

## 1. IDENTIFICATION

<b>Product Name</b>	<b>Sodium dimethyldithiocarbamate, 40% solution</b>
<b>Other Names</b>	No Data Available
<b>Uses</b>	Chemical intermediate; For research and industrial use only.
<b>Chemical Family</b>	No Data Available
<b>Chemical Formula</b>	C3H6NNaS2
<b>Chemical Name</b>	Sodium dimethyldithiocarbamate, aqueous solution
<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 Pty Ltd	2 Swettenham Road Minto NSW 2566 Australia	+61-2-97333000
Redox Pty 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

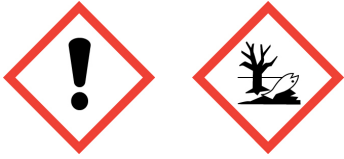
*For emergencies only; DO NOT contact these companies for general product advice.*

<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>	Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)		
<b>Hazard Categories</b>	Serious Eye Damage/Irritation - Category 2A Acute Hazard To The Aquatic Environment - Category 1		
<b>Pictograms</b>			
<b>Signal Word</b>	Warning		
<b>Hazard Statements</b>	<b>H319</b>	Causes serious eye irritation.	
	<b>H400</b>	Very toxic to aquatic life.	
<b>Precautionary Statements</b>	Prevention	<b>P280</b>	Wear eye protection/face protection.
		<b>P273</b>	Avoid release to the environment.
		<b>P264</b>	Wash hands thoroughly after handling.
	Response	<b>P337 + P313</b>	If eye irritation persists: Get medical advice/attention.
		<b>P391</b>	Collect spillage.
		<b>P305 + P351 + P338</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	Disposal	<b>P501</b>	Dispose of contents/container in accordance with local / regional / national / international regulations.

#### 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)

#### Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

<b>HSNO Classifications</b>	Health Hazards	<b>6.1D</b>	Substances that are acutely toxic - Harmful
	Environmental Hazards	<b>9.3B</b>	Substances that are ecotoxic to terrestrial vertebrates

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Sodium dimethyldithiocarbamate	C3H6NNaS2	128-04-1	>=40 %
Water	H2O	7732-18-5	Balance %

### 4. FIRST AID MEASURES

*Description of necessary measures according to routes of exposure*

<b>Swallowed</b>	IF SWALLOWED: Rinse mouth. Do not induce vomiting unless directed to do so by medical personnel. 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 before reuse. If skin irritation occurs, get medical advice/attention.
<b>Inhaled</b>	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing until recovered. If respiratory symptoms persist, get medical advice/attention. Apply resuscitation if victim is not breathing; Administer oxygen if breathing is difficult.
<b>Advice to Doctor</b>	In case of accident or if you feel unwell, seek medical advice immediately (show the SDS where possible). Treat symptomatically. Ensure that attending medical personnel are aware of the identity and nature of the product(s) involved, and take precautions to protect themselves.
<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>	Non-combustible; however, following evaporation of the aqueous component, residual material can burn if ignited.
<b>Extinguishing Media</b>	If material is involved in a fire, use dry chemical, Carbon dioxide (CO <sub>2</sub> ), foam or water spray for extinction.
<b>Fire and Explosion Hazard</b>	Decomposes on heating, emitting toxic fumes. Containers may explode when heated.
<b>Hazardous Products of Combustion</b>	Fire or heat may produce irritating, toxic and/or corrosive fumes, including Sodium oxide and organic acid vapours.
<b>Special Fire Fighting Instructions</b>	Contain runoff from fire control or dilution water - Runoff may pollute waterways.
<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>	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. Do not touch or walk through spilled material. Clean up any spills as soon as possible. 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 a suitable container 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>	Spillages and decontamination runoff should be prevented from entering drains and watercourses.
<b>Evacuation Criteria</b>	Spill or leak area should be isolated immediately. Evacuate unnecessary personnel. Keep unauthorised personnel away. Keep upwind and to higher ground.
<b>Personal Precautionary Measures</b>	Use personal protective equipment as required (see SECTION 8). Do not attempt to take action without suitable protective equipment.

## 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/spray and contact with eyes, skin and clothing. Do not ingest. Use personal protective equipment as required (see SECTION 8). Avoid release to the environment - Collect spillage (see SECTION 6).
<b>Storage</b>	Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep container tightly closed. Avoid freezing. 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: Wear respiratory protection in case of inadequate ventilation or where exposure through inhalation may occur. Recommended: Particulate/mist cartridge respirator (refer to AS/NZS 1715 &amp; 1716).</li> <li>- Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Chemical goggles or face shield. Contact lenses should not be worn.</li> <li>- Hand protection: Handle with gloves. Recommended: Neoprene or nitrile rubber gloves.</li> <li>- Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Wear suitable protective clothing.</li> </ul>
<b>Special Hazards Precautions</b>	No information available.
<b>Work Hygienic Practices</b>	Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b>	Liquid
<b>Appearance</b>	Transparent liquid
<b>Odour</b>	Ammonia odour
<b>Colour</b>	Light yellow
<b>pH</b>	10.4 - 11.6 (1% soln.)
<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>	No Data Available
<b>Freezing Point</b>	No Data Available
<b>Solubility</b>	Soluble in water
<b>Specific Gravity</b>	1.17 - 1.19
<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>	No Data Available
<b>Corrosion Rate</b>	No Data Available
<b>Decomposition Temperature</b>	No Data Available
<b>Density</b>	No Data Available
<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>	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>	Non-combustible; however, following evaporation of the aqueous component, residual material can burn if ignited.
<b>Reactions That Release Gases or Vapours</b>	Fire or heat may produce irritating, toxic and/or corrosive fumes, including Sodium oxide and organic acid vapours.
<b>Release of Invisible Flammable Vapours and Gases</b>	No information available.

## 10. STABILITY AND REACTIVITY

<b>General Information</b>	No information available.
<b>Chemical Stability</b>	Stable.
<b>Conditions to Avoid</b>	Avoid freezing.
<b>Materials to Avoid</b>	Incompatible/reactive with oxidising agents.
<b>Hazardous Decomposition Products</b>	Fire or heat may produce irritating, toxic and/or corrosive fumes, including Sodium oxide and organic acid vapours.
<b>Hazardous Polymerisation</b>	Has not been reported.

## 11. TOXICOLOGICAL INFORMATION

<b>General Information</b>	<ul style="list-style-type: none"> <li>- Acute toxicity: Not classified. May be harmful if swallowed.</li> <li>- Skin corrosion/irritation: Not classified. May cause mild skin irritation.</li> <li>- Eye damage/irritation: Causes serious eye irritation.</li> <li>- Respiratory/skin sensitisation: Not classified.</li> <li>- Germ cell mutagenicity: Not classified.</li> <li>- Carcinogenicity: Not classified.</li> <li>- Reproductive toxicity: Not classified.</li> <li>- STOT (single exposure): Not classified. May cause irritation to the respiratory tract.</li> <li>- STOT (repeated exposure): Not classified.</li> <li>- Aspiration toxicity: Not classified.</li> </ul>
<b>Acute</b>	
<b>Ingestion</b>	<p>Acute toxicity (Oral):  COMPONENT: Sodium dimethyldithiocarbamate (CAS No. 128-04-1):</p> <ul style="list-style-type: none"> <li>- LD50, Rat: 1,000 mg/kg</li> <li>- LD50, Mouse: 1,500 mg/kg</li> <li>- LD50, Rabbit: 300 mg/kg</li> </ul>
<b>Carcinogen Category</b>	None

## 12. ECOLOGICAL INFORMATION

<b>Ecotoxicity</b>	Aquatic toxicity: COMPONENT: Sodium dimethyldithiocarbamate (CAS No. 128-04-1): - LC50, Fish (Oncorhynchus mykiss): 3.7 - 11.4 mg/l (96 h) [flow-through]. - LC50, Fish (Oncorhynchus mykiss): 1.7 mg/l (96 h) [static]. - EC50, Crustacea (Daphnia magna): 0.2 mg/l (48 h).
<b>Persistence/Degradability</b>	No information available.
<b>Mobility</b>	No information available.
<b>Environmental Fate</b>	Very toxic to aquatic life - Avoid release to the environment.
<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 a safe manner and in accordance with local/regional/national regulations. Do not dispose of waste into sewer.
<b>Special Precautions for Land Fill</b>	No information available.

## 14. TRANSPORT INFORMATION

### Land Transport (Australia)

ADG Code

<b>Proper Shipping Name</b>	Sodium dimethyldithiocarbamate solution
<b>Class</b>	No Data Available
<b>Subsidiary Risk(s)</b>	No Data Available
<b>EPG</b>	47 Low To Moderate Hazard Substances
<b>UN Number</b>	No Data Available
<b>Hazchem</b>	No Data Available
<b>Pack Group</b>	No Data Available
<b>Special Provision</b>	AU01
<b>Comments</b>	UN#3082: Not regulated as DG when transported by road or rail in packagings that do not incorporate a receptacle exceeding 500 kg(L) or IBCs.

### Land Transport (Malaysia)

ADR Code

<b>Proper Shipping Name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Sodium dimethyldithiocarbamate solution)
<b>Class</b>	9 Miscellaneous Dangerous Goods and Articles
<b>Subsidiary Risk(s)</b>	No Data Available
<b>EPG</b>	47 Low To Moderate Hazard Substances
<b>UN Number</b>	3082
<b>Hazchem</b>	3Z
<b>Pack Group</b>	III
<b>Special Provision</b>	No Data Available

## Land Transport (New Zealand)

NZS5433

<b>Proper Shipping Name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Sodium dimethyldithiocarbamate solution)
<b>Class</b>	9 Miscellaneous Dangerous Goods and Articles
<b>Subsidiary Risk(s)</b>	No Data Available
<b>EPG</b>	47 Low To Moderate Hazard Substances
<b>UN Number</b>	3082
<b>Hazchem</b>	3Z
<b>Pack Group</b>	III
<b>Special Provision</b>	No Data Available

## Land Transport (United States of America)

US DOT

<b>Proper Shipping Name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Sodium dimethyldithiocarbamate solution)
<b>Class</b>	9 Miscellaneous Dangerous Goods and Articles
<b>Subsidiary Risk(s)</b>	No Data Available
<b>ERG</b>	171 Substances (Low to Moderate Hazard)
<b>UN Number</b>	3082
<b>Hazchem</b>	3Z
<b>Pack Group</b>	III
<b>Special Provision</b>	No Data Available

## Sea Transport

IMDG Code

<b>Proper Shipping Name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Sodium dimethyldithiocarbamate solution)
<b>Class</b>	9 Miscellaneous Dangerous Goods and Articles
<b>Subsidiary Risk(s)</b>	No Data Available
<b>UN Number</b>	3082
<b>Hazchem</b>	3Z
<b>Pack Group</b>	III
<b>Special Provision</b>	No Data Available
<b>EMS</b>	F-A, S-F
<b>Marine Pollutant</b>	Yes

## Air Transport

IATA DGR

<b>Proper Shipping Name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Sodium dimethyldithiocarbamate solution)
<b>Class</b>	9 Miscellaneous Dangerous Goods and Articles
<b>Subsidiary Risk(s)</b>	No Data Available
<b>UN Number</b>	3082
<b>Hazchem</b>	3Z
<b>Pack Group</b>	III
<b>Special Provision</b>	No Data Available

## 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 &amp; Rail (ADG Code)

**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** HSR007115

**National/Regional Inventories**

<b>Australia (AICS)</b>	Listed
<b>Canada (DSL)</b>	Not Determined
<b>Canada (NDSL)</b>	Not Determined
<b>China (IECSC)</b>	Not Determined
<b>Europe (EINECS)</b>	204-876-7
<b>Europe (REACH)</b>	Not Determined
<b>Japan (ENCS/METI)</b>	Not Determined
<b>Korea (KECI)</b>	Not Determined
<b>Malaysia (EHS Register)</b>	Not Determined
<b>New Zealand (NZIoC)</b>	Listed
<b>Philippines (PICCS)</b>	Not Determined
<b>Switzerland (Giftliste 1)</b>	Not Determined
<b>Switzerland (Inventory of Notified Substances)</b>	Not Determined
<b>Taiwan (NCSR)</b>	Not Determined
<b>USA (TSCA)</b>	Not Determined

**16. OTHER INFORMATION**

**Related Product Codes** SODIME1002, SODIME2001, SODIME3500, SODIME4500  
**Revision** 3  
**Revision Date** 09 Nov 2016  
**Key/Legend** < Less Than  
> 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 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 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