

### 1. IDENTIFICATION

<b>Product Name</b>	<b>Thiourea dioxide</b>
<b>Other Names</b>	Aminoiminomethanesulphinic acid; Formamidine sulfinic acid (FAS); Thiourea, S,S-dioxide (CAS#4189-44-0)
<b>Uses</b>	Pulper bleaching of recycled paper; Single stage bleaching of recycled paper; Sequential stage bleaching of recycled paper; Solubilising vat dyes; Clearing commercial dyes; Reductive bleaching of minerals (primarily Calcium carbonate).
<b>Chemical Family</b>	No Data Available
<b>Chemical Formula</b>	CH4N2O2S
<b>Chemical Name</b>	Methanesulfinic acid, aminoimino-
<b>Product Description</b>	No Data Available

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

Organisation	Location	Telephone
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.*

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)** Schedule 6

### 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>	Self-heating Substances and Mixtures - Category 2 Acute Toxicity (Oral) - Category 4 Acute Toxicity (Inhalation) - Category 4 Skin Corrosion/Irritation - Category 2 Serious Eye Damage/Irritation - Category 1 Specific Target Organ Toxicity (Single Exposure) - Category 3 Specific Target Organ Toxicity (Repeated Exposure) - Category 2

**Pictograms**



**Signal Word** Danger

<b>Hazard Statements</b>	<b>H252</b>	Self-heating in large quantities; may catch fire.
	<b>H302 + H332</b>	Harmful if swallowed or if inhaled.
	<b>H315</b>	Causes skin irritation.
	<b>H318</b>	Causes serious eye damage.
	<b>H335</b>	May cause respiratory irritation.
	<b>H373</b>	May cause damage to organs through prolonged or repeated exposure.

<b>Precautionary Statements</b>	Prevention	<b>P280</b>	Wear protective gloves/protective clothing/eye protection/face protection.
		<b>P260</b>	Do not breathe dusts or mists.
		<b>P235 + P410</b>	Keep cool. Protect from sunlight.
		<b>P270</b>	Do not eat, drink or smoke when using this product.
		<b>P271</b>	Use only outdoors or in a well-ventilated area.
	Response	<b>P305 + P351 + P338 + P310</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE/doctor.
		<b>P312</b>	Call a POISON CENTER or doctor/physician if you feel unwell.
		<b>P302 + P352</b>	IF ON SKIN: Wash with plenty of soap and water.
		<b>P330</b>	Rinse mouth.
		<b>P304 + P340</b>	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
		<b>P332 + P313</b>	If skin irritation occurs: Get medical advice/attention.
		<b>P362</b>	Take off contaminated clothing and wash before reuse.
	Storage	<b>P407</b>	Maintain air gap between stacks/pallets.
		<b>P420</b>	Store away from other materials.
		<b>P403 + P233</b>	Store in a well-ventilated place. Keep container tightly closed.
Disposal	<b>P405</b>	Store locked up.	
	<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** 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>	Physical Hazards	<b>4.2C</b>	Spontaneously combustible substances: self-heating substances: low hazard
	Health Hazards	<b>6.1D</b>	Substances that are acutely toxic - Harmful
		<b>6.1E</b>	Substances that are acutely toxic –May be harmful, Aspiration hazard
		<b>6.3A</b>	Substances that are irritating to the skin
		<b>6.9B</b>	Substances that are harmful to human target organs or systems
Environmental Hazards	<b>8.3A</b>	Substances that are corrosive to ocular tissue	
	<b>9.1D</b>	Substances that are slightly harmful to the aquatic environment or are otherwise designed for biocidal action	
	<b>9.3C</b>	Substances that are harmful to terrestrial vertebrates	

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### *Ingredients*

Chemical Entity	Formula	CAS Number	Proportion
Aminoiminomethanesulphinic acid	CH4N2O2S	1758-73-2	>98 % (w/w)
Contains: Thiourea	CH4N2S	62-56-6	<=0.1 %

### 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 induce vomiting. Immediately call a Poison Centre or doctor/physician for advice. Never give anything by mouth to an unconscious person. Keep victim calm and warm - Obtain immediate medical care.
<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. Immediately call a Poison Centre or doctor/physician for advice. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. Keep victim calm and warm - Obtain immediate medical care.
<b>Skin</b>	IF ON SKIN: Remove contaminated clothing and shoes immediately. Flush skin with running water for at least 15 minutes. 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. Immediately call a Poison Centre or doctor/physician for advice. Apply resuscitation if victim is not breathing; Administer oxygen if breathing is difficult. Keep victim calm and warm - Obtain immediate medical care.
<b>Advice to Doctor</b>	Treat symptomatically and supportively. Treatment may vary with condition of victim and specifics of incident. Effects of exposure (inhalation, ingestion or skin contact) may be delayed. Ensure that attending medical personnel are aware of identity and nature of the product(s) involved, and take precautions to protect themselves.
<b>Medical Conditions Aggravated by Exposure</b>	Persons with pre-existing skin, eye or respiratory disease may be at increased risk from the irritant or allergic properties of this material.

### 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. Avoid getting water inside containers or in contact with substance.
<b>Flammability Conditions</b>	Self-heating/spontaneously combustible substance: in large quantities, may catch fire. May ignite on contact with air, moist air or water.
<b>Extinguishing Media</b>	Use dry sand, dry chemical, soda ash or lime (or withdraw and let fire burn). Do NOT use water, Carbon dioxide (CO <sub>2</sub> ) or foam on the substance itself. Try to exclude oxygen.

<b>Fire and Explosion Hazard</b>	Risk of violent reaction or explosion: May react vigorously or explosively on contact with water. May produce flammable, toxic and/or corrosive gases on contact with air, moist air or water. May re-ignite after fire is extinguished. Containers may explode when heated. Runoff may create multiple fire or explosion hazard. Inhalation or contact with vapour, substance or decomposition products may cause severe injury or death. Contact with molten substance may cause severe burns.
<b>Hazardous Products of Combustion</b>	Fire will produce irritating, toxic and/or corrosive gases, including Nitrogen oxides (NO <sub>x</sub> ), Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> ), Sulfur oxides, Ammonia.
<b>Special Fire Fighting Instructions</b>	Prevent fire extinguishing water from contaminating surface water or the ground water system - Runoff from fire control or dilution water may pollute waterways; Runoff may create multiple fire or explosion hazard.
<b>Personal Protective Equipment</b>	Wear self-contained breathing apparatus (SCBA) in combination with normal firefighting clothing (full fire kit).
<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>	1Y

## 6. ACCIDENTAL RELEASE MEASURES

<b>General Response Procedure</b>	Try to exclude oxygen. ELIMINATE all ignition sources. Do not touch or walk through spilled material. Minimise dust generation. Do not breathe dust and prevent contact with eyes, skin and clothing.
<b>Clean Up Procedures</b>	Use clean, non-sparking tools to collect material and place it into loosely-covered or vented plastic containers for disposal (see SECTION 13). Do not return any spilled product to container because of the risk of contamination.
<b>Containment</b>	Stop leak if safe to do so - Prevent entry into waterways, drains or confined areas. Keep the spill compact. Do not permit material to scatter or spread. Water spray may be used to knock down vapours or divert vapour clouds - Do NOT get water inside containers or in contact with substance.
<b>Decontamination</b>	Flush remaining area with water to remove trace residue and dispose of properly.
<b>Environmental Precautionary Measures</b>	Avoid direct discharge to sewers and surface waters. Notify authorities if entry occurs.
<b>Evacuation Criteria</b>	Spill or leak area should be isolated immediately. Evacuate the danger area - Keep unauthorised personnel away. Keep upwind and to higher ground.
<b>Personal Precautionary Measures</b>	Do not touch damaged containers or spilled material unless wearing appropriate protective clothing (see SECTION 8). Always wear thermal protective clothing when handling molten substances.

## 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 - Use only outdoors or in a well-ventilated place. Handle in accordance with good industrial hygiene and safety practice. Avoid creating dust or mist and minimise dust accumulation. Do not breathe dust or mists and prevent contact with eyes, skin and clothing. Do not ingest. Use personal protective equipment as required (see SECTION 8). Self-heating/spontaneously combustible substance: Keep cool; Avoid exposure to moist air or water and incompatible materials (see SECTION 10). Do not add to hot materials; do not grind or subject to frictional heat as decomposition may result.
<b>Storage</b>	Store below 30 °C in a cool, dry and well-ventilated place. Protect from sunlight. Keep container tightly closed. Keep away from heat and sources of ignition - No smoking. Avoid exposure to moist air or water. Store away from other/incompatible materials (see SECTION 10). Maintain air gap between stacks/pallets. Store locked up.
<b>Container</b>	Keep in the original container.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

<b>General</b>	No specific exposure standards are available. Derived no-effect levels (DNELs) for Workers: - Inhalation route: Systemic effects, Long-term: 0.94 mg/m <sup>3</sup> - Dermal route: Systemic effects, Long-term: 1.333 mg/kg bw/day.
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<b>Exposure Limits</b>	No Data Available
<b>Biological Limits</b>	<p>Predicted no-effect concentration (PNEC) values:</p> <ul style="list-style-type: none"> <li>- Freshwater: 0.043 mg/L</li> <li>- Marine water: 0.021 mg/L</li> <li>- Intermittent releases: 0.551 mg/L</li> <li>- Freshwater sediment: 0.154 mg/kg dw.</li> <li>- Marine water sediment: 0.077 mg/kg dw.</li> <li>- STP: 10 mg/L</li> <li>- Soil: 0.006 mg/kg dw.</li> <li>- Air: No hazard identified.</li> <li>- Secondary poisoning: No potential for bioaccumulation.</li> </ul>
<b>Engineering Measures</b>	General room ventilation is required. Local exhaust ventilation, process enclosures or other engineers controls may be needed to maintain airborne levels below recommended exposure limits. Maintain adequate ventilation. Do not use in closed or confined spaces.
<b>Personal Protection Equipment</b>	<ul style="list-style-type: none"> <li>- Respiratory protection: Wear respiratory protection when dusts are generated. Recommended: Filter P3 for solid and liquid particles of toxic and very toxic substances (refer to AS/NZS 1715 &amp; 1716).</li> <li>- Eye/face protection: Wear appropriate eye protection to prevent eye contact. Recommended: Safety goggles or eye protection in combination with breathing protection.</li> <li>- Hand protection: Wear protective gloves. Recommended: Nitrile rubber (Glove thickness: 0.11 mm; Break through time: &gt; 480 min).</li> <li>- Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Protective (work) clothing, rubber boots.</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 thoroughly after handling. Remove contaminated clothing and wash before reuse.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b>	Solid
<b>Appearance</b>	Granular
<b>Odour</b>	Odourless
<b>Colour</b>	White (turns yellowish with time)
<b>pH</b>	No Data Available
<b>Vapour Pressure</b>	0.000104 Pa (20 °C) - 0.000161 Pa (25 °C) (@ No Data Available)
<b>Relative Vapour Density</b>	No Data Available
<b>Boiling Point</b>	Decomposes before boiling
<b>Melting Point</b>	129 - 133 °C (with decomposition)
<b>Freezing Point</b>	No Data Available
<b>Solubility</b>	27 g/L water 20°C
<b>Specific Gravity</b>	1.749
<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>	129 - 133 °C
<b>Density</b>	1,749 kg/m <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>	-3.37 (25 °C) [estimated]
<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>	Dissociation constant (pKa): 6.59 at 20 °C
<b>Potential for Dust Explosion</b>	Organic, granular solid - No explosive properties.
<b>Fast or Intensely Burning Characteristics</b>	Risk of violent reaction or explosion. May re-ignite after fire is extinguished.
<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>	May react vigorously or explosively on contact with water.
<b>Properties That May Initiate or Contribute to Fire Intensity</b>	Self-heating/spontaneously combustible substance: in large quantities, may catch fire. May ignite on contact with air, moist air or water.
<b>Reactions That Release Gases or Vapours</b>	Fire/decomposition will produce irritating, toxic and/or corrosive gases, including Nitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> ), Sulfur oxides, Ammonia.
<b>Release of Invisible Flammable Vapours and Gases</b>	May produce flammable, toxic and/or corrosive gases on contact with air, moist air or water.

## 10. STABILITY AND REACTIVITY

<b>General Information</b>	Heat-sensitive; sensitive to moisture.
<b>Chemical Stability</b>	Stable under recommended storage and handling conditions.
<b>Conditions to Avoid</b>	Keep away from heat and all sources of ignition. Avoid exposure to moist air or water.
<b>Materials to Avoid</b>	Incompatible/reactive with strong bases, strong oxidizing agents.
<b>Hazardous Decomposition Products</b>	Fire/decomposition will produce irritating, toxic and/or corrosive gases, including Nitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> ), Sulfur oxides, Ammonia.
<b>Hazardous Polymerisation</b>	No information available.

## 11. TOXICOLOGICAL INFORMATION

<b>General Information</b>	<ul style="list-style-type: none"> <li>- Acute toxicity: Harmful if swallowed and if inhaled.</li> <li>- Skin corrosion/irritation: Causes skin irritation.</li> <li>- Eye damage/irritation: Highly irritating - Causes serious eye damage.</li> <li>- Respiratory/skin sensitisation: Not sensitising.</li> <li>- Germ cell mutagenicity: No adverse effect observed (negative).</li> <li>- Carcinogenicity: No information available.</li> <li>- Reproductive toxicity: NOAEL reproduction (male/female): 100 mg/kg bw. [OECD 422].</li> <li>- STOT (single exposure): May cause respiratory irritation.</li> <li>- STOT (repeated exposure): May cause damage to organs through prolonged or repeated exposure.</li> <li>- Aspiration toxicity: No information available.</li> </ul>
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<b>Acute</b>	
<b>Ingestion</b>	<p>Acute toxicity (Oral):</p> <ul style="list-style-type: none"> <li>- LD50, Rats (male/female): 1,120 mg/kg bw.</li> </ul>
<b>Other</b>	<p>Acute toxicity (Dermal):</p> <ul style="list-style-type: none"> <li>- LD50, Rats: &gt;=2,000 mg/kg bw. [OECD 402].</li> </ul>
<b>Inhalation</b>	<p>Acute toxicity (Inhalation):</p> <ul style="list-style-type: none"> <li>- LC50, Rats (male/female): 0.164 mg/L (4 h) [analytical].</li> </ul> <p>*The substance was tested as an aerosol using water as vehicle, with high respirability. In contrast, the substance is handled, stored and used as coarse grained, crystalline solid with a very low dustiness. A spray application is not foreseen. This means only a very small amount will be inhalable during of manufacturing and using the substance. As a consequence, the acute inhalation test with the liquid aerosol is neither representative nor relevant for TDO in the supplied form. Technical Aminoiminomethanesulphinic acid can be viewed as a mixture of fine particles (&lt;10 µm) and coarse particles that cannot reach the thorax. The fine particles are classified as Fatal if inhaled (H331). The coarse particles are not classified for acute inhalation toxicity. With an estimated LC50 of 3.4 mg/L for total TDO (worst case), classification as Harmful if inhaled (H332) is warranted.</p>

**Carcinogen Category** None

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity** Aquatic toxicity:  
- Acute LC50, Fish (*Oryzias latipes*): >100 mg/L (96 h) [OECD 203].  
- Acute EC50, Invertebrates (*Daphnia magna*): 80.7 mg/L (48 h) [OECD 202].  
- Acute ErC50, Algae (*Selenastrum capricornutum*): 55.1 mg/L (72 h) [Growth rate].  
- Acute NOEC, Algae (*Selenastrum capricornutum*): 17.1 mg/L (72 h) [Growth rate].

**Persistence/Degradability** The substance is readily biodegradable.

**Mobility** No information available.

**Environmental Fate** Do not let product enter drains. Discharge into the environment must be avoided.

**Bioaccumulation Potential** The substance has a low potential for bioaccumulation (log Kow < 3).

**Environmental Impact** No Data Available

## 13. DISPOSAL CONSIDERATIONS

**General Information** Dispose of contents/container via a licensed professional waste disposal service and in accordance with local/regional/national regulations.

**Special Precautions for Land Fill** Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

## 14. TRANSPORT INFORMATION

### Land Transport (Australia)

ADG Code

**Proper Shipping Name** THIOUREA DIOXIDE

**Class** 4.2 Flammable Solids - Substances liable to spontaneous combustion

**Subsidiary Risk(s)** No Data Available

**EPG** 25 Spontaneously Combustible Substances (Air And/Or Water Reactive)

**UN Number** 3341

**Hazchem** 1Y

**Pack Group** III

**Special Provision** No Data Available

### Land Transport (Malaysia)

ADR Code

**Proper Shipping Name** THIOUREA DIOXIDE

**Class** 4.2 Flammable Solids - Substances liable to spontaneous combustion

**Subsidiary Risk(s)** No Data Available

**EPG** 25 Spontaneously Combustible Substances (Air And/Or Water Reactive)

**UN Number** 3341

**Hazchem** 1Y

**Pack Group** III

**Special Provision** No Data Available

**Land Transport (New Zealand)**

NZS5433

<b>Proper Shipping Name</b>	THIOUREA DIOXIDE
<b>Class</b>	4.2 Flammable Solids - Substances liable to spontaneous combustion
<b>Subsidiary Risk(s)</b>	No Data Available
<b>EPG</b>	25 Spontaneously Combustible Substances (Air And/Or Water Reactive)
<b>UN Number</b>	3341
<b>Hazchem</b>	1Y
<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>	THIOUREA DIOXIDE
<b>Class</b>	4.2 Flammable Solids - Substances liable to spontaneous combustion
<b>Subsidiary Risk(s)</b>	No Data Available
<b>ERG</b>	135 Substances - Spontaneously Combustible
<b>UN Number</b>	3341
<b>Hazchem</b>	1Y
<b>Pack Group</b>	III
<b>Special Provision</b>	No Data Available

**Sea Transport**

IMDG Code

<b>Proper Shipping Name</b>	THIOUREA DIOXIDE
<b>Class</b>	4.2 Flammable Solids - Substances liable to spontaneous combustion
<b>Subsidiary Risk(s)</b>	No Data Available
<b>UN Number</b>	3341
<b>Hazchem</b>	1Y
<b>Pack Group</b>	III
<b>Special Provision</b>	No Data Available
<b>EMS</b>	F-A, S-J
<b>Marine Pollutant</b>	No

**Air Transport**

IATA DGR

<b>Proper Shipping Name</b>	THIOUREA DIOXIDE
<b>Class</b>	4.2 Flammable Solids - Substances liable to spontaneous combustion
<b>Subsidiary Risk(s)</b>	No Data Available
<b>UN Number</b>	3341
<b>Hazchem</b>	1Y
<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 &amp; Rail (ADG Code)

<b>Dangerous Goods Classification</b>	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

<b>General Information</b>	THIOUREA is listed in Schedule 6 of the SUSMP.
<b>Poisons Schedule (Aust)</b>	Schedule 6

### Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

<b>Approval Code</b>	HSR002522
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### National/Regional Inventories

<b>Australia (AICS)</b>	Listed
<b>Canada (DSL)</b>	Listed
<b>Canada (NDSL)</b>	Not Determined
<b>China (IECSC)</b>	Listed
<b>Europe (EINECS)</b>	217-157-8
<b>Europe (REACH)</b>	Not Determined
<b>Japan (ENCS/METI)</b>	Listed
<b>Korea (KECI)</b>	Listed
<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>	Listed

## 16. OTHER INFORMATION

<b>Related Product Codes</b>	THDIOX1000, THDIOX1001, THDIOX1002, THDIOX1003, THDIOX1004, THDIOX1005, THDIOX1006, THDIOX1007, THDIOX1008, THDIOX1009, THDIOX1010, THDIOX1011, THDIOX1012, THDIOX1013, THDIOX1014, THDIOX1015, THDIOX1016, THDIOX2000, THDIOX3000, THDIOX3001, THDIOX3002, THDIOX4000, THDIOX5000
<b>Revision</b>	3
<b>Revision Date</b>	02 Apr 2018
<b>Reason for Issue</b>	update sds
<b>Key/Legend</b>	< Less Than > Greater Than <b>AICS</b> 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