



SAFETY DATA SHEET

1. Identification of the Substance/Mixture and of the Company/Undertaking

Product Identifier **Tri-Form 1,3-D EC5**

Other Means of Identification:

Product Code 295-ZAF-TAF

Recommended Use Pesticide (Fumigant)

Use only in accordance with the product's pesticide end use label. If the end-use labeling contains specific instructions or requirements that conflict with this Safety Data Sheet (SDS), follow the instructions or requirements on the labeling.

Restrictions on Use This product is for use by registered pest control operators only.

Manufacturer/Importer/Supplier/Distributor information:

Supplier Name Trical Crop Protection Africa (Pty) Ltd
Address P. O. Box 46036
Durbanville, Cape Town, 7551, Republic of South Africa

Telephone +27 861 111 998
E-mail sds@trical.com

Emergency phone number CHEMTREC (24 hours, within South Africa) 0 800 983 611
CHEMTREC (if outside South Africa) +1 703-527-3887 (collect calls accepted)

2. Hazards Identification

Physical Hazards	Flammable Liquids	Category 3
Health Hazards	Acute Toxicity, inhalation	Category 3
	Acute Toxicity, dermal	Category 3
	Acute Toxicity, oral	Category 3
	Skin Irritation	Category 2
	Eye Irritation	Category 2
	Skin Sensitization	Category 1
	Carcinogenicity	Category 2
Environmental Hazards	STOT, Single Exposure	Category 3
	Aspiration Hazard	Category 1
	Hazardous to the Aquatic Environment, Acute Hazard	Category 1
	Hazardous to the Aquatic Environment, Chronic Hazard	Category 1

Additional GHS Classification for Product When it is Packaged in a Cylinder:

Physical hazards Chemicals Under Pressure Category 2

Label Elements



This pictogram applies when product is packaged in a cylinder



Signal Word	DANGER
Hazard Statements	<p>Flammable liquid and vapour.</p> <p>Toxic if inhaled, if swallowed, or, in contact with skin.</p> <p>Causes skin irritation.</p> <p>Causes serious eye irritation.</p> <p>May cause an allergic skin reaction.</p> <p>Suspected of causing cancer by the oral route.</p> <p>May cause respiratory irritation.</p> <p>May be fatal if swallowed and enters airways.</p> <p>Very toxic to aquatic life and with long lasting effects.</p>
Additional Hazard Statement When Product Packaged in a Cylinder	Flammable chemical under pressure: May explode if heated.
Precautionary Statements:	
Prevention	<p>Obtain, read and follow all safety instructions before use.</p> <p>Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.</p> <p>Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use non-sparking tools. Take action to prevent static discharges.</p> <p>Avoid breathing gas or vapours.</p> <p>Wear protective gloves, protective clothing, and eye protection. [See Section 8 of SDS]</p> <p>Wash hands and face thoroughly after handling. Do not touch eyes.</p> <p>Do not eat, drink or smoke when using this product.</p> <p>Use only outdoors or in a well-ventilated area.</p> <p>Contaminated work clothing should not be allowed out of the workplace.</p> <p>Avoid release to the environment, [except for authorized use].</p>
Response	<p>IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get emergency medical help immediately.</p> <p>IF SWALLOWED: Get emergency medical help immediately. Rinse mouth. Do NOT induce vomiting.</p> <p>IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>IF ON SKIN (or hair): Take off immediately all contaminated clothing. Wash with plenty of water. Wash contaminated clothing before reuse.</p> <p>IF exposed or concerned, get medical advice.</p> <p>If eye irritation or if skin irritation or rash occurs: Get medical help.</p> <p>Specific treatment, see First Aid section on label.</p> <p>Get medical help if you feel unwell.</p> <p>In case of fire: Use dry sand, dry chemical or synthetic foams (including AFFF type) or protein foam to extinguish.</p> <p>Collect spillage.</p>
Storage	Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store locked up.
Disposal	Dispose of contents/container in accordance with local / regional / national / international regulations.
Additional Precautionary Statements When Product Packaged in Cylinder	<p>Do not spray on an open flame or other ignition source.</p> <p>In case of leakage, eliminate all ignition sources.</p> <p>Stop leak if safe to do so.</p>
Physical and Health hazard(s) Not Otherwise Classified (HNOC)	No data available.

3. Composition/Information on Ingredients

Chemical Name	Common Name and Synonyms	CAS Number	% by Weight
1,3-Dichloropropene	1,3-D; 1,3-Dichloroprop-1-ene (preferred IUPAC name)	542-75-6	95.0*
Emulsifier - Proprietary**			5.0

* Product label will reflect the nominal active ingredient percentage, which accounts for any impurities. Any impurities do not contribute to the classification of this product.

** Emulsifier identity withheld as trade secret.

4. First-Aid Measures

General Advice	First Aid responders should pay attention to self-protection and use 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 center or doctor for treatment advice. If breathing is difficult, oxygen should be administered by qualified personnel.
Skin Contact	Take off immediately all contaminated clothing. Wash skin with soap and plenty of water for 15-20 minutes. Call a poison 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	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Call a poison center or doctor for treatment advice. Suitable emergency eye wash facility should be immediately available.
Ingestion	Seek medical attention immediately. Do NOT induce vomiting. Call a physician and/or transport to emergency facility immediately.
Most Important Symptoms/Effects, 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 Immediate Medical Attention and Special Treatment Needed	Notes to physician: Skin contact may aggravate preexisting dermatitis. Maintain adequate ventilation and oxygenation of the patient. May cause asthma-like (reactive airways) symptoms. Bronchodilators, expectorants, antitussives, and corticosteroids may be of help. Respiratory symptoms, including pulmonary edema, may be delayed. Persons receiving significant exposure should be observed 24-48 hours for signs of respiratory distress. Because rapid absorption may occur through the lungs if aspirated and cause systemic effects, the decision of whether to induce vomiting or not should be made by a physician. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. 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. 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.

5. Firefighting Measures

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 water jet as an extinguisher, as this may not be effective to extinguish fire.

Specific Hazards Arising from the Chemical

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. Vapours 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 vapour space of containers at room temperature. Flammable concentrations of vapour can accumulate at temperatures above flash point; see Section 9.

Firefighting Instructions/Equipment

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 re-ignition 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 discolouration 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 SDS.

Special Protective Equipment for Firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes firefighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during firefighting operations. If contact is likely, change to full chemical resistant firefighting 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, refer to the relevant sections.

6. Accidental Release Measures

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 vapour to avoid fire or explosion. Vapour 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. Eliminate all sources of ignition in vicinity of spill or released vapour to avoid fire or explosion. Use appropriate safety equipment. For personal protection, see Section 8 of the SDS.
Environmental Precautions	Avoid discharge into drains, water courses or onto the ground. Use appropriate containment to avoid environmental contamination.
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.
Large Spills	Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Use a non-combustible material like vermiculite, sand, or earth to soak up the product and place into a container for later disposal. Prevent entry into waterways, sewer, basements, or confined areas. Following product recovery, flush area with water.
Small Spills	Absorb with materials such as: Clay. Dirt. Sand. Sweep up. Collect in suitable and properly labeled containers. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

7. Handling and Storage

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. Vapours 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 vapour 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 vapours. 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/Personal Protection.

For additional information on equipment bonding and grounding, refer to the Canadian Electrical Code in Canada, (CSA C22.1), or the American Petroleum Institute (API) Recommended Practice 2003, "Protection Against Ignitions Arising out of Static, Lightning, and Stray Currents" or National Fire Protection Association (NFPA) 77, "Recommended Practice on Static Electricity" or National Fire Protection Association (NFPA) 70, "National Electrical Code".

Conditions for Safe Storage, Including Any Incompatibilities

Store locked up. Keep away from heat, sparks, and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Avoid spark promoters. Eliminate sources of ignition, such as static build-up, heat, spark, or flame. Ground/bond container and equipment. These alone may be insufficient to remove static electricity. Store in original tightly closed container. Do not store in: Zinc. Aluminum. Aluminum alloys. Magnesium. Magnesium alloys. Store in a dry place. Do not store near food, foodstuffs, drugs, or potable water supplies.

8. Exposure Controls/Personal Protection

Occupational Exposure Limits:

Regulations for Hazardous Chemical Agents, 2021:

Component	CAS No.	TWA	Value	Skin Notation
1,3-Dichloropropene	542-75-6	OEL-RL	2 ppm (10 mg/m ³)	Can be absorbed via skin

US ACGIH Threshold Limit Values

1,3-Dichloropropene	542-75-6	TLV-TWA	1 ppm (4.5 mg/m ³)	Can be absorbed via skin
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Biological Limit Values:

No biological exposure limits noted for the ingredient(s).

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.

Appropriate 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, Such as Personal Protective Equipment:

Eye/Face Protection

Wear safety glasses with side shields (or goggles). If exposure causes eye discomfort, use a full-face respirator.

Skin Protection:

Hand Protection

Use gloves chemically resistant to this material. 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"). 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

Wear appropriate chemical resistant clothing.

Respiratory Protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus. The following should be effective types of air-purifying respirators: Organic vapour cartridge with a particulate pre-filter.

General Hygiene Considerations

When using, do not eat, drink, or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and Chemical Properties

NOTE: Information is for product, unless otherwise specified.

Physical State	Liquid
Colour	Colourless to brown
Odour	Sweet pungent
Odour Threshold	No test data available
Melting Point/Range	Not applicable
Freezing Point	No test data available
Boiling Point (760 mmHg)	107 °C (225 °F), estimated [1,3-Dichloropropene]
Flammability (solid, gas)	Not applicable to liquids
Lower Flammability Limit	No test data available
Upper Flammability Limit	No test data available
Flash Point	28 °C (82.4 °F) (<i>Pensky-Martens Closed Cup (Method A.9 of (EC) No. 440/2008)</i>)
Auto-Ignition Temperature	None below 400 °C, <i>92/69/EEC A15</i> [1,3-Dichloropropene]
Decomposition Temperature	No test data available
pH	3.98 1% (<i>CIPAC MT 75.3</i>)
Kinematic Viscosity	0.710 mm ² /s at 40 °C (104 °F)
Solubility	Emulsifiable in water
Partition Coefficient (n-octanol/water)	1.82 – 2.1 Measured [1,3-Dichloropropene]
Vapour Pressure	23 mmHg at 20 °C (68 °F) [1,3-Dichloropropene]
Relative Density	1.2 @ 20 °C (68 °F) / 4 °C (<i>Pyknometer</i>)
Vapour Density	No test data available (air =1)
Particle Characteristics	Not applicable to liquids
<u>Other Information:</u>	
Evaporation Rate	No test data available
Explosive Properties	None - EEC A14
Oxidizing Properties	No significant oxidation (<i>EPA OPPTS 830.6314 (Oxidizing or Reducing Action)</i>)
Density	1.20 g/cm ³ @ 20 °C (68 °F) (<i>Pyknometer</i>)

10. Stability and Reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage, and transport.
Chemical Stability	Unstable at elevated temperatures.
Possibility of Hazardous Reactions	Hazardous polymerization does 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.

11. Toxicological Information

NOTE: Information below is for the ingredient 1,3-Dichloropropene unless otherwise specified.

Information on Likely Routes of Exposure:

Inhalation, Eye contact, Skin contact, and Ingestion.

Symptoms of Exposure:

Headache, irritation of mucous membranes, dizziness, nausea, coughing, chest discomfort, breathing difficulties, and loss of consciousness. Reddening of skin, edema, itchy rash, and dermatitis.

Ingestion has resulted in gastrointestinal distress, sweating, rapid shallow breathing, rapid heart rate, and bluish discoloration of legs.

Information on Toxicological Effects, Including Delayed and Immediate Effects:

Acute Oral Toxicity

LD₅₀, Rat, 150 mg/kg [ATE mixture = 157.89 mg/kg]

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.

Acute Dermal Toxicity

LD₅₀, Rabbit, 333 mg/kg [ATE mixture = 350.53 mg/kg]

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

Acute Inhalation Toxicity

LC₅₀, Rat, 4-hr, vapour, > 2.7 mg/L (595 ppm) [ATE mixture = 2.84 mg/L]

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.

Skin Corrosion/Irritation

Brief contact may cause moderate skin irritation with local redness. May cause drying and flaking of the skin.

Serious Eye Damage/Eye Irritation

Contact may cause severe eye damage or corneal injury. Vapour may cause lacrimation (tears) or eye irritation experienced as mild discomfort and redness.

Respiratory Sensitization

Not available.

Skin Sensitization

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

Specific Target Organ Toxicity Single Exposure

May cause respiratory irritation.

Specific Target Organ Toxicity Repeated Exposure

Not GHS classified, however, 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).

Germ Cell Mutagenicity

In vitro genetic toxicity studies were negative in some cases and positive in other cases. Animal genetic toxicity studies were negative.

Carcinogenicity:

1,3-Dichloropropene

IARC Group 2B: Possibly carcinogenic to humans
US NTP Reasonably anticipated to be a human carcinogen
ACGIH A3: Confirmed animal carcinogen with unknown relevance to humans

Reproductive Toxicity

In animal studies, did not interfere with reproduction.

Teratogenicity

Did not cause birth defects or other effects in the fetus even at doses which caused toxic effects in the mother.

Aspiration Hazard

May be fatal if swallowed and enters airways.

Interactive Effects:

No data available.

Other Information:

No data available.

12. Ecological Information

NOTE: Information below is for the ingredient 1,3-Dichloropropene unless otherwise specified.

Ecotoxicity:

Acute Toxicity to Fish	Material is highly toxic to aquatic organisms on an acute basis (LC ₅₀ /EC ₅₀ between 0.1 and 1 mg/L in the most sensitive species tested) LC ₅₀ = 2.78 mg/L, 96-hr, <i>Oncorhynchus mykiss</i> (rainbow trout) LC ₅₀ = 0.87 mg/L, 96-hr, <i>Cyprinodon variegatus</i> (sheepshead minnow) LC ₅₀ = 3.70 mg/L, 96-hr, <i>Lepomis macrochirus</i> (bluegill sunfish)
Acute Toxicity to Fish [surfactant]	LC ₅₀ = 64 mg/L ca, 96-hr, <i>Oncorhynchus mykiss</i> (rainbow trout), static test
Acute Toxicity to Aquatic Invertebrates	EC ₅₀ = 3.58 mg/L, 48-hr, <i>Daphnia magna</i> (water flea) EC ₅₀ = 0.64 mg/L, 48-hr, <i>Crassostrea virginica</i> (eastern oyster)
Acute Toxicity to Algae/ Aquatic Plants	EbC ₅₀ = 14.9 mg/L, 72-hr, <i>Pseudokirchneriella subcapitata</i> (green algae), static test, Biomass EC ₅₀ = 2.35 mg/L, 120-hr, diatom <i>Navicula</i> sp., Biomass EC ₅₀ = 14.56 mg/L, 14-day, <i>Lemna gibba</i>
Chronic Toxicity to Fish	NO _{EC} = 0.0318 mg/L, 33-day, <i>Pimephales promelas</i> (fathead minnow), flow-through test, survival
Chronic Toxicity to Aquatic Invertebrates	NO _{EC} = 0.0701 mg/L, 21-day, <i>Daphnia magna</i> (water flea), number of offspring
Toxicity to Aboveground Organisms	Material is moderately toxic to birds on an acute basis (LD ₅₀ between 51 and 500 mg/kg) Material is practically non-toxic to birds on a dietary basis (LC ₅₀ > 5000 ppm) Oral LD ₅₀ = 139.8 mg/kg bodyweight, <i>Colinus virginianus</i> (bobwhite quail), mortality Dietary LC ₅₀ = > 6243 mg/kg diet, <i>Anas platyrhynchos</i> (mallard duck)
Toxicity to Soil-Dwelling Organisms	LC ₅₀ = 55.6 mg/kg, 14-day, <i>Eisenia fetida</i> (earthworms)
Persistence and Degradability:	
Biodegradability	Biodegradation may occur under aerobic conditions (in the presence of oxygen).
Biodegradation	4.9% (For 1,3-Dichloropropene) Method: OECD Test Guideline 301D or Equivalent
Theoretical Oxygen Demand	1.281 mg/mg (For 1,3-Dichloropropene)
Biological Oxygen Demand	0.148 mg/mg (For 1,3-Dichloropropene)
Stability in Water (1/2-life)	2.3 – 4.75 d (For 1,3-Dichloropropene)
Photodegradation	7 – 12 hr (Atmospheric 1/2-life for 1,3-Dichloropropene)
Bioaccumulative Potential	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 Kow)	1.82 – 2.1 Measured (For 1,3-Dichloropropene)
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
Other Adverse Effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected.

13. Disposal Considerations

Disposal Instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways, or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local Disposal Regulations	Dispose in accordance with all applicable regulations.
Waste from Residues / Unused Products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated Packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not clean drum with caustic or lye. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport Information

US DOT (Highway/Rail)

UN Number	UN2903
UN Proper Shipping Name	Pesticides, liquid, toxic, flammable, n.o.s.(1,3-Dichloropropene)
Hazard Class	6.1 (3)
Packing Group	II
Marine Pollutant	1,3-Dichloropropene
Reportable Quantity (RQ)	1,3-Dichloropropene (100 lbs)
ERG	131 (TREC 2903)

IATA (Air)

UN Number	UN2903
UN Proper Shipping Name	Pesticide, liquid, toxic, flammable, n.o.s.(1,3-Dichloropropene)
Hazard Class	6.1 (3)
Packing Group	II

IMDG (Water)

UN Number	UN2903
UN Proper Shipping Name	PESTICIDE, LIQUID, TOXIC, FLAMMABLE, N.O.S.(1,3-Dichloropropene)
Hazard Class	6.1 (3)
Packing Group	II
Marine Pollutant	1,3-Dichloropropene
Transport in Bulk	Consult IMO regulations before transporting ocean bulk

Special Precautions for User Packages must be secured against all movement during transport. Keep markings, labels or placards on package until clean and purged of residue. For cylinders, ensure valve is closed and safety cap(s) and valve protection are in place prior to transport.

Transport in Bulk According to IMO Instruments Not applicable to this product's packaging types.

15. Regulatory Information

<u>Republic of South Africa</u>	Regulations for Hazardous Chemical Agents on 29 March 2021, Occupational Health and Safety Act No. 85 of 1993 National Road Traffic Act No. 93 of 1996 as amended Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act No. 36 of 1947 as amended. Globally Harmonized System of Classification and Labeling of Chemicals (GHS) [SANS 10234 2019 (edition 2)]
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16. Other information

Version 5 Date: April 24, 2023

Revision History:

05-30-17	Initial version
09-25-17	Section 2: Revised eye hazard classification
	Section 11: Revised eye damage/irritation information
01-15-18	Section 15: Revised International Inventory information
10-22-18	Section 9: Revised flash point, pH, density, and Other Information
04-24-23	SDS: Revised to comply with Regulation for Hazardous Chemical Agents, 2021
	Section 2: Removed Exclamation Point and Corrosive pictograms

Other Information: None

NFPA Rating:



NFPA Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

ABBREVIATIONS:

ACGIH	American Conference of Governmental Industrial Hygienists
ATE	Acute Toxicity Estimate per GHS classification guidelines
CAS	Chemical Abstracts Service
CHEMTREC	Chemical Transportation Emergency Center
EC ₅₀	Half Maximal Effective Concentration - concentration of a material in water, a single dose which is expected to cause a biological effect on 50% of a group of test species.
ERG	Emergency Response Guide for USA transportation requirements
GHS	Globally Harmonized System
IARC	International Agency for Research on Cancer
IMDG	International Maritime Dangerous Goods
LC ₅₀	Lethal Concentration - median dose at which 50% of test animals die from inhalation
LD ₅₀	Lethal Dose - median dose at which 50% test animals die from oral or dermal exposure
NFPA	National Fire Protection Association
NOEC	No Observed Effect Concentration
NTP	National Toxicology Program
OECD	Organisation for Economic Co-operation and Development
OEL-RL	Occupational Exposure Limit - Restricted Limit
ppm	part(s) per million
TWA	Time Weighted Average airborne concentration for a worker in 8-hour day
TLV-TWA	Threshold Limit Value – Time Weighted Average airborne concentration for a worker in 8-hour day
TREC	Transportation Emergency Card for South Africa transportation requirements
US DOT	United States Department of Transportation

WARRANTY

Notice: The information above is believed to be accurate and represents the best information currently available to us. Seller warrants that this product conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with directions under normal conditions of use, but neither this warranty nor any other warranty of merchantability or fitness for a particular purpose, express or implied, extends to the use of this product contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to seller, and buyer assumes the risk of any such use. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.