

# SAFETY DATA SHEET

## RURAL TELONE C-60 SOIL FUMIGANT

Date Prepared: 18<sup>th</sup> September 2018

Replaces: 16<sup>th</sup> June 2015

### 1. IDENTIFICATION

**Product Identifier:** Rural Telone™ C-60 Soil Fumigant  
**Other Means of Identification:** 1,3-Dichloropropene (1,3-D) and Chloropicrin (Trichloronitromethane, Nitrochloroform)  
**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**  
**Skin Corrosion/Irritation, Category 1A to 1C**  
**Serious Eye Damage/Irritation, Category 1**



**Danger**



**Danger**

**GHS Hazard Phrases:** H330: Fatal if Inhaled  
 H314: Causes severe skin burns and eye damage  
 H318: Causes serious eye damage

**GHS Precaution Phrases:** P260: Do not breathe gas  
 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: Store in a well-ventilated place. Keep cylinder tightly closed  
 P405: Store locked up  
 P501: Dispose of contents/cylinder by returning to supplier

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	40%
Chloropicrin	000076-06-2	60%

### 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



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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.

**On Skin:** Immediate continued and thorough washing in flowing water for at least 30 minutes is imperative while removing contaminated clothing. Prompt medical attention is essential. Wash clothing before reuse. Destroy contaminated leather items.

**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.) 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.

**Pre-existing Conditions:** Persons using Telone C-60 should have a medical examination (especially respiratory system and skin) prior to use to detect pre-existing conditions that might place them at increased risk and to establish a baseline for future health monitoring. Persons with impaired respiratory functions may be at increased risk from exposure to Chloropicrin.

### 5. FIRE FIGHTING MEASURES

**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:** Vapours are heavier than air and may travel a long distance and accumulate in low laying areas. Product can decompose at elevated temperatures. The generation of gas during decomposition can cause pressure in closed systems. Pressure build up can be rapid. Cylinders may rupture violently in a fire. Withdraw all personnel from area if discolouration of the cylinder is noted. Hazardous combustion products may include but are not limited to nitrogen oxides, hydrogen chloride, hydrocarbons, carbon monoxide, and carbon dioxide. Fire water run-off, if not contained, may cause environmental damage. Move container from fire area if this is possible without hazard.



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**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. Evacuate enclosed areas and keep bystanders upwind in 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:** Stop leak when safe to do so. If it can be done safely, invert or reposition the leaking container of Telone C-60 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 (24 Hours). Wear personal protective equipment (see section 8).

### 7. HANDLING AND STORAGE

**Precautions for Safe Handling:** Schedule 7 Poison – Observe all relevant regulations regarding sale, transport and storage of S7 Poisons. Prevent skin and eye contact. Wear chemical resistant (neoprene or nitrile) gloves and chemical resistant goggles or face shield plus a respirator, preferably positive pressure breathable air type respirator.

**Conditions for Safe Storage:** Store cylinders upright in cool, well-ventilated locked storage preferably outside or detached from other buildings and away from ignition sources. Do not store near or with oxidising materials.

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Exposure Limits:** 1,3-Dichloropropene: ASCC TWA 1 ppm (4.5 mg/m<sup>3</sup>), Skin.  
Chloropicrin: ASCC TWA 0.1 ppm (9.67 mg/m<sup>3</sup>).

**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 PAKAGING 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



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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 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.

### 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

<b>Appearance:</b>	Straw-coloured liquid
<b>Odour:</b>	Pungent, lacrymating (causes tears)
<b>Vapour Pressure:</b>	Approx. 30 mmHg @ 20°C (moderately volatile)
<b>Boiling Point/Range:</b>	Not known (estimated at > 90°C)
<b>Freezing/Melting Point:</b>	Not known (estimated at < -50°C)
<b>Solubility:</b>	Chloropicrin component is soluble, 1,3-D is approx. 0.1%
<b>Specific Gravity/Density:</b>	1.45 @ 20°C
<b>Flash Point:</b>	49°C (PMCC)
<b>Flammability Limits:</b>	LFL: 5.5% @ 80°C ; UFL: 14.5% @ 80°C (for 1,3-Dichloropropene)

## 10. STABILITY AND REACTIVITY

<b>Chemical Stability and Conditions to Avoid:</b>	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.
<b>Incompatible Materials:</b>	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.
<b>Hazardous Decomposition Products:</b>	Depends on the temperature, air supply and the presence of other materials. Hazardous combustion products may include but are not limited to nitrogen oxides, hydrogen chloride, hydrocarbons, carbon monoxide, and carbon dioxide.
<b>Polymerisation:</b>	This product is unlikely to spontaneously polymerise.

## 11. TOXICOLOGICAL INFORMATION

### ACUTE

<b>Swallowed:</b>	Moderate toxicity if swallowed. The oral LD <sub>50</sub> for rats is > 100 (males) and 100-200 (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.
<b>In Eyes:</b>	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



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lacrimation (tears) and eye irritation may be experienced as mild discomfort and redness.

**On Skin:** Brief contact may cause severe skin burns. Symptoms may include pain, severe local redness, and tissue damage. Prolonged or widespread skin contact may result in absorption of harmful amounts. The LD<sub>50</sub> for skin absorption in rabbits is between 907 (males) and > 1000 (females) mg/kg. Classified as corrosive to the skin. Vapour may cause skin irritation. May cause more severe response if skin is abraded (scratched or cut). Skin contact may cause an allergic reaction in a small proportion of individuals.

**Inhaled:** Brief exposure (minutes) to easily attainable concentrations may cause serious adverse effects, even death. Excessive exposure may cause severe irritation to upper respiratory tract (nose and throat) and lungs. Excessive exposure to Chloropicrin may cause lung injury. May cause allergic respiratory response. Excessive exposure may cause Methemoglobinemia, thereby impairing the blood's ability to transport oxygen. May cause central nervous system effects and nausea or vomiting. Chloropicrin has also caused weak/irregular heart action and muscle damage upon severe exposure.

#### CHRONIC

**Reproductive Effects:** For the major components, Chloropicrin and 1,3-Dichloropropene, did not interfere with reproduction in animal studies.

**Teratogenic Effects:** Birth defects are unlikely. Even exposures having an adverse effect on the mother should have no effect on the foetus.

**Mutagenic Effects:** For the component 1,3-Dichloropropene, in-vitro toxicity studies were negative in some cases and positive in other cases. Animal genetic toxicity studies were negative. For Chloropicrin, in-vitro genetic toxicity studies were negative in some cases and positive in other cases. Animal genetic toxicity studies were inconclusive.

**Carcinogenic Effects:** 1,3-D is listed as a potential carcinogen. 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.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity:** Material is highly toxic to aquatic invertebrates on an acute basis (LC<sub>50</sub> or EC<sub>50</sub> is < 1 mg/L in most sensitive species tested) and highly toxic to fish e.g. Acute LC<sub>50</sub> in bluegill (*Lepomis macrochirus*) and rainbow trout (*Oncorhynchus mykiss*) is estimated at < 1 mg/L (based on Chloropicrin). A feeding study of Chloropicrin in chickens showed no adverse effects at doses up to 100 ppm for 120 days (highest dose tested). Material is toxic to birds on an acute basis (LD<sub>50</sub> is between 51 and 500 mg/kg). Material is harmful in the soil environment primarily to nematodes.

**Persistence / Degradability:** Chloropicrin degrades to carbon dioxide in soil with a half-life between 8 hours and 4.5 days. In water, Chloropicrin degrades to carbon dioxide, bicarbonate, chloride, nitrate and nitrite within 32 hours when exposed to light. Half-life in air when exposed to simulated sunlight was 20 days with the end products being phosgene, nitric oxide, chlorine, nitrogen dioxide and dinitrogen tetroxide.

**Mobility:** Based largely or completely on information for a similar material: Potential for mobility in soil is very high (Koc between 0 and 50).



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**Environmental Fate:** Based largely or completely on information for a similar material: Degradation is expected in the soil environment within days to weeks. 1,3-Dichloropropene has a stratospheric ozone depletion potential (ODP) of 0.002, relative to CFC 12 (ODP = 1).

**Bioaccumulation Potential:** Bioconcentration potential is low (BCF is < 100 or Log Pow < 3).

### 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

**UN Number:** 3390  
**Proper Shipping Name:** TOXIC BY INHALATION, LIQUID, CORROSIVE, N.O.S. (CHLOROPICRIN AND 1,3-DICHLOROPROPENE)  
**DG Class (Subsidiary Risk):** 6.1 (8)  
**Packaging Group:** I  
**Special Precautions for Users:** Do not use magnesium, aluminium or their alloys for handling equipment or containers. Be sure container is closed completely.  
**Hazchem Code:** 3WE

### 15. REGULATORY INFORMATION

**Poison Scheduling:** S7  
**Registration/Notification:** APVMA Product No. 63583

### 16. OTHER INFORMATION

<sup>TM</sup> Telone is a Registered Trademark of Dow AgroSciences LLC

Prepared using data supplied by information supplied by manufacturer and publicly available databases including US Occupational Safety & Health Administration (OHSA); American Conference of Industrial Hygienists (ACGIH); Extension Toxicology Network (Exttoxnet); International Programme on Chemical Safety (IPCS Inchem); Toxnet; National Occupational Health and Safety Commission of Australia (NOHSC Australia) – SafeWork Australia; Australian Pesticides & Veterinary Medicines Authority (APVMA).

**DISCLAIMER:** The information contained in this Safety Data Sheet is provided to the best of our knowledge at the date of issue, but no warranty can be made that the information is accurate or complete. Individuals reading this information must exercise their independent judgement in determining its appropriateness in any situation. TriCal Australia makes no representation as to the accuracy and comprehensiveness of the information and to the full extent allowed by the law excludes all liability whatsoever, whether with respect to negligence or otherwise, for any loss or damage arising from or connection with the supply or use of the information in this Safety Data Sheet.

**Please read the label carefully before using this product.**

#### CHANGE REGISTER

Revision Date	Revision Details
16 June 2015	<b>2. HAZARD IDENTIFICATION</b> – Hazard, Risk and Safety Phrases update in line with GHS
18 September 2018	<b>Company Details changed</b> – from A-Gas Rural to TriCal Australia Pty Ltd