentration. LC50 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.  
**LD50** LD stands for Lethal Dose. LD50 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 Health 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