



## READ LABEL COMPLETELY BEFORE MIXING OR APPLYING



**Registered to:**  
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ONEKAWA  
NAPIER  
Phone: 06 8435330

Controls plant parasitic nematodes in cropping land

### ACTIVE INGREDIENT:

Contains (945 g/kg) 1150 g/litre 1,3-dichloropropene.



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### WARNING:

This material is very dangerous if swallowed, inhaled or absorbed through the skin.

Attacks eyes. Will irritate the nose and throat and skin.

The fumes first cause smarting, then watering of the eyes. This should be taken as a warning sign. The liquid can cause burns.

### PRECAUTIONS:

When using the product wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow length neoprene gloves and goggles and impervious footwear and half facepiece respirator with organic vapour cartridge (MB filter).

Avoid contact with eyes and skin.

Do not inhale vapour.

Protect eyes while using.

Wash splashes of concentrate off skin immediately with soap and water.

Do not eat, drink or smoke while using.

Wash thoroughly before meals and after work.

Wash protective clothing daily after work.

Do not re-use footwear until thoroughly aired.

Do not use in or near food preparation or storage areas.

Empty contents fully into application equipment. Close all valves and return to point of supply for refill or storage.

This product is highly toxic to birds and is moderately toxic to honey bees and aquatic organisms.

Do not use Telone Soil Fumigant in soil within 15 metres of an aquatic environment such as a river, stream or marsh.

Avoid contamination of any water supply with chemical or empty container.

Avoid re-entry into treated areas for 5 days. When re-entry into treated areas is necessary, or when odour persists beyond 5 days after treatment and entry is required, wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow length neoprene gloves and goggles and impervious footwear and half facepiece respirator with organic vapour cartridge (MB filter).

**Ground water advisory statement:** The 1,3-dichloropropene in Telone is known to move through soil and under certain conditions has the potential to reach ground water. Application in areas where soils are permeable and ground water is near the surface could result in ground water contamination for a period of time after treatment. Do not apply within 30 metres of any well used for drinking water.

### SYMPTOMS OF POISONING

The symptoms described above under WARNING will lead to poisoning if exposure continues.

### FIRST AID:

If swallowed do NOT induce vomiting. For advice contact the National Poisons Centre, 0800 POISON (0800 764 766) or a doctor immediately. Begin artificial respiration if the victim is not breathing. Use mouth-to-nose rather than mouth-to-mouth. Obtain medical attention. If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. If splashed in eyes, wash out immediately with water.

If inhaled, remove to fresh air immediately. Begin artificial respiration if breathing has stopped.

### STORAGE

Store in original container tightly closed and in a dry, cool, locked, well ventilated area, away from foodstuffs. Do not store for prolonged periods in direct sunlight.

When stored appropriately this product should show no significant degradation for 2 years from the date of manufacture. Contact your supplier for further information about the use of any product that is older than this.

### SMALL SPILL MANAGEMENT

Extinguish all sources of ignition. Wear protective equipment (see PRECAUTIONS). Apply absorbent material such as earth, sand, clay granules or cat litter to the spill. Sweep up material for disposal when absorption is completed and contain in a refuse vessel for disposal in a manner acceptable to the health and catchment authorities. If necessary wash the spill area with an alkali detergent and water and absorb the wash liquid for disposal as described above. 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.

For all major spillages the Fire Service should be informed immediately, followed by the local Health Protection Officers.

### DIRECTIONS FOR APPLICATIONS AND PLANTING:

#### General

Use Telone only as a preplanting treatment to control lesion, root-knot and many other nematodes in land to be planted with strawberries, vegetable crops, tobacco, floral crops, citrus and deciduous orchard planting sites, ornamentals and forest nursery crops.

**DO NOT** use Telone on extremely heavy clay soils.

**DO NOT** dilute with water.

**DO NOT** apply Telone Soil Fumigant through any type of irrigation system.

**DO NOT** use when soil temperature is below 5°C or above 27°C.

**DO NOT** apply within 1.5m of desirable plants or living trees.

**DO NOT** fumigate more than once per crop.

#### Application

When conducting any activity within 2 metres of unshielded, pressurised hoses containing Telone soil fumigants wear protective equipment. (See PRECAUTIONS).

**Do Not** use in enclosed greenhouses or other enclosed areas. Telone can be used in large greenhouses with both ends removed to allow ventilation.

**Do Not** unload cylinders by rope-sling, hooks or tongs.

Keep cylinders upright in tamper-proof airy stores, away from dwellings and food and feed stuffs.

Put out all pilot lights and glowing heating units.

**Do Not** use containers, pumps or other transfer equipment made of aluminium, magnesium or their alloys as under certain conditions this product may be severely corrosive to such metals.

Since Telone is corrosive under certain conditions, flush all applicators with fuel oil or kerosene immediately after use.

#### APPLICATION RATES

**Broadcast application:** For light sandy soils apply 200 litres Telone per hectare and for all other soils apply 350 litres Telone per hectare.

**Row application:** For light sandy soils apply Telone at a rate/tyne of 600 ml/100m of row and for all other soils 1050ml/100m of row. Flow rates are based on 30.5cm outlet spacing. Flow rates for alternative spacings can be calculated using the formula: ml/100m of row/outlet = 0.1 X rate in L/ha X outlet spacing in cm.

#### Application Timing

Telone can be applied at any time of the year when soil conditions permit. Conditions that allow rapid diffusion of the fumigant as a gas through the soil normally give best results. Because Telone does not provide residual control of soil pests, it should be used as a preplant application before planting each crop. The following soil temperature and moisture conditions should exist at time of treatment. Failure to meet these conditions may result in unsatisfactory product performance.

#### Soil Conditions

Optimal temperatures for application are between 10°C and 20°C.

#### Soil Moisture

It is critical to manage soil moisture properly before fumigation. Plan fumigation for seasons, crop rotations, or irrigation schedules which leave moisture in the soil. The soil must be moist from 5 cm below the soil surface to at least 30 cm deep as determined by the feel method (see below). The amount of moisture needed in this zone will vary according to soil type. The surface soil generally dries very rapidly and should not be considered in this determination. If there is insufficient moisture at the 5 cm to 15 cm depth, the soil moisture must be adjusted. If irrigation is not available and there is adequate soil moisture below 15cm, it may be brought to the surface by disk or ploughing before or during the injection.

In general, no irrigation should immediately precede subsoiling or fumigation; however, when irrigation is available and surface soil moisture conditions are not likely to provide an adequate seal against fumigant loss, a very light sprinkler irrigation to wet the top 2.5 to 5 cm of soil may be used to bring soil moisture content to the desired level.

**The following descriptions will aid in determining acceptable soil moisture conditions by the "feel method".** For coarse soils (sand and loamy sand), there must be enough moisture to allow formation of a weak ball when compressed in the hand. Due to soil texture, this ball is easily broken with little disturbance. In loamy or medium textured soils (coarse sandy loam, sandy loam and fine sandy loam), a soil sample with the proper moisture content can be formed into a ball which holds together with moderate disturbance, but does not stick between the thumb and forefinger. Fine textured soils (clay loam, silty clay loam, sandy clay, silty clay, sandy clay loam and clay), should be pliable and not crumbly, but should not form a ribbon when compressed between the thumb and forefinger.

UN No. 2047  
DICHLOROPROPENES.  
PG11  
HAZCHEM 2W

**NETT CONTENTS: 80 Kilograms**

**BATCH NUMBER: D0408**

**DATE OF MANUFACTURE: 01/04/2008 EXPIRY DATE: 01/04/2010**

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#### Soil Preparation

The soil should be free of clods. Large clods can prevent effective soil sealing and reduce effectiveness of Telone. Plant residues should be thoroughly incorporated into the soil prior to treatment to avoid interfering with application. Undecomposed plant material may harbour pests that will not be controlled by fumigation. Little or no crop residue should be present on the soil surface. Crop residue that is present should lie flat to permit the soil to be sealed effectively. Compacted soil layers within the desired treatment zone should be fractured before or during application of the fumigant. Deviation from the above conditions may result in unsatisfactory results.

#### Placement of fumigant

Telone may be applied as either a broadcast or row treatment. It must be placed at least 20cm below the final soil surface. When soil conditions allow, placement of 35cm below the final soil surface is recommended. Deeper placement is recommended when fumigating soil to be planted with deep-rooted plants, such as citrus and deciduous orchard trees or to control deeply distributed pests. For row application, the fumigant must be placed at least 30cm from the edge of the bed.

#### Application Methods and Equipment

Use equipment specifically designed for application of fumigants to soil.

**Minimizing end row spillage:** Product spillage at the end of rows should be minimized. An effective flow shut-off device must be used to prevent discharge of fluid at the end of rows. After shutting off flow, run tynes underground for 30 cms to limit spillage which may occur when the tyne is raised from the ground.

**Broadcast Application:** Choose application equipment which allows the deepest application and best soil seal under existing conditions.

The fumigant outlet spacing varies with the type of application equipment used:

**With tyne equipment** a fumigant tyne spacing of 30 cm is recommended. The outlet spacing for this equipment may be up to 1½ times the application depth but generally should be equal to the application depth and should not exceed the soil-shattering capability of the tynes.

**Row Application (for row spacing greater than 60cm):** Use tyne equipment to treat a band of soil where the crop is to be planted, i.e. the plant row. When multiple tynes per plant row are used, space the tynes (fumigant outlets) 20 to 30 cm. Regardless of the number or spacing of tynes used, the fumigant must be placed at least 30cm from the edge of the bed. To prevent seed germination problems caused by improper seed-to-soil contact or improper seeding depth, do not place the seed directly over the furrow left by the applicator tyne(s).

#### Sealing the Soil After Application

**Immediately** after tyne application of Telone the soil must be "sealed" to prevent fumigant loss and ensure that an effective concentration of fumigant is maintained within the soil for a period of several days. **For broadcast treatment**, sealing can be accomplished with equipment that will uniformly mix the soil to a depth of 8 to 10cm to effectively eliminate chisel or plough traces which can allow direct escape of the fumigant. A tandem disc or similar equipment may be used for this purpose. To maximize sealing, steps should also be taken to compact the soil surface to further retard the rate of fumigant loss by following with a ring roller or roller in combination with tillage equipment. Compaction of the soil surface alone does not effectively disrupt tyne or plough traces.

**For row treatment**, forming the beds at the time of application should be accomplished in a manner that places the fumigant at least 30cm from the edge of the bed or the nearest soil/air interface (e.g. furrow). The closest soil/air interface could be the furrow for multiple tyne applications or the top of the beds for single tyne applications. Row treatments into preformed beds must be sealed by disrupting the tyne trace using press sealers, ring rollers or by reforming the beds and following with such equipment.

Sealing can also be improved by applying un-perforated plastic film, such as polyethylene, over the entire area or in strips. Use of a film to seal the soil surface does not eliminate the need to eliminate chisel traces prior to application of the plastic film.

Proper soil conditions at the time of application (see **Soil Preparation**) are important to ensure proper placement of fumigant (see **Placement of Fumigant**) and obtaining adequate sealing. Prior tillage should be adequate to eliminate clods and thoroughly mix crop residues into the soil.

#### Soil Fumigation Interval

Leave the soil undisturbed for at least 7 days after treatment and unplanted for at least 14 days after application of the fumigant. Longer intervals are required if the soil becomes cold or wet, and for deep-rooted tree, shrub and vine planting sites.

Allow the fumigant to dissipate completely before planting the crop. Seeds (such as Cress), previously soaked in water, may be used as a bioassay to determine if Telone is present in the soil at concentrations sufficient to cause plant injury. Do not plant if the odour of Telone is present within the zone of fumigation.

#### RE-ENTRY PERIOD

Do not allow entry into treated areas for 5 days after treatment. When prior entry is necessary, or when odour persists beyond 5 days after treatment and entry is required, wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow length neoprene gloves and goggles and impervious footwear and half facepiece respirator with organic vapour cartridge (MB filter).

#### Caution

Fumigation may temporarily raise the level of ammonia nitrogen and soluble salts in the soil. This is most likely to occur when heavy rates of fertiliser and fumigant are applied to soils that are either cold, wet, acid or high in organic matter. To avoid injury to plant roots, apply fertiliser as indicated by soil tests.

#### After fumigation

To avoid ammonia injury or nitrate starvation (or both) to crops, avoid using fertilisers containing ammonium salts and use only fertilisers containing nitrates until after the crop is well established.

To avoid reinfection of treated soil do not use transplants, tools or crop remains that could carry soil borne pests from infected land.