

Classified as hazardous in accordance with the criteria of EPA New Zealand

## Section 1 - Identification

### Product Identifier

|                             |   |
|-----------------------------|---|
| <b>Product Name</b>         | <u>N,N,N',N'-Tetramethylethylenediamine</u> |
| <b>CAS No</b>               | 110-18-9                                    |
| <b>Synonyms</b>             | TMEDA; TEMED; 1,2-Di(dimethylamino)ethane   |
| <b>Molecular Formula</b>    | C6 H16 N2                                   |
| <b>Molecular Weight</b>     | 116.21                                      |
| <b>Recommended Use</b>      | Laboratory chemicals.                       |
| <b>Uses advised against</b> | No Information available                    |

|                                |   |
|--------------------------------|---|
| <b>Product Code</b>            | <b>138450000; 138450500; 138455000</b>  |
| <b>Address</b>                 | Thermo Fisher Scientific New Zealand Ltd<br>244 Bush Road, Albany,<br>Auckland, New Zealand |
| <b>Emergency Tel.</b>          | <b>CHEMTREC®</b><br><b>09 980 6780 or +64 9 980 6780</b>                                    |
| <b>Telephone / Fax Numbers</b> | Tel: 09 980 6700<br>Fax: 09 980 6788  |
| <b>E-mail address</b>          | <a href="mailto:ANZinfo@thermofisher.com">ANZinfo@thermofisher.com</a>                      |

## Section 2 - Hazard(s) Identification

### Classification under Work Safe New Zealand

Classified as hazardous in accordance with the criteria of EPA New Zealand

**HSNO Approval Number**      **HSR001080**

### GHS Classification

#### Physical hazards

Flammable liquids

Category 2

#### Health hazards

Acute Oral Toxicity  
Acute Dermal Toxicity  
Acute Inhalation Toxicity - Vapors  
Skin Corrosion/Irritation  
Serious Eye Damage/Eye Irritation

Category 3  
Category 4  
Category 3  
Category 1 B  
Category 1

#### Environmental hazards

Chronic aquatic toxicity

Category 3

**Label Elements****Signal Word****Danger****Hazard Statements**

H225 - Highly flammable liquid and vapor  
H314 - Causes severe skin burns and eye damage  
H412 - Harmful to aquatic life with long lasting effects  
H312 - Harmful in contact with skin  
H301 + H331 - Toxic if swallowed or if inhaled

**Precautionary Statements****Prevention**

P240 - Ground and bond container and receiving equipment  
P242 - Use non-sparking tools  
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking  
P233 - Keep container tightly closed  
P241 - Use explosion-proof electrical/ ventilating/ lighting equipment  
P264 - Wash face, hands and any exposed skin thoroughly after handling  
P243 - Take action to prevent static discharges  
P270 - Do not eat, drink or smoke when using this product  
P271 - Use only outdoors or in a well-ventilated area  
P280 - Wear protective gloves/protective clothing/eye protection/face protection

**Response**

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P310 - Immediately call a POISON CENTER or doctor  
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower  
P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing  
P330 - Rinse mouth  
P331 - Do NOT induce vomiting  
P363 - Wash contaminated clothing before reuse  
P370 + P378 - In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish

**Storage**

P403 + P233 - Store in a well-ventilated place. Keep container tightly closed

**Disposal**

P501 - Dispose of contents/ container to an approved waste disposal plant

**Other hazards which do not result in classification**

Toxic to terrestrial vertebrates

## Section 3 - Composition and Information on Ingredients

| Component                    | CAS No   | Weight % |
|------------------------------|----------|----------|
| 1,2-Bis(dimethylamino)ethane | 110-18-9 | >95      |

## Section 4 - First Aid Measures

**Description of first aid measures**

|  |  |
|--|--|
| <b>New Zealand Emergency Tel.</b>          | CHEMTREC®<br>09 980 6780 or +64 9 980 6780   |
| <b>Inhalation</b>                          | Remove to fresh air. If breathing is difficult, give oxygen. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.  |
| <b>Eye Contact</b>                         | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.  |
| <b>Skin Contact</b>                        | Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.  |
| <b>Ingestion</b>                           | Do NOT induce vomiting. Call a physician or poison control center immediately.   |
| <b>Self-Protection of the First Aider</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 and effects</b> | Difficulty in breathing. Causes burns by all exposure routes. . Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated: Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation: May cause pulmonary edema |
| <b>Notes to Physician</b>                  | Treat symptomatically.   |

## Section 5 - Fire Fighting Measures

**Suitable Extinguishing Media**

CO<sub>2</sub>, dry chemical, dry sand, alcohol-resistant foam. Water mist may be used to cool closed containers.

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

No information available.

**Specific Hazards Arising from the Chemical**

Flammable. Containers may explode when heated. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back.

**Hazardous Combustion Products**

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

**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

**Personal Precautions, Protective Equipment and Emergency Procedures****Emergency procedures**

Use personal protective equipment as required. Keep people away from and upwind of spill/leak. Remove all sources of ignition. Take precautionary measures against static discharges.

**Environmental Precautions**

Should not be released into the environment.

#### Methods for Containment and Clean Up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

#### Precautions to prevent secondary hazards

Clean contaminated objects and areas thoroughly observing environmental regulations

#### Reference to Other Sections

Refer to protective measures listed in Sections 8 and 13.

## Section 7 - Handling and Storage

### Precautions for Safe Handling

#### Advice on safe handling

Use only under a chemical fume hood. Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Keep away from open flames, hot surfaces and sources of ignition. Use only non-sparking tools. Use spark-proof tools and explosion-proof equipment. Do not breathe (dust, vapor, mist, gas). Do not ingest. If swallowed then seek immediate medical assistance. Take precautionary measures against static discharges. Wash hands before breaks and immediately after handling the product. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded.

#### Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

### Conditions for Safe Storage, Including any Incompatibilities

#### Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks and flame. Flammables area. Store under an inert atmosphere.

#### Incompatible Materials

Strong oxidizing agents.

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

AS 1940-2004 - The storage and handling of flammable and combustible liquids

## Section 8 - Exposure Controls and Personal Protection

### Control parameters

#### Exposure limits

The product does not contain any hazardous materials with occupational exposure limits established.

#### Biological limit values

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

### Appropriate engineering controls

#### Engineering Measures

Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Use explosion-proof electrical/ventilating/lighting equipment. 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

### Individual protection measures, such as personal protective equipment

|                        |  |
|------------------------|--|
| <b>Eye Protection</b>  | Goggles (Australian/New Zealand Standard AS/NZS 1337 - Eye protectors for Industrial applications) |
| <b>Hand Protection</b> | Protective gloves  |

| Glove material                                 | Breakthrough time                 | Glove thickness | AUS/NZ Standard | Glove comments        |
|--|-----------------------------------|-----------------|-----------------|-----------------------|
| Natural rubber, Nitrile rubber, Neoprene, PVC. | See manufacturers recommendations | -               | AS/NZS 2161     | (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.

|                                 |   |
|---------------------------------|---|
| <b>Skin and body protection</b> | Wear appropriate protective gloves and clothing to prevent skin exposure  |
| <b>Respiratory Protection</b>   | 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 |
| <b>Recommended Filter type:</b> | Particulates filter conforming to EN 143 Ammonia and organic ammonia derivatives filter Type K Green conforming to EN14387 (or AUS/NZ equivalent)   |
| <b>Recommended half mask:-</b>  | Valve filtering: EN405 or Half mask: EN140 plus filter, EN 141 (or AUS/NZ equivalent)<br>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>Physical State</b>                          | Liquid                                     |  |
| <b>Appearance</b>                              | Colorless                                  |  |
| <b>Odor</b>                                    | Rotten-egg like                            |  |
| <b>Odor Threshold</b>                          | No data available                          |  |
| <b>pH</b>                                      | 8.0-8.5                                    | 0.1 g/L (20°C)                           |
| <b>Melting Point/Range</b>                     | -55 °C / -67 °F                            |  |
| <b>Softening Point</b>                         | No data available                          |  |
| <b>Boiling Point/Range</b>                     | 120 - 122 °C / 248 - 251.6 °F              | @ 760 mmHg                               |
| <b>Flammability (liquid)</b>                   | Highly flammable                           | On basis of test data                    |
| <b>Flammability (solid,gas)</b>                | Not applicable                             | Liquid                                   |
| <b>Explosion Limits</b>                        | <b>Lower</b> 1 vol%<br><b>Upper</b> 9 vol% |  |
| <b>Flash Point</b>                             | 17 °C / 68 °F                              | <b>Method -</b> No information available |
| <b>Autoignition Temperature</b>                | No data available                          |  |
| <b>Decomposition Temperature</b>               | No data available                          |  |
| <b>Viscosity</b>                               | No data available                          |  |
| <b>Water Solubility</b>                        | Miscible                                   |  |
| <b>Solubility in other solvents</b>            | No information available                   |  |
| <b>Partition Coefficient (n-octanol/water)</b> |  |  |
| <b>Component</b>                               | <b>log Pow</b>                             |  |
| 1,2-Bis(dimethylamino)ethane                   | 0.3  |  |
| <b>Vapor Pressure</b>                          | No data available                          |  |
| <b>Density / Specific Gravity</b>              | 0.770                                      |  |
| <b>Bulk Density</b>                            | Not applicable                             | Liquid                                   |
| <b>Vapor Density</b>                           | 4.00                                       | (Air = 1.0)                              |
| <b>Particle characteristics</b>                | Not applicable (liquid)                    |  |

**Other information**

**Molecular Formula** C<sub>6</sub> H<sub>16</sub> N<sub>2</sub>  
**Molecular Weight** 116.21  
**Explosive Properties** Vapors may form explosive mixtures with air

## Section 10 - Stability and Reactivity

**Reactivity** None known, based on information available

**Stability** Air sensitive. Moisture sensitive.

**Sensitivity to Mechanical Impact** No information available

**Sensitivity to Static Discharge** No information available

**Hazardous Polymerization** Hazardous polymerization does not occur.

**Hazardous Reactions** None under normal processing.

**Conditions to Avoid** Incompatible products, Excess heat, Keep away from open flames, hot surfaces and sources of ignition, Exposure to moist air or water, Exposure to air.

**Incompatible Materials** Strong oxidizing agents.

**Hazardous Decomposition Products** Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Nitrogen oxides (NO<sub>x</sub>).

## Section 11 - Toxicological Information

**Acute Effects****Information on likely routes of exposure****Product Information**

**Inhalation** Causes burns. May cause pulmonary edema. Harmful by inhalation.  
**Eyes** Causes burns.  
**Skin** Causes burns. May be harmful in contact with skin.  
**Ingestion** Causes burns. Harmful if swallowed.

**Numerical measures of toxicity****(a) acute toxicity;**

**Oral** Category 4  
**Dermal** Based on available data, the classification criteria are not met  
**Inhalation** Category 4

| Component                    | LD50 Oral  | LD50 Dermal                  | LC50 Inhalation             |
|------------------------------|--|------------------------------|-----------------------------|
| 1,2-Bis(dimethylamino)ethane | LD50 = 891 mg/kg ( Rat )<br>LD50 = 406 mg/kg ( Rat ) | LD50 = 1230 mg/kg ( Rabbit ) | LC50 > 1180 ppm ( Rat ) 4 h |

**(b) skin corrosion/irritation;** Category 1 B

**(c) serious eye damage/irritation;** Category 1

**(d) respiratory or skin sensitization;**

**Respiratory** No data available  
**Skin** No data available

**(e) germ cell mutagenicity;** No data available

**(f) carcinogenicity;** No data available  
There are no known carcinogenic chemicals in this product

**(g) reproductive toxicity;** No data available

**(h) STOT-single exposure;** No data available

**(i) STOT-repeated exposure;** No data available

**Target Organs** No information available.

**(j) aspiration hazard;** No data available

**Other Adverse Effects** See actual entry in RTECS for complete information

**Symptoms / effects, both acute and delayed**

Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting. Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation. May cause pulmonary edema.

## Section 12 - Ecological Information

### Ecotoxicity

**Aquatic ecotoxicity** Do not empty into drains.

**Terrestrial ecotoxicity** There is no data for this product

### **Persistence and Degradability**

**Persistence** Miscible with water, Persistence is unlikely, based on information available.

**Bioaccumulative Potential** Bioaccumulation is unlikely

| Component                    | log Pow | Bioconcentration factor (BCF) |
|------------------------------|---------|-------------------------------|
| 1,2-Bis(dimethylamino)ethane | 0.3     | No data available             |

**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

### Other adverse effects

**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 treatment methods

#### 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. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and empty container away from heat and sources of ignition.

#### Other Information

Disposal agencies or waste contractors must comply with the New Zealand Hazardous Substances (Disposal) Regulations. Waste codes should be assigned by the user based on the application for which the product was used. Do not flush to sewer. Can be landfilled or incinerated, when in compliance with local regulations. Do not empty into drains. Large amounts will affect pH and harm aquatic organisms.

## Section 14 - Transport Information

| Component  | Hazchem Code |
|--|--------------|
| 1,2-Bis(dimethylamino)ethane<br>110-18-9 ( >95 ) | 2YE          |

### NZS 5433:2020

|                      |                              |
|----------------------|------------------------------|
| UN-No                | UN2372                       |
| Proper Shipping Name | 1,2-Di-(dimethylamino)ethane |
| Hazard Class         | 3                            |
| Packing Group        | II                           |

### IATA

|                      |                               |
|----------------------|-------------------------------|
| UN-No                | UN2372                        |
| Proper Shipping Name | 1,2-Di-(dimethylamino) ethane |
| Hazard Class         | 3                             |
| Packing Group        | II                            |

### IMDG/IMO

|                      |                              |
|----------------------|------------------------------|
| UN-No                | UN2372                       |
| Proper Shipping Name | 1,2-Di-(dimethylamino)ethane |
| Hazard Class         | 3                            |
| Packing Group        | II                           |

|                       |                       |
|-----------------------|-----------------------|
| Environmental hazards | No hazards identified |
|-----------------------|-----------------------|

|  |                                |
|--|--------------------------------|
| Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code | Not applicable, packaged goods |
|--|--------------------------------|

|                     |   |
|---------------------|---|
| Special Precautions | No special precautions required. Please refer to the applicable dangerous goods regulations for additional information. |
|---------------------|---|

|                        |            |
|------------------------|------------|
| Additional information | None known |
|------------------------|------------|



## Section 15 - Regulatory Information

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

|                      |           |
|----------------------|-----------|
| HSNO Approval Number | HSR001080 |
|----------------------|-----------|

#### National Regulations

There are no applicable tolerable exposure limits or environmental exposure limits according to the EPA Controls for Hazardous Substances

#### Certified handlers, tracking and controlled substance license requirements

Certified handlers are required for some substances. This includes substances requiring a controlled substance license, and most explosives, vertebrates toxic agents, and certain fumigants. Acutely toxic substances which are a Category 1 or 2, such as pesticides also require Certified handlers. Please check the Health and Safety at Work Act 2015 for further information. Tracking is required for some highly hazardous substances. These substances need to be under the control of an appropriately trained person or appropriately secured. Please check the Health and Safety at Work Act 2015 for further information.

#### Prohibition or notification/licensing requirements

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

#### International Regulations

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

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

**Rotterdam Convention (PIC)** Not applicable

#### Authorisation/Restrictions according to EU REACH

| Component                    | REACH (1907/2006) - Annex XIV - Substances Subject to Authorization | REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances | REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC) |
|------------------------------|---|---|---|
| 1,2-Bis(dimethylamino)ethane | -   | Use restricted. See item 75. (see link for restriction details)               | -   |

<https://echa.europa.eu/substances-restricted-under-reach>

#### International Inventories

New Zealand (NZIoC), Australia (AICS), Europe (EINECS/ELINCS/NLP), Korea (KECL), China (IECSC), Taiwan (TCSI), Japan (ENCS), Japan (ISHL), Canada (DSL/NDL), Philippines (PICCS). US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

| Component                    | CAS No   | NZIoC | AICS | EINECS    | ELINCS | NLP | KECL     | IECSC | TCSI |
|------------------------------|----------|-------|------|-----------|--------|-----|----------|-------|------|
| 1,2-Bis(dimethylamino)ethane | 110-18-9 | X     | X    | 203-744-6 | -      | -   | KE-33586 | X     | X    |

| Component                    | CAS No   | TSCA | TSCA Inventory notification - Active-Inactive | DSL | NDL | PICCS | ISHL | ENCS |
|------------------------------|----------|------|---|-----|-----|-------|------|------|
| 1,2-Bis(dimethylamino)ethane | 110-18-9 | X    | ACTIVE  | X   | -   | X     | X    | X    |

**Legend:** X - Listed '-' - Not Listed

**KECL** - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

## Section 16 - Other Information

This safety data sheet complies with the requirements of the EPA Hazardous Substances

## (Hazard Classification) Notice 2020 and WorkSafe New Zealand Regulations

Legend

|  |  |
|--|--|
| <b>NZIoC</b> - New Zealand Inventory of Chemicals  | <b>AICS</b> - Australian Inventory of Chemical Substances  |
| <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/NDL</b> - Canadian Domestic Substances List/Non-Domestic Substances List                      | <b>ENCS</b> - Japanese Existing and New Chemical Substances  |
| <b>IECS</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>NZS 5433:2020</b> - Transport of Dangerous Goods on Land  | <b>OECD</b> - Organisation for Economic Co-operation and Development   |
| <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>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 Compound)   |  |

**Key literature references and sources for data**

HSNO classifications provided in the New Zealand Chemical Classification Information Database (CCID).

<https://echa.europa.eu/information-on-chemicals>

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

EPA Guide to classifying hazardous substances in New Zealand

EPA - Assigning a product to an existing HSNO approval guide

**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.

|                         |                |
|-------------------------|----------------|
| <b>Revision Date</b>    | 10-Mar-2023    |
| <b>Revision Summary</b> | Not applicable |

**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