

1. IDENTIFICATION

Product Identifier: Rural Telone™ Soil Fumigant
Other Means of Identification: 1,3-Dichloropropene (1,3-D)
Uses: Soil Fumigant
Supplier Name: TriCal Australia
Address: 5 Chamberlain St, Wingfield, SA, 5013
Telephone: (08) 8347 3838 or 1300 FUMIG8
Email: info@trical.com.au

2. HAZARDS IDENTIFICATION

Acute Toxicity – Inhalation, Category 1 and 2
Acute Toxicity – Oral, Category 3
Flammable Liquid, Category 1
Skin Corrosion/Irritation, Category 2
Serious Eye Damage/Irritation, Category 1



Danger



Warning



Danger



Danger



Warning

GHS Hazard Phrases:

- H224: Extremely flammable liquid and vapour
- H330: Fatal if Inhaled
- H301: Toxic if swallowed
- H314: Causes severe skin burns and eye damage
- H318: Causes serious eye damage
- H371: May cause damage to organs (Respiratory)
- H373: May cause damage to stomach through prolonged or repeated exposure
- H400: Very toxic to aquatic life
- H410: Very toxic to aquatic life with long-lasting effects

GHS Precaution Phrases:

- P210: Keep away from heat/sparks/open flames/hot surfaces – No smoking
- P233: Keep cylinder tightly closed
- P240: Ground/Bond cylinder and receiving equipment
- P241: Use explosion-proof electrical/ventilating/lighting equipment
- P242: Use only non-sparking tools
- P243: Take precautionary measures against static discharge
- P260: Do not breathe gas
- P270: Do not eat, drink or smoke when using this product
- P271: Use only outdoors in well ventilated areas
- P284: Wear respiratory protection
- P264: Wash hands, arms and face thoroughly after handling
- P280: Wear protective gloves and eye protection

GHS Response Phrases:

- P304 + P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
- P310: Immediately call a POISON CENTRE or doctor/physician
- P301 + P330 + P331: IF SWALLOWED: Rinse mouth. DO NOT induce vomiting
- P303 + P361 + P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
- P363: Wash contaminated clothing before reuse
- P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

GHS Storage and Disposal Phrases:

- P403 + P233+ P235: Store in a well-ventilated place. Keep cylinder tightly closed. Keep cool
- P405: Store locked up
- P501: Dispose of contents/cylinder by returning to supplier



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Date Prepared: 18th September 2018

Replaces: 12th December 2016

Classified as **HAZARDOUS** according to the criteria of NOHSC
Classified as **DANGEROUS GOODS** for Land and Marine Transport (See Section 14)

3. COMPOSITION/INGREDIENTS

Identity (Other Names)	CAS Number	Proportion
1,3-Dichloropropene	000542-75-6	94.5%
Balance not contributing to hazard		5.5%

4. FIRST AID MEASURES

Consult the Poisons Information Centre (13 11 26) or a doctor in every case of suspected chemical poisoning. Never give fluids or induce vomiting if a patient is unconscious or convulsing regardless of cause of injury. If breathing difficulties occur seek medical attention immediately.

Swallowed: Call the Poisons Information Centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the Poisons Information Centre or doctor. Never give anything by mouth to an unconscious person.

In Eye: Wash immediately and continuously with flowing water for at least 30 minutes. Remove contact lenses after the first 5 minutes and continue washing. Obtain prompt medical attention, preferably from an ophthalmologist. Call the Poison Information Centre or doctor for treatment advice.

On Skin: Immediate continued and thorough washing in flowing water for at least 30 minutes is imperative while removing contaminated clothing. Obtain medical advice without delay. Wash clothing before reuse. Wash skin with soap and water for at least 15-20 minutes. Call the Poison Information Centre or doctor for treatment advice. Properly dispose of contaminated leather items, such as shoes, belts and watchbands.

Inhaled: Move person to fresh air. If person is not breathing, call 000 or an ambulance, and then give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask, etc.) Call an ambulance, and then the poison information centre or doctor for treatment advice. If breathing is difficult, oxygen should be administered by qualified personnel.

Advice to Doctor: Due to irritant properties, swallowing may result in burns/ulceration of mouth, stomach, and lower gastrointestinal tract with subsequent stricture. Aspiration of vomitus may cause lung injury. Suggest endotracheal/oesophageal control if lavage is done. Respiratory symptoms, including pulmonary oedema, may be delayed. Persons receiving significant exposure should be observed 24-48 hours for signs of respiratory distress. Maintain adequate ventilation and oxygenation of the patient. May cause respiratory sensitisation or asthma-like symptoms. Bronchodilators, expectorants and antitussives may be of help. Excessive exposure may aggravate pre-existing asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome). Treat bronchospasm with inhaled beta2 agonist and oral or parenteral corticosteroids. Methemoglobinemia may aggravate any pre-existing condition sensitive to a decrease in available oxygen, such as chronic lung disease, coronary artery disease or anaemia. If burn is present, treat as any thermal burn, after decontamination. Animal data indicates that this material is a potential skin sensitiser. However, skin sensitisation 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. Skin contact may aggravate pre-existing dermatitis.



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5. FIRE FIGHTING MEASURES

Flash Point:	27.2°C
Flammable Limits:	LFL: 5.5% @ 80°C UFL: 14.5% @ 80°C
Extinguishing Media:	Water fog or fine spray, carbon dioxide, dry chemical, or foam. Water fog, applied gently, may be used as a blanket for extinguishing fire. General purpose synthetic foams (including AFF type) or protein foams are preferred if available. Alcohol resistant foams (ATC type) may function. Do not use direct water stream. Straight or direct water streams may not be effective in extinguishing fire.
Fire and Explosion Hazards:	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 by static discharge. Vapours are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flashback 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. Stay upwind; keep out of low areas.
Precautions for Fire Fighters:	Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire-fighting clothing (including fire-fighting helmet, coat, pants, boots, and gloves). Avoid contact with this material during fire-fighting operations. If contact is likely, change to full chemical resistant clothing with SCBA. If this will not provide sufficient fire protection; consider fighting fire from a remote location. Consider use of unmanned hose holder or monitor nozzles. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.
Hazchem Code:	3WE

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures:	Extinguish all ignition sources in the vicinity of the spill or released vapour to avoid fire or explosion. Evacuate enclosed areas and keep bystanders out of low lying areas and move them upwind to open areas. Wear respiratory protection (self-contained purifying respirator (PAPR) equipped with Type A cartridges), a face shield or goggles, overalls buttoned to neck and wrist, chemical resistant gloves and boots. In addition, body protection providing gas-tight protection is required to prevent possible skin effects.
Containment of Spill:	Only trained and properly protected personnel must be involved in clean-up operations. If it can be done safely, invert or reposition the leaking cylinder of Telone so that the area with the leak is up and the flow reduced. If possible, put the container into an overpak. Cover or confine the leakage with an absorbent such as vermiculite, clay, sand, or other non-combustible absorptive material. Collect the spent absorbent material in a disposal drum. If the spill is on the ground, dig up enough of the soil to eliminate the contamination and place the soil in a disposal drum.
Large spills/leaks:	Bund the area of large spills and report them to TriCal Australia by phone on (08) 8347 3838



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(24 Hours). Wear personal protective equipment (see section 8). Warn public of downwind explosion hazard. Keep out of sewers.

7. HANDLING AND STORAGE

- Precautions for Safe Handling:** Keep out of reach of children. Do not swallow. Avoid breathing vapour or mist. Avoid contact with eyes, skin and clothing. Use with adequate ventilation. Wash thoroughly after handling. Keep cylinder closed. Cylinders, 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 on the type of operation. Keep away from heat, sparks, and flames. Never use air pressure for transferring product. No smoking, open flames or sources of ignition in handling and storage areas. Vapours are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flashback may occur. Electrically bond and ground all containers and equipment before transfer or use of material. Do not enter confined spaces unless adequately ventilated.
- Conditions for Safe Storage:** Store cylinders upright in cool, well-ventilated locked storage preferably outside or detached from other buildings. Minimise sources of ignition, such as static build-up, heat, spark or flame. Flammable mixtures may exist within the vapour space of containers at room temperature. Do not store near or with oxidising materials. Be sure cylinder is closed completely.
- Special Precautions:** Do not use magnesium, aluminium or their alloys for handling equipment or cylinders. Be sure cylinder is closed completely.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

These precautions are suggested for conditions where a potential for exposure exists. Emergency procedures may require additional precautions.

Exposure Limits: 1,3-Dichloropropene: NOHSC TWA 1 ppm (4.5 mg/m³), Skin. Carcinogen category 3, skin.

A 'skin' notation following the exposure guideline refers to the potential for dermal absorption of the material including mucous membranes and the eyes either by contact with vapours or by direct skin contact. It is intended to alert the reader that inhalation may not be the only route of exposure and that measures to minimise dermal exposures should be considered.

Engineering Controls: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines. Lethal concentrations may exist in areas with poor ventilation, including low lying areas.

RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS:

Personal Protective Equipment: **Respiratory Protection:** Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required, use an approved self-contained breathing apparatus or positive pressure airline with auxiliary self-contained air supply.

Protective Gloves: Potentially fatal if absorbed through the skin. Impermeable protective gloves must be worn when using. For help in selecting suitable equipment, consult AS 2161.

Eye Protection: Use chemical goggles. Wear a face-shield, which allows use of chemical goggles, or wear full face respirator, to protect face and eyes when there is any likelihood of splashes. Eye wash fountain/equipment should be located in immediate work area. If



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exposure causes eye discomfort, use a full face respirator.

Clothing: Use protective clothing chemically resistant to this material. Selection of specific items such as face shield, gloves, boots, apron, or full-body suit will depend on operation. A safety shower, or emergency washing facilities, should be located in the immediate work area. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse or dispose of properly. Items, which cannot be decontaminated, such as shoes, belts, and watchbands should be removed and disposed of properly. If hands are cut or scratched, use chemical resistant gloves even for brief exposures.

Safety Boots: Wearing safety boots in industrial situations is advised.

APPLICATORS AND ALL OTHER HANDLERS:

Personal Protective Equipment: Wear cotton overalls buttoned to the neck and wrist and a washable hat, chemical resistant apron, elbow length neoprene gloves, chemical resistant footwear (non-sparking rubber boots – not steel capped) and full face respirator with organic vapour/gas cartridge or canister.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Straw-coloured liquid
Odour:	Sweet
pH	6.5 (@1 %) CIPAC MT 75 (1% aqueous suspension)
Vapour Pressure:	Approx. 30 mmHg @ 20°C (moderately volatile)
Boiling Point (760 mmHg):	225°F (107°C)
Solubility in Water:	Insoluble
Specific Gravity/Density:	1.21 @ 20°C Pyknometer
Flash Point - Closed Cup:	27.5°C (81.5°F) ATSM D56
Vapour Pressure:	23 mmHg @ 20°C
Autoignition Temperature:	756 mmHg 400°C (752°F) 92/69/EEC A 15
Dynamic Viscosity:	0.66 mPa.s @ 40°C
Kinematic Viscosity:	0.636 mm ² /s @ 20°C
Liquid Density:	1.211 g/cm ³ @ 20°C Digital Density Meter

10. STABILITY AND REACTIVITY

Chemical Stability and Conditions to Avoid:	Unstable at elevated temperatures. Avoid moisture, open flames, welding arcs, or other high temperature sources, which induce thermal decomposition. Generation of gas during decomposition can cause pressure in closed systems. Pressure build up can be rapid.
Incompatible Materials:	Moisture – Corrosive when wet. Reaction with water can generate gases and acids. Avoid contact with amines and strong bases, oxidising materials, metals such as zinc, cadmium, and magnesium and/or absorbent materials such as organic absorbents.
Hazardous Decomposition Products:	Depends on the temperature, air supply and the presence of other materials. Hazardous combustion products may include but are not limited to hydrogen chloride, carbon monoxide, and carbon dioxide. Toxic gases are released during decomposition. Decomposition products can include trace amounts of Phosgene.
Polymerisation:	Not known to occur.

11. TOXICOLOGICAL INFORMATION

ACUTE

Potential Health This section includes possible adverse effects, which could occur if this material is not handled



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- Effects:** in the recommended manner.
- Swallowed:** Moderate toxicity if swallowed. The oral LD₅₀ for rats is 300 (males) and 224 (females) mg/kg. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause serious injury, even death. Aspiration into the lungs may occur during ingestion or vomiting, resulting in rapid absorption and injury to other body systems. Swallowing may result in gastrointestinal irritation or ulceration.
- In Eyes:** May cause severe eye irritation with corneal injury, which may result in permanent impairment of vision, even blindness. Chemical burns may occur. Vapours may cause lacrimation (tears) and eye irritation may be experienced as mild discomfort and redness.
- On Skin:** Brief contact may cause moderate skin irritation with local redness. May cause drying and flaking of the skin. Prolonged or widespread contact may result in absorption of harmful amounts. The LD50 for skin absorption in rabbits is 333mg/kg. Prolonged or repeated exposure may cause skin irritation, even a burn. Animal data indicates that 1,3 – Dichloropropene is a potential skin sensitiser.
- Inhaled:** Prolonged excessive exposure may cause serious effects, even death. Excessive exposure may cause irritation to upper respiratory tract (nose and throat) and lungs. The vapour LC₅₀ for rats is 855-1035pp, for 4 hours (males) and 904ppm for 4 hours (females).
- CHRONIC**
- Repeated Exposure Effects:** In animals, effects have been reported on the following organs: Bladder, Nasal tissue, Liver, Lung, Gastrointestinal tract, Respiratory tract, and Blood forming organs (Bone marrow and Spleen).
- Reproductive Effects:** In animal studies, has been shown not to interfere with reproduction.
- Teratogenic Effects:** Birth defects are unlikely. Even exposures having an adverse effect on the mother should have no effect on the foetus.
- Mutagenic Effects:** In-vitro toxicity studies were negative in some cases and positive in other cases. Animal genetic toxicity studies were negative.
- Carcinogenic Effects:** 1,3-D has been shown to cause cancer in laboratory animals by the oral route when the dose exceeds the body's defence mechanisms. Inhalation exposure resulted in an increase in the normal occurrence of benign lung tumours in male mice. Not classified as a carcinogen by the Australian Advisory Committee on Chemicals Scheduling under normal conditions of exposure. 1,3-Dichloropropene is listed as a potential carcinogen for hazard communication purposes under the National Exposure Standards for Atmospheric Contaminants un the Occupational Environment [NOHSC:1003 (1995)].

12. ECOLOGICAL INFORMATION

- Movement and Partitioning:** **Mobility in soil:** Potential for mobility in soil is very high (Koc between 0 and 50). **Bioaccumulation:** Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
- Ecotoxicity:** Material is highly toxic to aquatic invertebrates on an acute basis (LC₅₀ or EC₅₀ is < 1 mg/L in most sensitive species tested). **Fish Acute and Prolonged Toxicity**



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LC₅₀, rainbow trout (*Oncorhynchus mykiss*), 96 h: 2.78 – 4.63 mg/L

LC₅₀, sheepshead minnow (*Cyprinodon variegatus*), 96 h: 0.91 mg/L

Aquatic Invertebrate Acute Toxicity

EC₅₀ eastern oyster (*Crassostrea virginica*), 96 h shell growth inhibition: 0.67 mg/L

Aquatic Plant Toxicity

EbC₅₀, diatom *Navicular* sp., biomass growth inhibition, 120 h: 0.29 mg/L

EbC₅₀, duckweed *Lemna* sp., biomass growth inhibition, 14 h: 3.60 mg/L

Fish Chronic Toxicity Value (ChV)

fish, flow-through, 33 d, survival, LC₅₀, NOEC: 0.117 mg/L, LOEC: 0.204 mg/L

Aquatic Invertebrates Chronic Toxicity Value

water flea *Daphnia magna*, 21 d, number of offspring, EC₅₀, NOEC: 0.073 mg/L, LOEC: 0.109 mg/L

Toxicity to Above Ground Organisms

oral LD₅₀, bobwhite (*Colinus virginianus*): 152 mg/kg bodyweight

dietary LC₅₀, bobwhite (*Colinus virginianus*): > 5620 mg/kg diet

LC₅₀, honey bee (*Apis mellifera*): 18097 mg/m³

Persistence / Degradability:

Based largely or completely on information for a similar material

- Degradation is expected in the atmospheric environment within minutes to weeks
- Degradation is expected in the soil environment within days to weeks
- 1,3-Dichloropropene has a stratospheric ozone depletion potential (ODP) of 0.02, relative to CFC 12 (ODP=1)

13. DISPOSAL CONSIDERATIONS

Disposal Methods: Empty cylinders should have all valves closed and be returned to the point of sale. Do not use empty containers to store any other material.
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.

14. TRANSPORT INFORMATION

Classified as **Dangerous Goods for Transport**. DO NOT SHIP BY AIR.

UN Number: 2903

Proper Shipping Name: PESTICIDE, LIQUID, TOXIC, FLAMMABLE, N.O.S. (1,3-DICHLOROPROPENE)

DG Class (Subsidiary Risk): 6.1 (3)

Packaging Group: III

Marine Pollutant: Yes

Hazchem Code: 3WE

15. REGULATORY INFORMATION

Poison Scheduling: S7

Registration/Notification: APVMA Product No. 60921

16. OTHER INFORMATION

Glossary

ACGIH: American Conference of Governmental Industrial Hygienists

BCF: Bioconcentration Factor – a measure for the characterisation of the accumulation of a chemical in an organism. It is defined as the concentration of a chemical in an organism (plants, microorganisms, animals) divided by the concentration in a reference compartment (e.g. food, surrounding water)

BOD: Biochemical oxygen demand – the amount of oxygen required by aerobic microorganisms to decompose the organic matter in a sample of water, such as that polluted by sewage. It is used as a measure of the degree of water



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pollution. Also called biological oxygen demand.

EC₅₀: median effective concentration. Statistically derived concentration of a substance in an environmental medium expected to produce a certain effect in 50% of test organisms in a given population under a defined set of conditions

EEL: Environmental exposure standard set by ERMA

Explosive Limits: The range of concentrations (% by volume in air) of a flammable gas or vapour that can result in an explosion or ignition in a confined space

Koc: the organic carbon partition coefficient (mL soil water / g organic carbon)

Kow: See Pow

LC₅₀: Lethal concentration 50%. A concentration of chemical in air or water that will kill 50% of the test organisms

LD₅₀: Lethal dose 50%. The doses of chemical that will kill 50% of the test animals receiving it.

NOSHC: National Occupational Health and Safety Commission of Australia, now SafeWork Australia

PEL: Permissible exposure level, a maximum allowable exposure level by law

Polymerisation: a chemical reaction in which small molecules (monomers) combine to form much larger molecules (polymers). A hazardous polymerisation reaction is one that occurs at a fast rate and releases large amounts of energy

Pow: the octanol-water partition coefficient is the ratio of the concentration of a chemical in octanol and in water at equilibrium and at a specified temperature. Octanol is an organic solvent that is used as a surrogate for natural organic matter. This parameter is used in many environmental studies to help determine the fate of chemicals in the environment.

STEL: Short term exposure limit. A term used to indicate the maximum average concentration allowed for a continuous 15 minute exposure period.

TLV: Threshold Limit Value, an exposure limit set by a competent authority

TWA: Time Weighted Average. The average concentration of a chemical in air over the total exposure time – usually an 8 hour working day

References

AS/NZS 1715-2009 Selection Use and Maintenance of Respiratory Protective Devices

AS/NZS 1716-2012 Respiratory Protective Devices

Australian Dangerous Goods Code

International Maritime Dangerous Goods Code

International Air Transport Association (IATA) Dangerous Goods Regulation

WorkSafe Australia Hazardous Substance Information System

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Please read the label carefully before using this product.

CHANGE REGISTER

Revision Date	Revision Details
12 December 2016	2. HAZARD IDENTIFICATION – Hazard, Risk and Safety Phrases update in line with GHS ALL SECTIONS – Update to current references & Format change
18 September 2018	Company Details changed – from A-Gas Rural to TriCal Australia Pty Ltd