

# SAFETY DATA SHEET

## NZ TULIP LTD

**Product name:** 1,3-Dichloropropene

**Issue Date:** 03.02.2021

**Print Date:** 03.02.2021

NZ Tulip Ltd encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

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## 1. PRODUCT AND COMPANY IDENTIFICATION

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**Product name:** 1,3-Dichloropropene

### **Recommended use of the chemical and restrictions on use**

**Identified uses:** End use fumigant. **Product users and applicators should primarily refer to the product label attached to or accompanying the product container.**

### **COMPANY IDENTIFICATION**

NZ TULIP LTD

A Subsidiary of The Dow Chemical Company

Level 8

7 City Road

Grafton, Auckland 1010, New Zealand

### **Customer Information Number:**

(86) 21 3851 4988

SDSQuestion@dow.com

### **EMERGENCY TELEPHONE NUMBER**

**24-Hour Emergency Contact:** 0800 658 158

**Local Emergency Contact:** 0800 504 567

**For medical advice, contact the New Zealand Poisons Information Centre:** 0800 POISON (0800 764766)

**Transport Emergency Only Dial** 111

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## 2. HAZARDS IDENTIFICATION

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### **GHS Classification**

**NEW ZEALAND HAZARDOUS SUBSTANCES CLASSIFICATION:** Classified as hazardous according to criteria in the New Zealand Hazardous Substances (Minimum Degrees of Hazard) Notice 2017, and the Hazardous Substances (Classification) Notice 2017. Refer to Section 15 for HSNO Approval Number.

3.1: Flammable Liquids - Category B

6.1: Acute toxicity - Category C - Oral

6.1: Acute toxicity - Category C - Inhalation

6.3: Skin irritation - Category A

6.4: Eye irritation - Category A

6.5: Skin sensitisation - Category B

6.6: Germ cell mutagenicity - Category B

6.7: Carcinogenicity - Category B

6.9: Specific Target Organ Toxicity - Category B - Inhalation

- 9.1: Aquatic toxicity (Acute or Chronic) - Category A
- 9.2: Ecotoxic to soil environment - Category D
- 9.3: Ecotoxic to terrestrial vertebrates - Category B

**GHS label elements**

**Hazard pictograms**



Signal word: **DANGER!**

**Hazard statements**

- Highly flammable liquid and vapour.
- Toxic if swallowed.
- Causes skin irritation.
- May cause an allergic skin reaction.
- Causes serious eye irritation.
- Toxic if inhaled.
- Suspected of causing genetic defects.
- Suspected of causing cancer.
- May cause damage to organs if inhaled.
- Very toxic to aquatic life with long lasting effects.
- Harmful to the soil environment.
- Toxic to terrestrial vertebrates.

**Precautionary statements**

**Prevention**

- Use only outdoors or in a well-ventilated area.
- Do not eat, drink or smoke when using this product.
- Avoid release to the environment.
- Wear protective gloves/ eye protection/ face protection.
- Use personal protective equipment as required.

**Response**

- IF exposed or concerned: Get medical advice/ attention.
- IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
- Rinse mouth.
- Do NOT induce vomiting.
- IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.

**Storage**

- Store in a well-ventilated place. Keep container tightly closed.
- Store in a well-ventilated place. Keep cool.
- Store locked up.

**Disposal**

Dispose of contents/ container to an approved waste disposal plant.

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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

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This product is a substance.

<b>Component</b>	<b>CASRN</b>	<b>Concentration</b>
1,3-Dichloropropene	542-75-6	97.5%
Balance	Not available	2.5%

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**4. FIRST AID MEASURES**

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**Description of first aid measures****General advice:**

First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

**Inhalation:** Move person to fresh air. If person is not breathing, call an emergency responder or ambulance, then give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask etc). Call a poison control center or doctor for treatment advice. If breathing is difficult, oxygen should be administered by qualified personnel.

**Skin contact:** Take off contaminated clothing. Wash skin with soap and plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice. Wash clothing before reuse. Shoes and other leather items which cannot be decontaminated should be disposed of properly. Suitable emergency safety shower facility should be immediately available.

**Eye contact:** Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Call a poison control center or doctor for treatment advice. Suitable emergency eye wash facility should be immediately available.

**Ingestion:** Do not induce vomiting. Call a physician and/or transport to emergency facility immediately. Seek medical attention immediately.

**Most important symptoms and effects, both acute and delayed:**

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

**Indication of any immediate medical attention and special treatment needed**

**Notes to physician:** Maintain adequate ventilation and oxygenation of the patient. May cause asthma-like (reactive airways) symptoms. Bronchodilators, expectorants, antitussives and

corticosteroids may be of help. If burn is present, treat as any thermal burn, after decontamination. The decision of whether to induce vomiting or not should be made by a physician. Animal data indicates that this material is a potential skin sensitizer. However, skin sensitization has not been encountered among employees involved in the manufacture of this material. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Have the Safety Data Sheet, and if available, the product container or label with you when calling a poison control center or doctor, or going for treatment. Repeated excessive exposure may aggravate preexisting lung disease. Skin contact may aggravate preexisting dermatitis.

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## 5. FIREFIGHTING MEASURES

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### Hazchem Code

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### Extinguishing media

**Suitable extinguishing media:** Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. General purpose synthetic foams (including AFFF type) or protein foams are preferred if available. Alcohol resistant foams (ATC type) may function. Water fog, applied gently may be used as a blanket for fire extinguishment.

**Unsuitable extinguishing media:** Do not use direct water stream. Straight or direct water streams may not be effective to extinguish fire.

### Special hazards arising from the substance or mixture

**Hazardous combustion products:** During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Hydrogen chloride. Carbon monoxide. Carbon dioxide.

**Unusual Fire and Explosion Hazards:** Container may rupture from gas generation in a fire situation. Electrically ground and bond all equipment. Flammable mixtures of this product are readily ignited even by static discharge. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur. Flammable mixtures may exist within the vapor space of containers at room temperature. Flammable concentrations of vapor can accumulate at temperatures above flash point; see Section 9.

### Advice for firefighters

**Fire Fighting Procedures:** Keep people away. Isolate fire and deny unnecessary entry. Stay upwind. Keep out of low areas where gases (fumes) can accumulate. Water may not be effective in extinguishing fire. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Do not use direct water stream. May spread fire. Eliminate ignition sources. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Water fog, applied gently may be used as a blanket for fire

extinguishment. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.

**Special protective equipment for firefighters:** Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, see Section 8 of the safety data sheet.

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## 6. ACCIDENTAL RELEASE MEASURES

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**Personal precautions, protective equipment and emergency procedures:** Isolate area. Keep unnecessary and unprotected personnel from entering the area. Refer to section 7, Handling, for additional precautionary measures. Keep personnel out of low areas. Keep upwind of spill. Ventilate area of leak or spill. No smoking in area. Eliminate all sources of ignition in vicinity of spill or released vapor to avoid fire or explosion. Vapor explosion hazard. Keep out of sewers. For large spills, warn public of downwind explosion hazard. Check area with combustible gas detector before reentering area. Ground and bond all containers and handling equipment. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

**Environmental precautions:** Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information. Spills or discharge to natural waterways is likely to kill aquatic organisms.

**Methods and materials for containment and cleaning up:** Ground and bond all containers and handling equipment. Pump with explosion-proof equipment. If available, use foam to smother or suppress. Contain spilled material if possible. Small spills: Absorb with materials such as: Clay. Dirt. Sand. Sweep up. Collect in suitable and properly labeled containers. Large spills: Contact NZ Tulip Ltd for clean-up assistance. See Section 13, Disposal Considerations, for additional information.

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## 7. HANDLING AND STORAGE

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**Precautions for safe handling:** Keep out of reach of children. Keep away from heat, sparks and flame. Electrically bond and ground all containers, personnel and equipment before transfer or use of material. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur. Avoid contact with eyes, skin, and clothing. Avoid breathing vapor or mist. Do not swallow. Wash thoroughly after handling. Keep container closed. Use only with adequate ventilation. Never use air pressure for transferring product. No smoking, open flames or sources of ignition in handling and storage area. Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. Use of non-sparking or explosion-proof equipment may be necessary, depending upon the type of operation. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

**Conditions for safe storage:** Minimize sources of ignition, such as static build-up, heat, spark or flame. Keep container closed. Do not store in: Zinc. Aluminum. Aluminum alloys. Magnesium. Magnesium alloys. Flammable mixtures may exist within the vapor space of containers at room

temperature. Store in a dry place. Store in original container. Keep container tightly closed. Do not store near food, foodstuffs, drugs or potable water supplies.

#### Storage stability

**Shelf life:** Use within 2 year

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Control parameters

If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Component	Regulation	Type of listing	Value
1,3-Dichloropropene	ACGIH	TWA	1 ppm
	Further information: A3: Confirmed animal carcinogen with unknown relevance to humans; Skin: Danger of cutaneous absorption		
	NZ OEL	WES-TWA	4.5 mg/m3 1 ppm
	Further information: Skin: Skin absorption		

RECOMMENDATIONS IN THIS SECTION ARE FOR MANUFACTURING, COMMERCIAL BLENDING AND PACKAGING WORKERS. APPLICATORS AND HANDLERS SHOULD SEE THE PRODUCT LABEL FOR PROPER PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING.

#### Exposure controls

**Engineering controls:** Use engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations.

#### Individual protection measures

**Eye/face protection:** Use chemical goggles. If exposure causes eye discomfort, use a full-face respirator.

#### Skin protection

**Hand protection:** Use chemical resistant gloves classified under standard AS/NZS 2161.10: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Ethyl vinyl alcohol laminate ("EVAL"). Viton. Examples of acceptable glove barrier materials include: Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to AS/NZS 2161.10) is recommended. When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to AS/NZS 2161.10) is recommended. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

**Other protection:** Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, boots, apron, or full body suit will depend on the task.

**Respiratory protection:** Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use an approved respirator. Selection of air-purifying or positive-pressure supplied-air will depend on the specific operation and the potential airborne

concentration of the material. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus.

The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

**Other Information:** Selection and use of personal protective equipment should be in accordance with the recommendations in one or more of the relevant Australian/New Zealand Standards, including:  
 AS/NZS 1336: Eye and face protection – Guidelines.  
 AS/NZS 1337: Personal eye protection - Eye and face protectors for occupational applications.  
 AS/NZS 1715: Selection, use and maintenance of respiratory protective equipment.  
 AS/NZS 2161: Occupational protective gloves.  
 AS/NZS 2210: Occupational protective footwear.  
 AS/NZS 4501: Occupational protective clothing Set

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

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<b>Appearance</b>	
<b>Physical state</b>	Liquid.
<b>Color</b>	Colorless to yellow
<b>Odor</b>	Sweet
<b>Odor Threshold</b>	No test data available
<b>pH</b>	6.5 1% CIPAC MT 75 (1% aqueous suspension)
<b>Melting point/range</b>	Not applicable
<b>Freezing point</b>	No test data available
<b>Boiling point (760 mmHg)</b>	107 °C <i>estimated</i>
<b>Flash point</b>	<b>closed cup</b> 27 °C <i>EC Method A9</i>
<b>Evaporation Rate (Butyl Acetate = 1)</b>	No test data available
<b>Flammability (solid, gas)</b>	Not Applicable
<b>Flammability (liquids)</b>	Not expected to be a static-accumulating flammable liquid.
<b>Lower explosion limit</b>	No test data available
<b>Upper explosion limit</b>	No test data available
<b>Vapor Pressure</b>	23 mmHg at 20 °C
<b>Relative Vapor Density (air = 1)</b>	3.8
<b>Relative Density (water = 1)</b>	1.21 at 20 °C / 4 °C <i>Pyknometer</i>
<b>Water solubility</b>	insoluble
<b>Partition coefficient: n-octanol/water</b>	log Pow: 1.82 - 2.1 <i>Measured</i>
<b>Auto-ignition temperature</b>	92/69/EEC A15 none below 400 degC
<b>Decomposition temperature</b>	No test data available
<b>Dynamic Viscosity</b>	0.66 mPa.s at 40 °C
<b>Kinematic Viscosity</b>	0.636 mm <sup>2</sup> /s at 20 °C
<b>Explosive properties</b>	No data available

<b>Oxidizing properties</b>	No data available
<b>Liquid Density</b>	1.211 g/cm <sup>3</sup> at 20 °C <i>Digital density meter</i>
<b>Molecular weight</b>	No data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

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## 10. STABILITY AND REACTIVITY

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**Reactivity:** No dangerous reaction known under conditions of normal use.

**Chemical stability:** Unstable at elevated temperatures.

**Possibility of hazardous reactions:** Polymerization will not occur.

**Conditions to avoid:** Exposure to elevated temperatures can cause product to decompose. Generation of gas during decomposition can cause pressure in closed systems. Avoid static discharge.

**Incompatible materials:** Avoid contact with: Acids. Bases. Oxidizers. Avoid contact with metals such as: Zinc. Cadmium. Magnesium. Aluminum. Aluminum alloys.

**Hazardous decomposition products:** Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Carbon monoxide. Carbon dioxide. Hydrogen chloride. Toxic gases are released during decomposition. Decomposition products can include trace amounts of: Phosgene.

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## 11. TOXICOLOGICAL INFORMATION

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*Toxicological information appears in this section when such data is available.*

**Acute toxicity (represents short term exposures with immediate effects - no chronic/delayed effects known unless otherwise noted)**

**Acute oral toxicity**

Moderate toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. Swallowing may result in gastrointestinal irritation.

Based on product testing:  
LD50, Rat, > 110 mg/kg

**Information for components:**

**1,3-Dichloropropene**

Single dose oral LD50 has not been determined. LD50,

For similar material(s): LD50, Rat, 110 mg/kg

**Balance**

Single dose oral LD50 has not been determined.



**Acute dermal toxicity**

Prolonged or widespread skin contact may result in absorption of harmful amounts.

Based on product testing:

LD50, Rabbit, 333 mg/kg

**Information for components:**

**1,3-Dichloropropene**

The dermal LD50 has not been determined.

For similar material(s): LD50, Rabbit, 333 mg/kg

For similar material(s): LD50, Rat, 1,200 mg/kg

**Balance**

The dermal LD50 has not been determined.

**Acute inhalation toxicity**

Prolonged excessive exposure may cause serious adverse effects, even death. Excessive exposure may cause irritation to upper respiratory tract (nose and throat) and lungs.

Observations in animals include: Lethargy.

Based on product testing:

LC50, Rat, 4 Hour, vapour, > 2.7 - < 3.07 mg/l

**Information for components:**

**1,3-Dichloropropene**

The LC50 has not been determined.

For similar material(s): LC50, Rat, 4 Hour, vapour, 2.7 - 3.07 mg/l

**Balance**

The LC50 has not been determined.

**Skin corrosion/irritation**

Based on product testing:

Brief contact may cause moderate skin irritation with local redness.

May cause drying and flaking of the skin.

**Information for components:**

**1,3-Dichloropropene**

For similar material(s):

Brief contact may cause moderate skin irritation with local redness.

May cause drying and flaking of the skin.

**Serious eye damage/eye irritation**

Based on product testing:

May cause severe eye irritation.

May cause slight corneal injury.

Vapor may cause lacrimation (tears).

Vapor may cause eye irritation experienced as mild discomfort and redness.

**Information for components:**

**1,3-Dichloropropene**

For similar material(s):

May cause severe eye irritation.

May cause slight corneal injury.

Vapor may cause lacrimation (tears).

Vapor may cause eye irritation experienced as mild discomfort and redness.

**Sensitization**

For skin sensitization:

Animal data indicate that 1,3-dichloropropene is a potential skin sensitizer.

For respiratory sensitization:

No relevant data found.

**Information for components:**

**1,3-Dichloropropene**

Animal data indicate that 1,3-dichloropropene is a potential skin sensitizer.

For respiratory sensitization:

No relevant data found.

**Specific Target Organ Systemic Toxicity (Single Exposure)**

May cause respiratory irritation.

Route of Exposure: Inhalation

Target Organs: Respiratory Tract

**Information for components:**

**1,3-Dichloropropene**

May cause respiratory irritation.

Route of Exposure: Inhalation

Target Organs: Respiratory Tract

**Aspiration Hazard**

May be fatal if swallowed and enters airways.

**Information for components:**

**1,3-Dichloropropene**

Aspiration into the lungs may occur during ingestion or vomiting, resulting in rapid absorption and injury to other body systems.

**Chronic toxicity (represents longer term exposures with repeated dose resulting in chronic/delayed effects - no immediate effects known unless otherwise noted)**

**Specific Target Organ Systemic Toxicity (Repeated Exposure)**

Based on product testing:

In animals, effects have been reported on the following organs:

Bladder.

Nasal tissue.

Liver.  
Lung.  
Gastrointestinal tract.  
Respiratory tract.  
Blood-forming organs (Bone marrow & Spleen).

**Information for components:**

**1,3-Dichloropropene**

For similar material(s):

In animals, effects have been reported on the following organs:

Bladder.  
Liver.  
Lung.  
Gastrointestinal tract.  
Respiratory tract.  
Nasal tissue.  
Blood-forming organs (Bone marrow & Spleen).

**Carcinogenicity**

Based on product testing: Has been shown to cause cancer in laboratory animals by the oral route. Inhalation exposure resulted in an increase in the normal occurrence of benign lung tumors in male mice.

**Information for components:**

**1,3-Dichloropropene**

For similar material(s): Has been shown to cause cancer in laboratory animals by the oral route. Inhalation exposure resulted in an increase in the normal occurrence of benign lung tumors in male mice.

**Teratogenicity**

Based on product testing: Did not cause birth defects or other effects in the fetus even at doses which caused toxic effects in the mother.

**Information for components:**

**1,3-Dichloropropene**

For similar material(s): Did not cause birth defects or other effects in the fetus even at doses which caused toxic effects in the mother.

**Reproductive toxicity**

Based on product testing: In animal studies, did not interfere with reproduction.

**Information for components:**

**1,3-Dichloropropene**

For similar material(s): In animal studies, did not interfere with reproduction.

**Mutagenicity**

Based on product testing: In vitro genetic toxicity studies were negative in some cases and positive in other cases. Animal genetic toxicity studies were negative.

**Information for components:**

**1,3-Dichloropropene**

For similar material(s): In vitro genetic toxicity studies were negative in some cases and positive in other cases. Animal genetic toxicity studies were negative.

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**12. ECOLOGICAL INFORMATION**

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*Ecotoxicological information appears in this section when such data is available.*

**Ecotoxicity****Acute toxicity to fish**

Material is highly toxic to aquatic organisms on an acute basis (LC50/EC50 between 0.1 and 1 mg/L in the most sensitive species tested).

LC50, *Oncorhynchus mykiss* (rainbow trout), 96 Hour, 2.78 mg/l

LC50, *Cyprinodon variegatus* (sheepshead minnow), 96 Hour, 0.87 mg/l

LC50, *Lepomis macrochirus* (Bluegill sunfish), 96 Hour, 3.7 mg/l

**Acute toxicity to aquatic invertebrates**

EC50, *Daphnia magna* (Water flea), 48 Hour, 3.58 mg/l

EC50, eastern oyster (*Crassostrea virginica*), 48 Hour, 0.64 mg/l

**Acute toxicity to algae/aquatic plants**

EbC50, *Pseudokirchneriella subcapitata* (green algae), static test, 72 Hour, Biomass, 14.9 mg/l

EC50, diatom *Navicula* sp., 120 Hour, Biomass, 2.35 mg/l

EC50, *Lemna gibba*, 14 d, 14.56 mg/l

**Long-term (chronic) aquatic hazard****Chronic toxicity to fish**

NOEC, *Pimephales promelas* (fathead minnow), flow-through test, 33 d, survival, 0.0318 mg/l

**Chronic toxicity to aquatic invertebrates**

NOEC, *Daphnia magna* (Water flea), 21 d, number of offspring, 0.0701 mg/l

**Toxicity to Above Ground Organisms**

Material is moderately toxic to birds on an acute basis (LD50 between 51 and 500 mg/kg).  
Material is practically non-toxic to birds on a dietary basis (LC50 > 5000 ppm).

oral LD50, *Colinus virginianus* (Bobwhite quail), mortality, 139.8mg/kg bodyweight.

dietary LC50, *Anas platyrhynchos* (Mallard duck), > 6243mg/kg diet.

**Toxicity to soil-dwelling organisms**

LC50, *Eisenia fetida* (earthworms), 14 d, 55.6 mg/kg

**Persistence and degradability**

**Biodegradability:** Biodegradation may occur under aerobic conditions (in the presence of oxygen).

10-day Window: Fail

**Biodegradation:** 4.9 %

**Method:** OECD Test Guideline 301D or Equivalent

**Theoretical Oxygen Demand:** 1.281 mg/mg

**Biological oxygen demand (BOD)**

Incubation Time	BOD
	0.148 mg/mg

**Stability in Water (1/2-life)**

Hydrolysis, half-life, 2.3 - 4.75 d

**Photodegradation**

**Atmospheric half-life:** 7 - 12 Hour

**Bioaccumulative potential**

**Bioaccumulation:** No data available for this product. For similar material(s):

Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

**Partition coefficient: n-octanol/water(log Pow):** 1.82 - 2.1 Measured

**Mobility in Soil**

For similar material(s):

Potential for mobility in soil is very high (Koc between 0 and 50).

**Partition coefficient (Koc):** 44.7 Measured

**Results of PBT and vPvB assessment**

This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

**Other adverse effects**

1,3-Dichloropropene has a stratospheric ozone depletion potential (ODP) of 0.002, relative to CFC 12 (ODP=1).

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**13. DISPOSAL CONSIDERATIONS**

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**Disposal methods:** If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws.

Waste handling, treatment and disposal practices must be in compliance with the New Zealand Hazardous Substances (Disposal) Notice 2017. Additional local requirements may be applicable in accordance with planning controls under the Resource Management Act. Regulations concerning waste management may vary in different locations.

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## 14. TRANSPORT INFORMATION

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**Classification for ROAD and Rail transport:**

<b>Proper shipping name</b>	PESTICIDE, LIQUID, TOXIC, FLAMMABLE, N.O.S.(1,3-Dichloropropene)
<b>UN number</b>	UN 2903
<b>Class</b>	6.1 (3)
<b>Packing group</b>	II
<b>Environmental hazards</b>	1,3-Dichloropropene

**Classification for SEA transport (IMO-IMDG):**

<b>Proper shipping name</b>	PESTICIDE, LIQUID, TOXIC, FLAMMABLE, N.O.S.(1,3-Dichloropropene)
<b>UN number</b>	UN 2903
<b>Class</b>	6.1 (3)
<b>Packing group</b>	II
<b>Marine pollutant</b>	1,3-Dichloropropene
<b>Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code</b>	Consult IMO regulations before transporting ocean bulk

**Classification for AIR transport (IATA/ICAO):**

<b>Proper shipping name</b>	Pesticide, liquid, toxic, flammable, n.o.s.(1,3-Dichloropropene)
<b>UN number</b>	UN 2903
<b>Class</b>	6.1 (3)
<b>Packing group</b>	II

**Hazchem Code**

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This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

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## 15. REGULATORY INFORMATION

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New Zealand. Inventory of Chemical Substances

The hazardous components of this product are listed in the New Zealand Inventory of Chemicals (NZIoC) or the product otherwise complies with the requirements of the Hazardous Substances and New Organisms (HSNO) Act 1996.

#### HSNO Approval

Liquid containing 1153 g/litre 1,3-dichloropropene

HSNO Approval Number: HSR001639

#### HSNO Controls

Certified handler certificate not required.

Tracking hazardous substance not required.

Refer to the Health and Safety at Work (Hazardous Substances) Regulations 2017, for further information.

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## 16. OTHER INFORMATION

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#### Revision

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Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

#### Legend

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
NZ OEL	New Zealand. Workplace Exposure Standards for Atmospheric Contaminants
TWA	8-hour, time-weighted average
WES-TWA	Workplace Exposure Standard - Time Weighted average

#### Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECS - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program;

NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

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