

11220-15

05/3/2010

1 of 33



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF  
PREVENTION, PESTICIDES AND  
TOXIC SUBSTANCES

CERTIFIED MAIL

Mardel Belotinsky  
TriCal Inc.  
P.O. Box 1327  
Hollister, CA 95024-1327

MAY 3 2010

Subject: Tri-Form 40/60  
EPA Reg. No. 11220-15  
Pre-RED Mitigation Amendment dated November 4, 2009  
EPA Decision Number 430350

Dear Ms. Belotinsky:

The amended label referred to above, submitted in connection with reregistration of chloropicrin under the Federal Insecticide, Fungicide and Rodenticide Act as amended is acceptable provided the following label revisions are made and the following conditions are met:

**LABEL REVISIONS**

1. On page 2 in the company address, delete "8770 Highway 25 · Hollister · CA 95023".
2. On page 2, revise the last bullet under the Hazardous Liquid Vapor section to read "This product also contains chloropicrin, a strong lachrymator (tear-producing eye irritant), which has the capacity to cause marked eye irritation to the upper respiratory tract. Low concentrations are capable of causing painful eye irritation. The effect may be so powerful that a person may become temporarily blinded and panic-stricken. That, in turn, may lead to accidents."
3. On page 3 under the PPE section, revise the second and third sections to read "**When not performing tasks with liquid contact potential, all handlers (including applicators) must wear:**
  - Long-sleeved shirt and long pants, and
  - Shoes and socks.
  - Do not wear jewelry, gloves, goggles, tight clothing, rubber protective clothing, or rubber boots when handling. Chloropicrin is heavier than air and can be trapped inside clothing and cause skin injury.

**When performing tasks with liquid contact potential, all handlers (including applicators) must wear:**

- Long-sleeved shirt and long pants,

- Chemical-resistant gloves,
  - Chemical-resistant apron,
  - Protective eyewear (Do NOT wear goggles), and
  - Chemical-resistant footwear and socks.”
4. On page 3 under number 1, revise the first sentence of the second section to read “If sensory irritation (tearing, burning of the eyes or nose) is experienced and handlers remain in the application block, handlers must wear at a minimum either:”
  5. On page 3 under number 1, change “a” to “A” in the first bullet of the second section.
  6. On page 4, revise the section “IMPORTANT: An air-supplying respirator. . .” to read “IMPORTANT: A self-contained breathing apparatus (SCBA) is not permitted for routine handler tasks.”
  7. On page 4 under number 3, revise the first sentence of the second section to read “If sensory irritation (tearing, burning of the eyes or nose) is experienced and handlers remain in the application block, handlers must wear at a minimum either:”
  8. On page 4 under number 3, delete the extra bullet under the second section.
  9. On page 4 under number 4, revise:
    - a. the title to read, “Handlers exposed to high airborne concentrations of this product, e.g., emergencies such as a spill or leak or when corrective action is needed to reduce air levels to acceptable levels, and exposure to this product in poorly ventilated areas, must wear at a minimum.”
    - b. revise the last bullet to read “Self-contained breathing apparatus (SCBA) with NIOSH approval number prefix TC-13F. See further respirator requirements in the *Protection for Handlers* section on this label.”
  10. On page 6 under the DIRECTIONS FOR USE section, revise the text above the Agricultural Use Requirements box as follows:

“DIRECTIONS FOR USE  
RESTRICTED USE PESTICIDE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the Agency responsible for pesticide regulation.”

11. On page 6 in the Agricultural Use Requirements box, add the following sentence after the last sentence, “PPE for Entry During the Entry Restricted Period: PPE for entry that is

permitted by this labeling is listed in the Hazards to Humans and Domestic Animals section of this labeling.”

12. On page 6 under the NOTICE section, add a quotation mark before the word LIMITATION.
13. On page 7 in the Entry Restricted Period section under the fourth bullet, delete the word “until”.
14. On page 8 under number 1, revise the sixth bullet to read “Handlers can remove full-face air-purifying respirators or resume work activities if all of the following conditions exist provided that a half-face respirator is worn:”
15. On page 10 under number 3, revise the eighth bullet to read “Work activities can resume if all of the following conditions exist provided that a full-face air-purifying respirator is worn:”
16. On page 10 under SUPERVISION OF HANDLERS, revise the fifth sentence to read, “The certified applicator must provide **Fumigant Safe Handling** information to each handler involved in the application or confirm that each handler participating in the application has received **Fumigant Safe Handling** information in a manner they can understand within the past twelve months. **Fumigant Safe Handling** information will be provided where this product is purchased, or at <http://www.epa.gov/fumigantraining>.”
17. On page 11, revise the subheading and text “Air-Rescue Device Availability. . .” to read “AVAILABILITY OF RESPIRATORS FOR EMERGENCIES”
  - The employer of any handler must confirm that at least one self-contained breathing apparatus (SCBA) is on-site and is ready for use in case of an emergency. This must be documented in the FMP.”
18. On page 13 under GENERAL APPLICATION RESTRICTIONS:
  - a. Delete the first and second bullet.
  - b. Add a bullet and the following text “CHEMIGATION: DO NOT APPLY TRI-FORM 40/60 THROUGH ANY TYPE OF IRRIGATION SYSTEM.”
19. On page 14, delete the chemigation text.
20. On page 14 under Application Timing, revise the second sentence to read “Conditions that allow rapid diffusion of the fumigant as a gas through the soil normally give the best results.”
21. On page 15, under Weather Conditions revise the fourth bullet to read “Detailed local forecasts for weather conditions, wind speed, and air stagnation advisories may be

obtained on-line at: <http://www.nws.noaa.gov>, or by contacting your local National Weather Service Forecasting Office.”

22. On page 18 under Application Methods and Equipment, letter a, in the first bullet, revise “1-½” to “1 ½”.
23. On page 20 under the Bulk and Non-Bulk Containers section in the fourth bullet, delete the extra space between “product” and “when”.
24. On pages 20 and 21, delete the Tri-Form 40/60 Tree Replant Applications: GAPS section.
25. On page 21, revise the first bullet in the FMP section to read, “Applicator information (name, phone number, pesticide applicator license and/or certificate number, employer name, employer address).”
26. On page 22, revise the third bullet “Air-purifying respirators, air-rescue devices, and. . .” to read, “Air purifying respirators, SCBAs, and other personal protective equipment (PPE) for handlers (handler task; protective clothing; respirator make, model, type, style, and size; respirator cartridge type; respirator cartridge replacement schedule; eye protection; gloves; and other PPE)”.
27. On page 22, revise the text “For handlers designated to wear air-purifying respirators. . .” to read “For handlers designated to wear respirators (air-purifying respirator or SCBA):
  - Date of medical qualification for respirator(s) that each handler is designated to wear,
  - Date of training for respirator(s) that each handler is designated to wear, and
  - Date of fit-testing for respirator(s) that each handler is designated to wear.”
28. On page 23 under Good Agricultural Practices, delete “(registrants may also include optional GAPS).”
29. On page 24 under the APPLICATION DIRECTIONS section, move the first paragraph to page 14. Place this paragraph in the Planting Interval section after the first sentence.
30. On page 25, revise the first sentence of footnote (a) as follows: “Do not exceed specified maximum application rates in Table 1 or in the footnotes below.”
31. On page 25, revise the “note” section to read “To control symphylans (garden centipedes), use 38.5 to 48.6 gal/A for tarped or untarped deep applications, or 24.3 gal/A for untarped shallow applications. Apply during late Summer or early Fall when the soil is warm.”
32. On page 26, in Table 2, revise the “Note” at the top of the table to read as follows: “Note: In no case may the amount of fumigant . . .”

50A33

33. On page 27 under SPILL AND LEAK PROCEDURES, revise the second and seventh sentences as follows:
  - a. "For entry into affected area to correct problems, wear the personal protective equipment specified in the *Hazards to Humans and Domestic Animals* section of this labeling.
  - b. Dispose of contaminated material on site or at an approved disposal facility."
  
34. On page 27 of the STORAGE AND DISPOSAL section, revise the PESTICIDE STORAGE AND HANDLING section as follows: Store in a cool, . . . Remove the valve bonnet and safety cap only when fumigant is about to be removed from the cylinder. The safety cap and valve protection bonnet must be replaced when the cylinder is not in use. Do not subject cylinders to rough handling, or to abnormal mechanical shock such as dropping, bumping, dragging or sliding. Do not use ropes, slings, hooks, tongs, and similar handling devices for unloading cylinders. To transport heavier cylinders, use a hand truck, fork truck or similar device to which cylinders can be firmly secured."

#### CONDITIONS

1. EPA has determined that the risk mitigation measures on the revised label for this product are necessary to adequately protect human health and the environment. Therefore, pursuant to 40 CFR § 152.130(d), EPA has decided that no product bearing previously approved labeling may be sold or distributed (release for shipment) by its registrant after December 1, 2010. Wherever state approval is required for sale or distribution of this product with this new labeling, EPA strongly encourages you to submit an application to the state authority as soon as possible. You should be aware that the Agency does not intend to modify the December 1, 2010, deadline because of any failure to obtain necessary state approvals.
  
2. Submit one copy of the final printed label that incorporates the required changes before the product is released for shipment.

One copy of the label stamped "Accepted with comments" is enclosed for your records. If you have any questions, please Andrea Carone by phone at (703) 308-0122 or via email at [carone.andrea@epa.gov](mailto:carone.andrea@epa.gov) or Mary Waller by phone at (703) 308-9354 or via email at [waller.mary@epa.gov](mailto:waller.mary@epa.gov).

Sincerely,



Mary L. Waller  
Product Manager (21)  
Fungicide Branch  
Registration Division (7504P)

Enclosure

**RESTRICTED USE PESTICIDE**  
 DUE TO ACUTE TOXICITY AND CARCINOGENICITY  
 For retail sale to and use by certified applicators or persons under their direct supervision and only for those uses covered by the certified applicator's certification.

# Tri-Form 40/60

*A multi-purpose liquid fumigant for preplant treatment of soil to control nematodes, symphlyans, wireworms and certain soil-borne diseases in cropland.  
 Not for use in greenhouses or other enclosed areas.*

**ACTIVE INGREDIENTS:**

1,3-Dichloropropene .....	39.0%
Chloropicrin .....	59.4%
<b>OTHER INGREDIENTS:</b> .....	<u>1.6%</u>
<b>TOTAL:</b> .....	100.0%

One gallon of Tri-Form 40/60 weighs about 12.1 pounds at 20° C.  
 Contains 4.7 pounds of 1,3-Dichloropropene and 7.2 pounds of Chloropicrin per gallon.

### KEEP OUT OF REACH OF CHILDREN



**DANGER                      PELIGRO**

**POISON** [Note : « Poison » will be printed in red.]

*Si Usted no entiende la etiqueta, busque a alguien para que se la explique a Usted en detalle.  
 (If you do not understand the label, find someone to explain it to you in detail.)*

**IN ALL CASES OF OVEREXPOSURE, GET MEDICAL ATTENTION IMMEDIATELY.  
 TAKE PERSON TO A DOCTOR OR TO AN EMERGENCY TREATMENT FACILITY.**

FIRST AID	
<b>If swallowed:</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>If on skin or clothing:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If inhaled:</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>If in eyes:</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<ul style="list-style-type: none"> <li>• For additional information in case of an emergency, call toll free (1-800-424-9300.)</li> </ul>	

- Have the product container or label with you when calling a poison control center or doctor, or going for treatment.
- NOTE TO PHYSICIAN**
- Because rapid absorption may occur through lungs if product is aspirated and cause systemic effects, the decision to induce vomiting or not should be made by a physician. Probable mucosal damage may contraindicate the use of gastric lavage. If lavage is performed, endotracheal and/or esophageal control is suggested. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach.

*SEE SIDE PANELS FOR ADDITIONAL PRECAUTIONARY STATEMENTS.*



**TriCal, Inc.**

P. O. Box 1327 • Hollister • CA 95024-1327 -- 8770 Highway 25 • Hollister • CA 95023  
(831) 630-2243

EPA Reg. No. 11220-15  
EPA Est. 11220-CA-4; 11220-CA-8

NET CONTENTS.....LBS.

**PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS:**

**D A N G E R**

**HAZARDOUS LIQUID AND VAPOR**

- DO NOT SWALLOW ANY OF THIS PRODUCT. MAY BE FATAL IF SWALLOWED.
- DO NOT GET IN EYES. CAUSES SEVERE EYE INJURY.
- DO NOT GET ON SKIN. MAY BE FATAL IF ABSORBED THROUGH THE SKIN. CAUSES SKIN BURNS. MAY CAUSE ALLERGIC SKIN REACTION.
- DO NOT BREATHE VAPOR. MAY BE FATAL IF INHALED. MAY CAUSE LUNG, LIVER AND KIDNEY DAMAGE AND RESPIRATORY SYSTEM IRRITATION UPON PROLONGED CONTACT.
- THE USE OF THIS PRODUCT MAY BE HAZARDOUS TO YOUR HEALTH. THIS PRODUCT CONTAINS 1,3-DICHLOROPROPENE, WHICH HAS BEEN DETERMINED TO CAUSE TUMORS IN LABORATORY ANIMALS. RISKS CAN BE REDUCED BY EXACTLY FOLLOWING DIRECTIONS FOR USE, PRECAUTIONARY STATEMENTS, AND BY WEARING THE PERSONAL PROTECTIVE EQUIPMENT SPECIFIED IN THIS LABELING.
- THIS FUMIGANT HAS THE CAPACITY TO CAUSE MARKED IRRITATION TO THE UPPER RESPIRATORY TRACT. A STRONG LACHRYMATOR (TEAR PRODUCING EYE IRRITANT). LOW CONCENTRATIONS ARE CAPABLE OF CAUSING PAINFUL EYE IRRITATION. THE EFFECT MAY BE SO POWERFUL THAT A PERSON MAY BECOME TEMPORARILY BLINDED AND PANIC-STRICKEN. THAT, IN TURN, MAY LEAD TO ACCIDENTS.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

Some materials that are chemical-resistant to this product are listed below. For more options, follow the instructions for Category H on the chemical resistance category selection chart. PPE constructed of saranex, neoprene, and chlorinated polyethylene provide short-term contact or splash protection against liquid in this product. Longer-term protection is provided by PPE constructed of viton, Teflon, and EVAL barrier laminates (for example, responder suits manufactured by Life-guard or silvershield gloves manufactured by North). Where chemical-resistant materials are required, leather, canvas, or cotton materials offer no protection from this product and must not be worn as the sole article of protection when contact with this product is possible. Where coveralls are required, they must be loose-fitting and constructed of woven fabrics (e.g., tight knit cotton or cotton/polyester), non-woven fabrics (e.g., tyvek or sontara), or fabrics containing microporous Teflon.

**All handlers (including applicators) must wear:**

- Long-sleeved shirt and long pants
- Shoes and socks

**When handling liquid, all handlers (including applicators) must wear:**

- Coveralls over short-sleeved shirt and short pants
- Chemical-resistant gloves
- Chemical-resistant apron
- Chemical-resistant headgear for overhead exposure
- Protective eyewear (**do not** wear goggles)
- Chemical-resistant footwear and socks.

***The PPE required when handling liquid must be immediately available and must be worn if the handler is to perform any handling activity with a potential for liquid contact.***

1. All handlers (including applicators) must wear a half-face air-purifying respirator (except when handlers are in enclosed cabs or applying the fumigant with equipment that disrupts the chisel trace and seals the soil at the same time, e.g., Yetter applicator) with either an organic-vapor-removing cartridge with a prefilter approved for pesticides (NIOSH approval number prefix TC-23C) or canister approved for pesticides (NIOSH approval number prefix TC-14G). See further respirator requirements in the *Directions for Use, Protection for Handlers* section on this label.

In addition, if sensory irritation (tearing, burning of the eyes or nose) is experienced while wearing a half-face air-purifying respirator, handlers must wear at a minimum either:

- a full-face respirator with an organic-vapor-removing cartridge with a prefilter approved for pesticides (NIOSH approval number prefix TC-23C), or
- A full-face respirator with a canister approved for pesticides (NIOSH approval number prefix TC-14G).

(See *Directions for Use, Protection for Handlers, Respiratory Protection and Stop Work Triggers*, number 1: *Handlers Wearing Half-Face Air Purifying Respirators*, for when a full-face respirator is required.)



**IMPORTANT:** An air-supplying respirator [i.e., a respirator connected directly to a clean air source or a self-contained breathing apparatus (SCBA)] is not permitted for routine handler tasks. Such respirators are only permitted in emergencies, such as a spill or leak, or when corrective action is needed to reduce air levels to acceptable levels.

2. Handlers using enclosed cabs are not required to wear respiratory protection (**Not Applicable in California**) provided that the cab has been maintained according to the manufacturer's written operating instructions **AND** there is written documentation that the ventilation system has been maintained according to the manufacturer's instructions **AND** the enclosed cab is in conformance with the following requirements:

- The enclosed cab must be positive pressure - 6 mm H<sub>2</sub>O gauge.
- The enclosed cab must have a minimum air intake flow of 43 m<sup>3</sup>/hour.
- The enclosed cab must be equipped with activated charcoal filter media containing no less than 1000 grams of activated charcoal.
- The filter must be changed after no more than 50 hours of application time.
- Conformance with these requirements must be documented in the Fumigant Management Plan (FMP).

(See *Directions for Use, Protection for Handlers, Respiratory Protection and Stop Work Triggers*, number 2: *Handlers in Enclosed Cabs* for stop work procedures.)

3. Handlers applying the fumigant with equipment that disrupts the chisel trace and seals the soil with one implement, e.g., a Yetter applicator (**Not Applicable in California**) are not required to wear respiratory protection unless sensory irritation is experienced.

If sensory irritation (tearing, burning of the eyes or nose) is experienced handlers must wear at a minimum either:

- A full-face respirator with an organic-vapor-removing cartridge with a prefilter approved for pesticides (NIOSH approval number prefix TC-23C), or
- A full-face respirator with a canister approved for pesticides (NIOSH approval number prefix TC-14G).
- 

(See *Directions for Use, Protection for Handlers, Respiratory Protection and Stop Work Triggers*, number 3: *Handlers Applying the Fumigant with Equipment that Disrupts the Chisel Trace and Seals the Soil with One Implement, e.g., a Yetter Applicator (Not Applicable in California)* for when a full-face respirator is required.)

4. Handlers exposed to high airborne concentrations of this product, such as cleanup following large spills and exposure to this product in poorly ventilated areas, must wear at a minimum:

- Chemical-resistant suit
- Chemical-resistant gloves, such as barrier laminate (EVAL) or viton
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear
- Supplied-air respirator with NIOSH approval number prefix TC-19C or self-contained breathing apparatus (SCBA) with NIOSH approval number prefix TC-13F. See further respirator requirements in the *Protection for Handlers* section on this label.

**Note:** In-tank cleaning of bulk tanks must be performed only by persons who have been specifically trained for this activity. Refer to OSHA 29 CFR Part 1910.146.

#### USER SAFETY REQUIREMENTS

1. Never Fumigate Alone: It is imperative to always have an assistant and proper protective equipment in case of accidents.
2. Drivers' Responsibilities: Drivers of application equipment must advise other workers of all precautions and procedures. In addition, drivers must instruct their helpers in the mechanical operation of the tractor and how to safely work with the tractor and driver while fumigating.
3. Dispose of Contaminated Clothing: Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.
4. Clean and Maintain PPE: Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.
5. Contact With Mouth: Never siphon this product by mouth or use mouth to blow out clogged lines, nozzles, etc.
6. Heat Illness Avoidance: Use measures to avoid or minimize heat illness while using this product. These measures include gradual adjustment to heat and respirator stress, fans for cooling, cooling vests, frequent breaks to cool down, frequent intake of drinking water, and maintaining weight from day to day.

#### USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets on clothing. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**ENVIRONMENTAL HAZARDS**

- This pesticide is toxic to mammals and birds. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters or rinsate.
- Chloropicrin has certain properties and characteristics in common with chemicals that have been detected in groundwater (chloropicrin is highly soluble in water and has low adsorption to soil).
- For untarped applications of chloropicrin, leaching and runoff may occur if there is heavy rainfall after soil fumigation.
- Groundwater Advisory: 1,3-dichloropropene is known to move through soil and under certain conditions has the potential to reach groundwater as a result of agricultural use. Application in areas where soils are permeable and groundwater is near the surface could result in groundwater contamination.

**PHYSICAL OR CHEMICAL HAZARDS**

- Combustible. Do not use or store near heat or open flame.
- Do not mix or allow coming in contact with oxidizing agent. A chemical reaction hazard may occur.
- Handle carefully! Do not drop or let container be impacted by heavy objects. An explosion hazard may occur.

**DIRECTIONS FOR USE**

IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN ANY MANNER INCONSISTENT WITH ITS LABELING. FOR ANY REQUIREMENTS SPECIFIC TO YOUR STATE OR TRIBE, CONSULT THE AGENCY RESPONSIBLE FOR PESTICIDE REGULATION.

**AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), restricted-entry intervals, and notification to workers. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard (WPS). **No instructions elsewhere on this labeling relieve users from complying with the requirements of the WPS.**

For the entry restricted period and notification requirements, see the *Entry Restricted Period* and *Notification* sections of this labeling.

**READ ALL DIRECTIONS FOR USE CAREFULLY BEFORE APPLYING.**

**NOTICE: READ THE ENTIRE LABEL AND LABEL BOOKLET. USE ONLY ACCORDING TO LABEL AND LABEL BOOKLET DIRECTIONS. BEFORE BUYING OR USING THIS PRODUCT, READ "WARRANTY DISCLAIMER" AND LIMITATION OF REMEDIES."**

## **ENTRY RESTRICTED PERIOD AND NOTIFICATION**

### **ENTRY RESTRICTED PERIOD**

Entry (including early entry that would otherwise be permitted under the WPS) by any person – other than a correctly trained and PPE-equipped handler who is performing a handling task listed on this labeling – is PROHIBITED – from the start of the application until:

- 5 days (120 hours) after the application is complete for untarped applications, or
- 5 days (120 hours) after application is complete if tarps are not perforated and removed for at least 14 days following application. Note: Persons installing, repairing, or monitoring tarps are handlers until 14 days after the application is complete if tarps are not perforated and removed during those 14 days, or
- 48 hours after tarp perforation is complete if tarps will not be removed for at least 14 days following application, or
- until tarp removal is completed if tarps are both perforated and removed less than 14 days after application.

NOTE: see *Tarp Perforation and/or Removal* section on this labeling for requirements about when tarps are allowed to be perforated.

### **NOTIFICATION**

Notify workers of the application by warning them orally and by posting Fumigant Treated Area signs. The Fumigant Treated Area signs must bear the skull and crossbones symbol and state:

- "DANGER/PELIGRO",
  - "Area under fumigation, DO NOT ENTER/NO ENTRE",
  - "1,3-Dichloropropene and Chloropicrin Fumigants in USE",
  - the date and time of fumigation,
  - the date and time entry restricted period is over,
  - Tri-Form 40/60, and
  - Name, address, and telephone number of the certified applicator in charge of the fumigation.
- Post the Fumigant Treated Area sign instead of the WPS sign for this application but follow all WPS requirements pertaining to location, legibility, size, and timing of posting and removal. Post the Fumigant Treated Area signs at all entrances to the application block (i.e., the field or portion of a field treated with a fumigant in any 24-hour period).

### **HANDLERS**

The following activities are prohibited from being performed in the application block (i.e., the field or portion of a field treated with a fumigant in any 24-hour period) by anyone other than persons who have been appropriately trained and equipped as handlers in accordance with the requirements in the Worker Protection Standard (40 CFR Part 170), from the start of the application until the entry restricted period ends (NOTE: persons installing, perforating, removing, repairing, and monitoring tarps are considered handlers for the durations listed below). Those activities include those persons:

- Participating in the application as supervisors, loaders, drivers, tractor co-pilots, shovelers, cross ditchers, or as other direct application participants (the application starts when the fumigant is first introduced into the soil and ends after the fumigant has stopped being delivered/dispensed to the soil);
- Using devices to take air samples to monitor fumigant air concentrations;
- Cleaning up fumigant spills (this does not include emergency personnel not associated with the fumigation application);

- Handling or disposing of fumigant containers;
  - Cleaning, handling, adjusting, or repairing the parts of fumigation equipment that may contain fumigant residues;
  - Installing, repairing, operating, or removing irrigation equipment in the fumigant application block;
  - Entering the application site to perform scouting, crop advising, or monitoring tasks;
  - Installing, perforating (cutting, punching, slicing, poking), removing, repairing, or monitoring tarps:
    - until 14 days after application is complete if tarps are not perforated and removed during those 14 days, or
    - until tarp removal is complete if tarps are **both** perforated **and** removed less than 14 days after application, or
    - until 48 hours after tarp perforation is complete if they will not be removed within 14 days after application.
- NOTE: See *Tarp Perforation and/or Removal* section on this labeling for requirements about when tarps are allowed to be perforated.
- Performing any handling tasks as defined by the WPS.

## PROTECTION FOR HANDLERS

### Respiratory Protection and Stop Work Triggers

#### 1. Handlers Wearing Half-Face Air Purifying Respirators

The following procedures must be followed to determine whether a full-face air-purifying respirator is required or if operations must cease for handlers wearing a half-face air-purifying respirator:

- If at any time any handler experiences sensory irritation (tearing, burning of the eyes or nose) while wearing a half-face respirator:
  - A full-face air-purifying respirator must be worn by all handlers who remain in the application block or
  - Operations must cease and handlers not wearing full-face air-purifying respirators must leave the application block.
- When full-face air-purifying respirators are worn, then air monitoring samples for chloropicrin must be collected at least every two hours in the breathing zone of a handler performing a representative handling task.
- When using monitoring devices to monitor air concentration levels, a direct reading detection device, such as a Matheson-Kitagawa, Dräger, or Sensidyne device must be used. The devices must have a sensitivity of at least 0.15 ppm for chloropicrin.
- When breathing zone samples are required, they must be taken outside respiratory protection equipment and within a ten inch radius of the handler's nose and mouth.
- If at any time (1) a handler experiences any sensory irritation when wearing a full-face air-purifying respirator; or (2) an air sample is greater than or equal to 1.5 ppm, then all handler activities must cease and handlers must be removed from the application block. If operations cease, the emergency plan detailed in the FMP must be implemented.
- Handlers can remove full-face air-purifying respirators or resume work activities if the following conditions exist provided that a half-face air-purifying respirator is worn:
  - Two consecutive breathing zone samples for chloropicrin taken at the handling site at least 15 minutes apart must be less than 1.5 ppm.

- Handlers do not experience sensory irritation.
- Air-purifying respirator cartridges have been changed.
- During the collection of air samples a full-face air-purifying respirator must be worn by the handler taking the air samples. Samples must be taken where the sensory irritation is first experienced.

## **2. Handlers in Enclosed Cabs (Not applicable in California)**

- If at any time any handler experiences sensory irritation (tearing, burning of the eyes or nose) while in the enclosed cab, operations must cease and handlers must leave the application block.
- Operations may resume in the enclosed cab provided that:
  - Two consecutive breathing zone samples from chloropicrin taken at the handling site at least 15 minutes apart must be less than 1.5 ppm,
  - Handlers do not experience sensory irritation, and
  - The filter has been changed.
  - During the collection of air samples a full-face air-purifying respirator must be worn by the handler taking the air samples. Samples must be taken where the sensory irritation was first experienced.

## **3. Handlers Applying the Fumigant with Equipment That Disrupts the Chisel Trace and Seals the Soil with One Implement, e.g., a Yetter applicator (Not applicable in California)**

The following procedures must be followed to determine whether a full-face air-purifying respirator is required or if operations must cease for handlers applying the fumigant with equipment that disrupts the chisel trace and seals the soil with one implement, e.g., a Yetter applicator.

- If at any time any handler experiences sensory irritation (tearing, burning of the eyes or nose) then either:
  - A full-face air-purifying respirator must be worn by all handlers who remain in the application block or
  - Operations must cease and handlers not wearing respiratory protection must leave the application block.
- Handlers can remove full-face air-purifying respirators or resume operations if two consecutive breathing zone samples taken at the handling site at least 15 minutes apart show that levels of chloropicrin have decreased to less than 0.15 ppm provided that handlers do not experience sensory irritation. During the collection of air samples, a full-face air-purifying respirator must be worn by the handler taking the air samples. Samples must be taken where the sensory irritation is first experienced.
- When using monitoring devices to monitor air concentration levels, a direct reading detection device, such as a Matheson-Kitagawa, Dräger, or Sensidyne device, must be used. The devices must have a sensitivity of at least 0.15 ppm for chloropicrin.
- When breathing zone samples are required, they must be taken outside respiratory protection equipment and within a ten inch radius of the handler's nose and mouth.
- When full-face air-purifying respirators are worn, then air monitoring samples must be collected at least every two hours in the breathing zone of a handler performing a representative handling task.

- If at any time: (1) a handler experiences any sensory irritation when wearing a full-face air-purifying respirator, or (2) an air sample is greater than or equal to 1.5 ppm, then all handler activities must cease and handlers must be removed from the application block. If operations cease, the emergency plan detailed in the FMP must be implemented.
- Handlers can resume work activities without full-face air-purifying respirators if two consecutive breathing zone samples taken at the handling site at least 15 minutes apart show levels of chloropicrin have decreased to less than 0.15 ppm, provided that handlers do not experience sensory irritation. During the collection of air samples a full-face air purifying respirator must be worn by the handler taking the air samples. Samples must be taken where the sensory irritation is first experienced.
- Work activities can resume if the following conditions exist provided that a full-face air-purifying respirator is worn:
  - Two consecutive breathing zone samples for chloropicrin taken at the handling site at least 15 minutes apart must be less than 1.5 ppm but are greater than 0.15 ppm,
  - Handlers do not experience sensory irritation while wearing the air-purifying respirator, and
  - Cartridges have been changed.
  - During the collection of air samples, a full-face air-purifying respirator must be worn by the handler taking the air samples. Samples must be taken where the sensory irritation is first experienced.

**SUPERVISION OF HANDLERS**

For all applications: from the start of the application until the fumigant has stopped being delivered/dispensed into the soil (i.e., after the soil is sealed), the certified applicator must be at the fumigation site in the line of sight of the application and must directly supervise all persons performing handling activities. For handling activities that take place after the fumigant has been delivered/dispensed into the soil until the entry restricted period expires, the certified applicator does not have to be on-site, but must have communicated, in a manner that can be understood, to the site owner/operator and handlers responsible for carrying out those activities the information necessary to comply with the label and procedures described in the FMP (e.g., emergency response plans and procedures). Communication activities must be captured in the FMP.

**IMPORTANT:** This requirement does not override the requirements in the Worker Protection Standard for Agricultural Pesticides for information exchange between owners/operators of agricultural establishments and commercial pesticide applicators. The certified applicator must provide the **Fumigant Safe Handling** information to each handler involved in the application or confirm that each handler participating in the application has received fumigant safe handling information within the past twelve months.

For all handling tasks at least two handlers trained under the provisions of the WPS 40 CFR 170.230 must be present.

**EXCLUSION OF NON HANDLERS FROM APPLICATION BLOCK**

The certified applicator supervising the application and the owner/operator of the establishment where the fumigation is taking place must make sure that all persons who are not trained and PPE-equipped and who are not performing one of the handling tasks as stated in this labeling are excluded from the application block during the entry restricted period.

**PROVIDING, CLEANING, AND MAINTAINING PPE**

The employer of any handler (as stated in this label) must make sure that all handlers are provided and correctly wear the required PPE. The PPE must be cleaned and maintained as required by the Worker Protection Standard for Agricultural Pesticides.

**AIR-PURIFYING RESPIRATOR AVAILABILITY FOR PRE-PLANT SOIL USES**

The employer of any handler must confirm that an air-purifying respirator and appropriate cartridges of the type specified in the PPE section of this label are immediately available for each handler who will wear one. These handlers must be fit-tested, trained, and medically examined. This must be documented in the FMP. Cartridges or canisters must be replaced when odor or irritation from this product becomes apparent, if the measured concentration of chloropicrin is greater than 1.5 ppm, or after 8 hours of use, whichever occurs first.

**AIR-RESCUE DEVICE AVAILABILITY FOR PRE-PLANT SOIL USES**

The employer of any handler must confirm that at least one air-rescue device (e.g., SCBA) is on-site and is ready for use in case of an emergency. This must be documented in the FMP.

**RESPIRATOR FIT TESTING, MEDICAL QUALIFICATION, AND TRAINING**

Employers must verify that any handler who uses a respirator is:

- Fit-tested and fit-checked using a program that conforms to OSHA’s requirements (see 29 CFR Part 1910.134)
- Trained using a program that conforms to OSHA’s requirements (see 29 CFR Part 1910.134)
- Examined by a qualified medical practitioner to ensure physical ability to safely wear the style of respirator to be worn. A qualified medical practitioner is a physician or other licensed health care professional who will evaluate the ability of a worker to wear a respirator. The initial evaluation consists of a questionnaire that asks about medical conditions (such as a heart condition) that would be problematic for respirator use. If concerns are identified, then additional evaluations, such as a physical exam, might be necessary. The initial evaluation must be done before respirator use begins. Handlers must be reexamined by a qualified medical practitioner if their health status or respirator style or use-conditions change. Upon request by local/state/federal/tribal enforcement personnel, employers must provide documentation demonstrating how they have complied with these requirements.

**TARP PERFORATION AND/OR REMOVAL**

IMPORTANT: Persons perforating, repairing, removing, and/or monitoring tarps are defined, within certain time limitations, as handlers (see handlers as stated in this labeling) and must be provided the PPE and other protections for handlers as required on this labeling and in the Worker Protection Standard for Agricultural Pesticides.

- Tarps must not be perforated until a minimum of 5 days (120 hours) have elapsed after the fumigant injection into the soil is complete (e.g., after injection of the fumigant product and tarps have been laid), unless a weather condition exists which necessitates the need for early perforation or removal, see *Early Tarp Removal for Broadcast Applications Only* and *Early Tarp Perforation for Flood Prevention Activities* sections.
- If tarps will be removed before planting, tarp removal must not begin until at least 2 hours after tarp perforation is complete.



- If tarps will not be removed before planting, planting or transplanting must not begin until at least 48 hours after the tarp perforation is complete.
- If tarps are left intact for a minimum of 14 days after fumigant injection into the soil is complete, planting or transplanting may take place while the tarps are being perforated.
- Each tarp panel used for broadcast fumigation must be perforated.
- Tarps used for fumigations may be perforated manually ONLY for the following situations:
  - At the beginning of each row when a coultter blade (or other device which performs similarly) is used on a motorized vehicle such as an ATV.
  - In fields that are 1 acre or less.
  - During flood prevention activities.
- In all other instances tarps must be perforated (cut, punched, poked, or sliced) only by mechanical methods.
- Tarp perforation for broadcast fumigations must be completed before noon.
- For broadcast fumigations, tarps must not be perforated if rainfall is expected within 12 hours.
- Early Tarp Removal for Broadcast Applications Only:
  - Tarps may be removed before the required 5 days (120 hours) if adverse weather conditions have compromised the integrity of the tarp, provided that the compromised tarp poses a safety hazard. *Adverse weather* includes high wind, hail, or storms that blow tarps off the field and create a hazard, e.g., tarps blowing into power lines and onto roads. A *compromised tarp* is a tarp that due to an adverse weather condition is no longer performing its intended function and is creating a hazard.
  - If tarps are removed before the required 5 days have elapsed due to adverse weather, the events must be documented in the post-application summary.
- Early Tarp Perforation for Flood Prevention Activities
  - Tarp perforation is allowed before the 5 days (120 hours) have elapsed.
  - Tarps must be immediately retucked and packed after soil removal.

**GENERAL INFORMATION**

This product is a multi-purpose liquid fumigant for preplant treatment of soil to control nematodes, symphylans, wireworms and certain soil borne diseases in cropland. This product may be applied as a preplant soil treatment to control or to aid in reducing the damaging effects of certain soil borne diseases, such as soil rot (soil pox) of sweet potatoes, Granville (bacterial) wilt, black root rot and black shank diseases of tobacco, *Verticillium* wilt of mint, pink root of onions, and pod rot of peanuts. This product also controls plant parasitic nematodes, such as root-knot, root lesion, citrus, cyst formers (golden, sugar beet, soybean), burrowing, lance, reniform, ring, spiral, sting, pin, stubby root, stylet, dagger and certain others, as well as symphylans (garden centipedes) and wireworms. Before fumigation, soil sampling for the type and number of pests present is recommended. In fields where pre-treatment soil samples indicate the presence of high population levels of nematodes, a successful fumigation cannot be expected to eradicate entire populations. Therefore, post-treatment sampling is recommended to determine the need for additional pest management practices. Consult State Agricultural Experiment Station or Extension Service specialists for information on other practices such as

post-harvest destruction of crop residues, weed control or other cultural practices, and use of nematode resistant crop varieties that may aid in reducing crop losses from soil borne pests.

#### **GENERAL APPLICATION RESTRICTIONS**

- Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.
- Do not wear jewelry, rubber gloves, goggles, tight clothing, rubber protective clothing, or rubber boots when handling. Chloropicrin is heavier than air and can be trapped inside clothing and cause skin injury.
- Do not apply this product within 100 feet of any well used for potable water. Do not apply this product within 100 feet from the edge of karst topographical features. Karst topography is identified from landscape features that result from the dissolving activity of water in carbonate rock formations (limestone, dolomite and marble). Surface features that are associated with karst topography include sinkholes, caverns, springs, and sinking or disappearing streams. In North Dakota, South Dakota, Wisconsin, Minnesota, New York, Maine, New Hampshire, Vermont, Massachusetts, Utah, and Montana: Where groundwater aquifers exist at a depth of 50 feet or less from the surface, do not apply this product where soils are Hydrologic Group A.
- Not for use in greenhouses or other enclosed areas.

#### **USE RESTRICTIONS FOR TRI-FORM 40/60 IN CERTAIN FLORIDA COUNTIES**

**NOTE:** Additional use restrictions listed below apply to the following Florida counties: Brevard, Broward, Charlotte, Citrus, Collier, Dade, DeSoto, Glades, Hardee, Hendry, Hernando, Highlands, Hillsborough, Indian River, Lake Lee, Manatee, Martin, Monroe, Okeechobee, Orange, Osceola, Palm Beach, Pasco, Pinellas, Polk, Sarasota, Seminole, St. Lucie, Sumter, and Volusia. For all other Florida counties, follow the label affixed to the product container for TRI-FORM 40/60.

#### **Additional Use Restrictions**

- Use TRI-FORM 40/60 only on soils that have a relatively shallow hard pan or soil layer restrictive to downward water movement (such as spodic horizon) within six feet of the ground surface and are capable of supporting seepage irrigation regardless of irrigation method employed.
- Use standard chisel injection equipment to inject TRI-FORM 40/60 as deep as possible without placing the fumigant directly into the shallow subsurface irrigation water.
- TRI-FORM 40/60 may not be applied within 100 feet of drinking water wells.

#### **RECONTAMINATION PREVENTION**

This product will control pests that are present in the soil treatment zone at time of fumigation. It will not control pests that are introduced into soil after fumigation. To avoid reinfestation of treated soil do not use irrigation water, transplants, seed pieces, or equipment that could carry soil borne pests from infested land. Avoid contamination from moving infested soil onto treated beds through cultivation, movement of soil from below the treated zone, dumping contaminated tare soil in treated fields and soil contamination from equipment or crop remains. Clean equipment carefully before entering treated fields.

DO NOT USE CONTAINERS, PUMPS OR OTHER TRANSFER EQUIPMENT MADE OF ALUMINUM, MAGNESIUM OR THEIR ALLOYS, AS UNDER CERTAIN CONDITIONS 1,3-DICHLOROPROPENE MAY BE SEVERELY CORROSIVE TO SUCH METALS.

**EQUIPMENT CLEAN-UP**

Because 1,3-dichloropropene is corrosive under certain conditions, flush all application equipment with fuel oil, kerosene or a similar type of petroleum solvent immediately after use. Fill pumps and meters with new motor oil or a 50% motor oil/fuel oil mixture before storing. **Do not use water.** Dispose of rinsate by incorporation into field just treated or by other approved means. Never introduce rinsate or unused product into surface or underground water supplies.

**CHEMIGATION**

DO NOT APPLY TRI-FORM 40/60 THROUGH ANY TYPE OF IRRIGATION SYSTEM.

**FERTILITY INTERACTIONS**

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 fertilizer and fumigant are applied to soils that are either cold, wet, acid, or high in organic matter. To avoid injury to certain crops including red beets, carrots, corn, radishes, cole crops, legumes (beans), lettuce, onions, and sugar beets, fertilize as indicated by soil tests made after fumigation. To avoid ammonia injury or nitrate starvation (or both) to crops grown on high organic soils, do not use fertilizers containing ammonium salts. Use only fertilizers containing nitrates until after the crop is well established and the soil temperature is above 65 degrees F. In mineral soils, do not apply more than 2/3 of the nitrogen requirements from fertilizers containing ammonium salts until the crop is well established and the soil temperature is above 65 degrees F. When using high rates of this product as required by certain state nursery regulations, liming of highly acid soils before fumigation may stimulate nitrification and reduce the possibility of ammonia toxicity. Certain nursery crops such as citrus seedlings, *Cornus* sp., *Crataegus* sp., spruce, and vegetable crops such as cauliflower have shown evidence of phosphorus deficiency following fumigation. To avoid this possible effect, additional phosphate fertilizer (foliar applied) is recommended where experience indicates a deficiency may occur.

**MANDATORY GOOD AGRICULTURAL PRACTICES (GAPS)**

The following GAPS must be followed during all fumigant applications. All measurements and other documentation planned to ensure that the mandatory GAPS are achieved must be recorded in the FMP and/or the post-application summary.

**Application Timing**

This product 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 this product does not provide residual control of soil pests, it should be used as a preplant application before planting each crop.

**Planting Interval**

Leave the soil undisturbed and unplanted for at least 7 days after application of the fumigant. A longer undisturbed interval is required if the soil becomes cold or wet, and for deep-rooted tree, shrub and vine planting sites.

**Tarps** (when tarps are used in Tri-Form 40/60 applications)

- A written tarp plan must be developed and included in the FMP. The plan must include:
  - schedule and procedures for checking tarps for damage, tears, and other problems
  - plans for determining when and how repairs to tarps will be made, and by whom
  - minimum time following injection that tarp will be repaired
  - minimum size of tarp damage that will be repaired
  - other factors used to determine how and when tarp repair will be conducted
  - schedule, equipment, and methods used to perforate tarps
  - aeration plans and procedures following perforation of tarp, but prior to tarp removal or planting/transplanting
  - schedule, equipment, and procedures for tarp removal

**Weather Conditions**

- Prior to fumigation the weather forecast for the day of the application and the 48-hour period following the fumigation must be checked to determine if unfavorable weather conditions exist (see *Identifying Unfavorable Weather Conditions* section) or are predicted and whether fumigation should begin.
- Wind speed at the application site must be a minimum of 2 mph at the start of the application or forecasted to reach at least 5 mph during the application.
- Do not apply if a shallow, compressed (low-level) temperature inversion is forecast to persist for more than 18 consecutive hours for the 48-hour period after the start of application, or if there is an air stagnation advisory issued by the National Weather Service in effect for the area in which the fumigation is planned.
- Detailed local forecasts for weather conditions, wind speed, and air stagnation advisories may be obtained on-line at: <http://www.nws.noaa.gov>. For further guidance, contact your local National Weather Service Forecasting Office.

***Identifying Unfavorable Weather Conditions***

- Unfavorable weather conditions block upward movement of air, which results in trapping fumigant vapors near the ground. The resulting air mass can move off-site in unpredictable directions. These conditions typically exist prior to sunset and continue past sunrise and persist as late as noontime. Unfavorable conditions are common on nights with limited cloud cover and light to no wind and their presence can be indicated by ground fog or smog and can also be identified by smoke from a ground source that flattens out below a ceiling layer and moves laterally in a concentrated cloud.

**Soil Preparation**

- Soil must be in good tilth and free of large clods. Large clods can prevent effective soil sealing and reduce effectiveness of the application. If subsurface soil compaction layers (hardpans) are present within the intended fumigation treatment zone, a deep tillage to fracture these layers must occur prior to or during the soil fumigant application.
- Plant residue that is present must not interfere with the application or the soil seal. Non-decomposed plant material may harbor pests that will not be controlled by fumigation. Crop residue that is present must lie flat to permit the soil to be sealed effectively and limit the natural "chimneys" that may occur in the soil when plant residue is present. These "chimneys" allow the soil fumigants to move through the soil quickly and escape into the atmosphere. This may create potentially harmful conditions for workers and bystanders and

limits the efficacy of the fumigant. Plant residue on the field serves to prevent soil erosion from both wind and water.

### Soil Sealing

- *For Broadcast Untarped Applications:* Use a disc or similar equipment to uniformly mix the soil to at least a depth of 3 to 4 inches to eliminate the chisel or plow traces. Following elimination of the chisel trace, the soil surface must be compacted with a cultipacker, ring roller, and roller in combination with tillage equipment. When using equipment similar to the Yetter applicator (chisel trace disruption and soil sealing are done with one implement), additional tillage and compaction are not required.
- *For Bedded Applications:* Preformed beds must be sealed by disruption of the chisel trace using press sealers, bed shapers, cultipackers, or by re-shaping (e.g., relisting, lifting, replacing) the beds immediately following injection. Beds formed at the time of application must be sealed by disrupting the chisel trace using press sealers, or bed shapers. When bedding, prebedders such as ripper hippers, hillers, or other prebedders may be used to disrupt the chisel trace and seal the soil. When using equipment similar to the Yetter applicator (chisel trace disruption and soil sealing are done with one implement), additional tillage and compaction are not required. Beds may be formed following the Yetter type applicator, in a normal interval consistent to area production practices.
- *For Tarped Applications:* The use of a tarp does not eliminate the need to minimize chisel traces prior to application of the tarp, such as by using a Nobel plow or other injection shank that disrupts the chisel traces. When bedding, prebedders such as ripper hippers, hillers, or other prebedders may be used to disrupt the chisel trace and seal the soil. When using equipment similar to the Yetter applicator (chisel trace disruption and soil sealing are done with one implement), additional tillage and compaction are not required. Beds may be formed following the Yetter type applicator, in a normal interval consistent to area production practices.

### **TRI-FORM 40/60 BEDDED AND BROADCAST SHANK APPLICATIONS:** **ADDITIONAL GAPS**

In addition to the GAPS required for all Tri-Form 40/60 soil fumigation applications, the following GAPS apply for injections applications.

**Tarps** (when tarps are used in Tri-Form 40/60 applications)

- Tarps must be installed immediately after the fumigant is applied to the soil.

### **Soil Preparation**

- Trash pulled by the shanks to the ends of the field must be covered with tarp, or soil, depending on the application method before making the turn for the next pass.

### **Soil Temperature**

- The minimum soil temperature at the depth of injection is 40 degrees F.
- The maximum soil temperature at the depth of injection must not exceed 90 degrees F at the beginning of the application.
  - If air temperatures have been above 100 degrees F in any of the three days prior to application, then soil temperature must be measured and recorded in the FMP.

### Soil Moisture

- The soil must be moist 9 inches below the surface. The amount of moisture needed will vary according to the soil type. Surface soil generally dries rapidly and must not be considered in this determination.
- Soil moisture must be determined by one of the following methods:
  - The USDA Feel and Appearance Method for testing, or
  - An instrument, such as a tensiometer.
- If there is insufficient moisture 9 inches below the surface, the soil moisture must be adjusted. If irrigation is not available and there is adequate soil moisture below 9 inches, soil moisture can be adjusted by discing or plowing before fumigant injection. To conserve existing soil moisture, pretreatment irrigation or pretreatment tillage should be done as close to the time of application as possible.
- Measure soil moisture at a depth of 9 inches at either end of the field, no more than 48 hours prior to application.

#### *Soil moisture determination using the USDA Feel and Appearance Method*

- For **coarse** textured soils (fine sand and loamy fine sand) there must be enough moisture (50 to 75 percent available soil water moisture) so the soil is moist, forms a weak ball with loose and clustered sand grains on fingers, darkened color, moderate water staining on fingers, will not ribbon.
- For **moderately coarse** textured soils (sandy loam and fine sandy loam) there must be enough moisture (50 to 75 percent available soil water moisture) so the soil is moist, forms a ball with defined finger marks, very light soil/water staining on fingers, darkened color will not stick.
- For **medium** textured soils (sandy clay loam, loam, and silt loam) there must be enough moisture (50 to 75 percent available soil water moisture) so the soil is moist, forms a ball, very light staining on fingers, darkened color, pliable, and forms a weak ribbon between the thumb and forefinger.
- For **fine** textured soils (clay, clay loam, and silty clay loam) there must be enough moisture (50 to 75 percent available soil water moisture) so the soil is moist, forms a smooth ball with defined finger marks, light soil/water staining on fingers, ribbons between thumb and forefinger.
- For **fields with more than one soil texture**, soil moisture content in the lightest textured (most sandy) areas must comply with this soil moisture requirement. Whenever possible, the field should be divided into areas of similar soil texture and the soil moisture of each area should be adjusted as needed. Coarser textured soils can be fumigated under conditions of higher soil moisture than finer textured soils; however, if the soil moisture is too high, fumigant movement will be retarded and effectiveness of the treatment will be reduced. Previous and/or local experience with the soil to be treated or the crop to be planted can often serve as a guide to conditions that will be acceptable. If there is uncertainty in determining the soil moisture content of the area to be treated, a local extension service agent, soil conservation service specialist, or pest control advisor (agriculture consultant) should be consulted for assistance.

### Application Depth

- **Tarped Broadcast Applications:** The injection point must be a minimum of 8 inches from the nearest final soil/air interface.
- **Tarped and Untarped Bedded Applications:** The injection point must be a minimum of 12 inches from the nearest final soil/air interface.
- **Untarped Broadcast Applications:** The injection point must be a minimum of 12 inches from the nearest final soil/air interface.
- **Untarped Broadcast Deep Applications:** The injection point must be a minimum of 18 inches from the nearest final/soil air interface.

### Application Methods and Equipment

- a. *For Broadcast Applications:* Use chisel (shank), offset wing shank, Nobel (sweep) plow or plow-sole application equipment. For best results when using chisel equipment, use ripper-type, forward-swept shanks. Nobel plow equipment is particularly useful for fall fumigation when the soil still contains some standing undecomposed plant material. Subsoiling may be necessary before application. Choose application equipment that allows the deepest application and best soil seal under existing conditions. The fumigant outlet spacing varies with the type of application equipment used:
- With chisel equipment a fumigant shank spacing of 12 to 24 inches is recommended. The outlet spacing for this equipment may be up to 1-½ times the application depth but generally should be equal to the application depth and should not exceed the soil-shattering capability of the chisels. Do not exceed the maximum shank and outlet spacing of 24 inches.
  - With plow-sole equipment a 12-inch outlet spacing is recommended. Do not exceed an outlet spacing of 18 inches.
  - With Nobel (sweep) plow equipment use an outlet spacing of 9 to 12 inches along the sweeps. Broadcast application can be made in the same direction or at an angle to the direction of row planting.
- b. *For Bedded Applications (for row spacing greater than 24 inches):*
- Use chisel equipment to treat a band of soil where the crop is to be planted, i.e. the plant row. In general, when one chisel is used, apply product at twice the flow rates given in Table 1. When multiple chisels per plant row are used, space the chisels (fumigant outlets) 8 to 12 inches apart and use the flow rates given in Table 1 per outlet (see footnote 1, Table 2). With certain deeper rooted crops such as potatoes and sugar beets, higher flow rates may be necessary to ensure adequate treatment of the zone of soil where primary root growth occurs; however, **in no case should the amount of fumigant applied per acre exceed the maximum gallons per acre rates given in Table 1.** To determine the amount (gallons) of product required per acre for various plant row spacings and flow rates, refer to Table 2. Note that as the distance between the plant rows increases the amount of fumigant required decreases and vice versa.
  - 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 chisel(s). When one chisel is used per plant row, place the seed about 4 inches to one side of the chisel furrow. When two chisels are used per plant row, plant the seed offset from the chisel trace.

**Prevention of End Row Spillage**

- Do not apply or allow fumigant to spill onto the soil surface. For each injection line either have a check valve located as close as possible to the final injection point, or drain/purge the line of any remaining fumigant prior to lifting injection shanks from the ground.
- Do not lift injection shanks from the soil until the shut-off valve has been closed and the fumigant has been depressurized (passively drained) or purged (actively forced out via air compressor) from the system.
- The dispensing system must shut off the feed stream when chisels are raised out of the ground.
- Do not stop or park near any area where dribble from chisel tips has fallen.
- A flow shutoff device must be placed as close as is technically feasible to the fluid discharge point. This can be a ball, poppet, or diaphragm check valve, or full flow shutoff device such as an electric or pneumatically actuated valve.
- Check valves must be replaced immediately if continuous drip occurs.
- Place check valves above the orifice.
- Isolate the check valve from upstream pressure by installing a main line shut off or bypass valve prior to the manifold.
- Do not exceed 1/4 inch diameter tubing.
- Do not use any method of end-row spillage control other than that stated on this label.
- An alternative to shutoff devices is a purge system which clears the line of all liquid. Consult your product representative for purge system description.

**Calibration, Set Up, Repair and Maintenance for Application Rigs**

- Brass, carbon steel or stainless steel fittings must be used throughout. Polyethylene tubing, polypropylene tubing, Teflon® tubing or Teflon®-lined steel braided tubing must be used for all low pressure lines, drain lines, and compressed gas or air pressure lines. All other tubing must be Teflon®-lined steel braided.
- Galvanized, PVC, nylon or aluminum pipe fittings must not be used.
- All rigs must include a filter to remove any particulates from the fumigant and for pressurized systems a check valve to prevent backflow of the fumigant into the pressurizing cylinder or the compressed air system.
- Rigs must include a flow meter or a constant pressure system with orifice plates to insure the proper amount of fumigant is applied.
- To prevent the backflow of fumigant into the compressed gas cylinder (e.g., nitrogen, other inert gas or compressed air), if used, applicators must:
  - Ensure that positive pressure is maintained in the cylinder at not less than 200 psi during the entire time it is connected to the application rig if a compressed gas cylinder is used. *(This is not required for a compressed air system that is part of the application rig because if the compressor system fails, the application rig will not be operable.)*
  - Ensure that application rigs are equipped with properly functioning check valves between the compressed gas cylinder or compressed air system and the fumigant cylinder. The check valve is best placed on the outlet side of the pressure regulator and is oriented to only allow compressed gas to flow out of the cylinder or compressed air out of the compressed air system.



- Always pressurize the system with compressed gas or by use of a compressed air system before opening the fumigant cylinder valve.
- Before using a fumigation rig for the first time, or when preparing it for use after storage, the operator must check the following items carefully:
  - Check the filter and clean or replace the filter element as required.
  - Check all tubes and chisels to make sure they are free of debris and obstructions.
  - Check and clean the orifice plates and screen checks if installed.
  - Pressurize the system with compressed gas or compressed air, and check all fittings, valves, and connections for leaks using soap solution.
- Install the fumigant cylinder and connect and secure all tubing. Slowly open the compressed gas or compressed air valve, and increase the pressure to the desired level. Slowly open the fumigant cylinder valve, always watching for leaks.
- When the application is complete, close the fumigant cylinder valve and blow residual fumigant out of the fumigant lines into the soil using compressed gas or compressed air. At the end of the application, disconnect all fumigant cylinders from the application rig. At the end of the season, seal all tubing openings with tape to prevent entry of insects and dirt.
- Application equipment must be calibrated and all control systems must be working properly. Proper calibration is essential for application equipment to deliver the correct amount of fumigant uniformly to the soil. Refer to the manufacturer's instructions on how to calibrate your equipment. Usually the equipment manufacturer, fumigant dealer, or Cooperative Extension Service can provide assistance.

#### **Bulk and Non-Bulk Containers**

- This product must be transferred through connecting hoses, pipes, and/or couplings sufficiently tight to prevent workers or other persons from coming in contact with the liquid product.
- All hoses, piping, and tanks used in connection with this product shall be of type appropriate for use under the pressure and vacuum conditions to be encountered.
- External sight gauges shall be equipped with valves so that pipes to sight gauge can be shut off in case of breakage or leakage.
- The mechanical transfer system must be adequate to make necessary measurements of the pesticide being used.
- Shut-off devices must be installed on the exit end of all hoses and at all disconnect points to prevent leakage of this product when the transfer is stopped and hose is removed or disconnected. A dry coupler that will minimize pesticide leakage must be installed at the disconnect point.
- The pressure in hoses used to move this product beyond a pump must not exceed the manufacturer's maximum pressure specification.

#### **TRI-FORM 40/60 TREE REPLANT APPLICATIONS: GAPS**

This application method is used when Tri-Form 40/60 is applied to individual tree sites in an existing orchard where shank applications are not possible. In addition to the GAPS required for all Tri-Form 40/60 soil fumigation applications, the following GAPS apply for Tri-Form 40/60 tree replant applications.

**Site Preparation**

- Remove the tree stump and primary root system in each individual tree-site with a back-hoe or other similar equipment, for example an auger.
- The hole must be backfilled with soil before application.

**Application Depth**

- The fumigant must be injected at least 18 inches into the soil.

**System Flush**

- Before removing the application wand from the soil the wand must be cleared using nitrogen or compressed air.

**Soil Sealing**

- After the wand is cleared and removed from the soil, the injection hole must be either covered with soil and tamped, or the soil must be compacted over the injection hole.

**SITE-SPECIFIC FUMIGATION MANAGEMENT PLAN (FMP)**

Prior to the start of fumigation, the certified applicator supervising the application must verify that a site-specific FMP exists for each application block (i.e., a field or portion of a field treated with a fumigant in any 24-hour period). In addition, an agricultural operation fumigating multiple application blocks may format the FMP in a manner whereby all of the information that is common to all the application blocks is captured once, and any information unique to a particular application block or blocks is captured in subsequent sections.

The FMP must be prepared by the certified applicator, the site owner/operator, registrant, or other party.

The certified applicator must verify in writing (sign and date) that the site-specific FMP(s) reflects current site conditions before the start of fumigation.

**Each site-specific FMP must contain the following elements:**

- ❖ Applicator information (name, phone number, pesticide applicator license number, employer name, employer address)
- ❖ General site information
  - Application block location (e.g., county, township-range-section quadrant), address, or global positioning system (GPS) coordinates
  - Name, address, and phone number of owner/operator of the application block
- ❖ General application information (target application date/window, brand name of fumigant, EPA registration number)
- ❖ Tarp information and procedures for repair, perforation, and removal (if tarp is used)
  - Brand name, lot number, thickness
  - Name and phone number of person responsible for repairing tarps
  - Schedule for checking tarps for damage, tears, and other problems
  - Maximum time following notification of damage that the person(s) responsible for tarp repair will respond
  - Minimum time following application that tarp will be repaired
  - Minimum size of damage that will be repaired
  - Other factors used to determine when tarp repair will be conducted
  - Name and phone number of person responsible for perforating and/or removing tarps (if other than certified applicator)
  - Equipment/methods used to perforate tarps
  - Schedule and target dates for perforating tarps

- Schedule and target dates for removing tarps
- ❖ Soil conditions (description of soil texture in application block, method used to determine soil moisture)
- ❖ Weather conditions (summary of forecasted conditions for the day of the application and the 48-hour period following the fumigant application)
  - Wind speed
  - Inversion conditions (e.g., shallow, compressed (low-level) temperature inversion)
  - Air stagnation advisory
- ❖ Air-purifying respirators, air-rescue devices, and other personal protective equipment (PPE) for handlers (handler task, protective clothing, air-purifying respirator type, respirator cartridge type, respirator cartridge replacement schedule, air-rescue device type, eye protection, gloves, other PPE)
- ❖ If using an enclosed cab in lieu of wearing an air-purifying respirator, verify that the cab: 1) has positive pressure (6 mm H<sub>2</sub>O Gauge), 2) has a minimum air-intake flow of 43 m<sup>3</sup>/hour, and 3) is equipped with activated charcoal filter-media containing no less than 1000 grams of activated charcoal. Document the application hours of the filter to confirm that the filter has been used for no more than 50 hours of application time. In addition, document that the ventilation system has been maintained according to the manufacturer's instructions.
- ❖ Emergency procedures (evacuation routes, locations of telephones, contact information for first responders, local/state/federal/tribal contacts, key personnel and emergency procedures/responsibilities in case of an incident, equipment/tarp/seal failure or complaints, or other emergencies)
- ❖ Fumigant Treated Area posting procedures (person(s) who will post Fumigant Treated Area signs, location of Fumigant Treated Area signs, procedures for Fumigant Treated Area sign removal)
- ❖ Plan describing how communication will take place between applicator, land owner/operator, and other on-site handlers (e.g., tarp perforators/removers, irrigators) for complying with label requirements (e.g., timing of tarp perforation and removal, PPE)
  - Name and phone number of persons contacted
  - Date contacted
- ❖ Authorized on-site personnel
  - Names, addresses and phone numbers of handlers
  - Names, addresses, and phone numbers for employers of handlers
  - Tasks that each handler is authorized and trained to perform
  - For handlers designated to wear air-purifying respirators:
    - date of medical qualification to wear an air-purifying respirator,
    - date of air-purifying respirator training, and
    - date of fit-testing for the air-purifying respirator.
- ❖ Air monitoring plan
  - If sensory irritation is experienced, indicate whether operations will be ceased or operations will continue with an air-purifying respirator
  - If the intention is to cease operations when sensory irritation is experienced, provide the name, address, and phone number of the handler that will perform monitoring activities prior to operations resuming.
  - When air-purifying respirators are worn:
    - Representative handler tasks to be monitored

- Monitoring equipment to be used and timing of monitoring
- ❖ Good Agricultural Practices (GAPs)
  - Description of applicable mandatory GAPs (registrants may also include optional GAPs)
  - Measurements and documentation to ensure GAPs are achieved (e.g., measurement of soil and other site conditions)
- ❖ Description of hazard communication. (The application block has been posted in accordance with the label. Pesticide product labels and material safety data sheets are on-site and readily available for employees to review.)
- ❖ Record-keeping procedures (the owner/operator of the application block as well as the certified applicator must keep a signed copy of the site-specific FMP for 2 years from the date of application).

For situations where an initial FMP is developed and certain elements do not change for multiple fumigation sites (e.g., applicator information, authorized on-site personnel, record-keeping procedures, emergency procedures) only elements that have changed need to be updated in the site-specific FMP provided the following:

- The certified applicator supervising the application has verified that those elements are current and applicable to the application block before it is fumigated.
- Record-keeping requirements are followed for the entire FMP (including elements that do not change).

Once the application begins, the certified applicator must make a copy of the FMP available for viewing by handlers involved in the fumigation. The certified applicator or the owner/operator of the application block must provide a copy of the FMP to any local/state/federal/tribal enforcement personnel who request the FMP. In the case of an emergency, the FMP must be made immediately available when requested by local/state/federal/tribal emergency response and enforcement personnel.

Within 30 days of completing the application portion of the fumigation process, the certified applicator supervising the application must complete a post-application summary that describes any deviations from FMP that have occurred, measurements taken to comply with GAPs, monitoring results as well as any complaints and/or incidents that have been reported to him/her.

**The Post-Application Summary must contain the following elements:**

- ❖ Actual date of the application, application rate, and size of application block fumigated
- ❖ Summary of weather conditions on the day of the application and during the 48-hour period following the fumigant application
- ❖ Soil temperature measurement (if air temperatures were above 100 degrees F in any of the 3 days prior to the application)
- ❖ Tarp damage and repair information (if applicable)
  - Location and size of tarp damage
  - Description of tarp/tarp seal/tarp equipment failure
  - Date and time of tarp repair
- ❖ Tarp perforation/removal details (if applicable)
  - Description of tarp removal (if different than in the FMP)
  - Date tarps were perforated
  - Date tarps were removed
- ❖ Complaint details (if applicable)
  - Person filing complaint (e.g., on-site handler, person off-site)

- If off-site person, name, address, and phone number of person filing complaint
- Description of control measures or emergency procedures followed after complaint
- ❖ Description of incidents, equipment failure, or other emergency and emergency procedures followed (if applicable)
- ❖ Details of elevated air concentrations monitored on-site (if applicable)
  - Location of elevated air concentration levels
  - Description of control measures or emergency procedures followed
  - Air monitoring results
    - When sensory irritation experienced:
      - Date and time of sensory irritation
      - Handler task/activity
      - Handler location where irritation was observed
      - Resulting action (e.g., cease operations, continue operations with air-purifying respirators)
    - When using a direct read instrument:
      - Sample date and time
      - Handler task/activity
      - Handler location
      - Air concentration
      - Sampling method
- ❖ Date of Fumigant Treated Area sign removal
- ❖ Any deviations from the FMP
- ❖ Record-keeping procedures (the owner/operator of the application block as well as the certified applicator must keep a signed copy of the post-application summary for 2 years from the date of application).

### **APPLICATION DIRECTIONS**

After fumigation, to prevent phytotoxicity, allow the fumigant to dissipate completely before planting the crop. Under optimum soil conditions for dissipation, 1 week for each 10 gallons/acre is recommended. To hasten dissipation, especially if heavy rains or low temperatures occur during the treatment period, till the soil to the depth of fumigant application. Use a knife-like chisel without turning the soil to reduce the possibility of recontaminating the treated soil. Dissipation is usually complete when the odor of the product is no longer evident at the application depth. Seed may be used as a bioassay to determine if the product is present in the soil at concentrations sufficient to cause plant injury. Do not plant if the odor of the product is present within the zone of fumigation.

### **BUFFER ZONE**

An application of this product shall not be made within 100 feet of an occupied structure, such as a school, hospital, business or residence. An application of this product shall not be made within 300 feet of an occupied structure in California, such as a school, hospital, business or residence. No person shall be present at this structure at any time during the seven consecutive day period following application. *These buffer zones do not apply to use on soils that will not experience an additional 1,3-D treatment for at least three years. For example, on soils to be planted with fruit trees, nut and nursery crops, perennial vines, hops, mint or pineapple.* NOTE: This product shall not be applied to soils more frequently than once each year.

**TABLE 1**  
**TRI-FORM 40/60 PRODUCT APPLICATION RATES**

Crop	Soil Type	Application Rates <sup>(a)</sup>	
		Broadcast Gallons/Acre	Fl. oz. per 1000' of Row/Outlet <sup>1</sup>
Vegetable Crops <sup>2</sup>	Mineral	19.5 to 31.5 <sup>3</sup>	57 to 90
	Muck or Peat	44.1 <sup>4</sup> to 48.6	128 to 142
Field Crops <sup>5</sup>	Mineral	19.5 to 31.5	57 to 90
	Muck or Peat	39.5	114
Fruit and Nut Crops <sup>6</sup>	Mineral, Muck, or Peat	44.1 to 48.6	128 to 142
Nursery Crops	Mineral, Muck, or Peat	44.1 to 48.6	128 to 142

(a) Do not exceed specified maximum application rates in Table 1. Rates identified in Table 1 apply to tarped shallow broadcast and non-tarped deep broadcast applications. For all non-tarped shallow applications, the maximum application rate for any crop or soil type is 24.3 gallons/acre. Row and bed applications may be made at the broadcast rates but the amount used will be proportionately less per acre depending on the row spacing and width of treatment in the row or bed.

<sup>1</sup>Flow rates are based on 12-inch outlet spacing. Flow rates for alternate spacings can be calculated using the following formula: fl oz/1000 ft of row/outlet = 0.245 x rate in gallons/acre x outlet spacing in inches. For row treatment refer to Table 2.

<sup>2</sup>Row treatment is not recommended for potatoes in irrigated areas of western and northwestern states.

<sup>3</sup>For cyst-forming nematodes, increase dosage to 39 gallons per acre (114 fl oz/1000 ft row per chisel).

<sup>4</sup>For muck soils containing less than 30% organic matter, use 39 gallons/acre.

<sup>5</sup>For mint, apply 48.6 gallons per acre.

<sup>6</sup>For burrowing nematode in citrus, inject on 18-inch centers, 12 inches deep. Keep free of plants susceptible to burrowing nematodes for 2 years before replanting to citrus.

Note: To control symphylans (garden centipedes), use only overall at 38.5 or more gallons per acre and apply during late Summer or early Fall when the soil is warm.

To control wireworms, use dosages recommended for nematodes in overall or broadcast treatments.

For wireworm control in soils to be planted to potatoes in Idaho, Nevada, Oregon, Utah, and Washington, refer to footnote 2, above.

TABLE 2

Rate Conversion Chart for Various Row Spacings and Fumigant Flow Rates<sup>1</sup>

Note: In no case should the amount of fumigant applied per acre exceed the gallons per acre rates for broadcast treatment given in Table 1.

Fl. Oz./ 1000' of Row	Plant Row Spacing (Inches)								
	28	32	36	40	44	48	52	56	60
	Gallons Per Acre								
52	7.6	6.6	5.9	5.3	4.8	4.4	4.1	3.8	3.5
60	8.8	7.7	6.8	6.1	5.6	5.1	4.7	4.4	4.1
68	9.9	8.7	7.7	6.9	6.3	5.8	5.3	4.9	4.6
76	11.1	9.7	8.6	7.8	7.0	6.5	6.0	5.5	5.2
84	12.3	10.7	9.5	8.6	7.8	7.1	6.6	6.1	5.7
92	13.4	11.7	10.4	9.4	8.5	7.8	7.2	6.7	6.3
100	14.6	12.8	11.3	10.2	9.3	8.5	7.8	7.3	6.8
108	15.8	13.8	12.2	11.0	10.2	9.2	8.5	7.9	7.3
116	16.9	14.8	13.2	11.8	10.8	9.9	9.1	8.5	7.9
124	18.1	15.8	14.1	12.7	11.5	10.5	9.7	9.0	8.4
132	19.3	16.8	15.0	13.5	12.2	11.2	10.4	9.6	9.0
140	20.4	17.9	15.9	14.3	13.0	11.9	11.0	10.2	9.5
148	21.6	18.9	16.8	15.1	13.7	12.6	11.6	10.8	10.1
156	22.8	19.9	17.7	15.9	14.5	13.3	12.2	11.4	10.6
164	23.9	20.9	18.6	16.7	15.2	13.9	12.9	11.9	11.2
172	25.1	21.9	19.5	17.6	16.0	14.6	13.5	12.5	11.7
180	26.3	23.0	20.4	18.4	16.7	15.3	14.1	13.1	12.2
188	27.4	24.0	21.3	19.2	17.4	16.0	14.8	13.7	12.8
196	28.6	25.0	22.2	20.0	18.2	16.7	15.4	14.3	13.3
204	29.8	26.0	23.1	20.8	18.9	17.4	16.0	14.9	13.9
212	30.9	27.0	24.0	21.6	19.7	18.0	16.6	15.4	14.4

<sup>1</sup>For row spacing of 24 inches or less, apply as a broadcast treatment. For treatments with row spacing greater than 24 inches, refer to Table 1 for the rate needed for a specific crop and/or soil texture. To determine gallons per acre for row treatments, double the flow rate in Table 1 and look up the corresponding gallons per acre in Table 2.

For single chisel applications: the flow rates are double those listed in Table 1. For example, for vegetable crops in mineral soil, the flow rate for a single chisel row treatment is 114 to 180 fl oz per 1000 ft of row (note the broadcast rate is 57 to 90 fl oz per 1000 ft of row).

For multiple chisel applications: use the flow rate given in Table 1 per outlet. For example, for vegetable crops in mineral soil using 2 chisels per row, the flow rate per outlet is 57 to 90 fl oz per 1000 ft of row per outlet.

To obtain the gallons per acre used for a row spacing not shown in this table, use the following equation:

$$\frac{\text{Fl. oz./1000 ft. of row} \times 4.08^a}{\text{row spacing (inches)}} = \text{gallons per acre}$$

$$^a 4.08 = \frac{12 \text{ inches} \times 43.56 \text{ (no. 1000 ft./acre)}}{128 \text{ (fl. oz. per gallon)}}$$

### SPILL AND LEAK PROCEDURES

Evacuate everyone from the immediate area of the spill or leak. For entry into affected area to correct problem, wear the personal protective equipment (including prescribed respirator) specified in the *Hazards to Humans and Domestic Animals* section of this labeling. Move leaking or damaged containers outdoors or to an isolated location. Observe strict safety precautions. Work upwind, if possible. Allow spilled fumigant to evaporate or to absorb onto vermiculite, dry sand, earth, or similar absorbent material. Such material should be disposed of on site or at an approved disposal facility. Only correctly trained and PPE-equipped handlers are permitted to perform such cleanup. Do not permit entry into the spill or leak area by any other person until the concentration of chloropicrin is measured to be less than 0.15 ppm.

### STORAGE AND DISPOSAL

*DO NOT CONTAMINATE WATER, FOOD, OR FEED BY STORAGE OR DISPOSAL.*

**PESTICIDE STORAGE AND HANDLING:** Store in a cool, dry, well-ventilated area under lock and key. Post as a pesticide storage area. Persons moving, handling, or opening containers must wear the personal protective equipment (including prescribed respirator) specified in the *Hazards to Humans and Domestic Animals* section of this labeling. Open container only in a well-ventilated area. The valve protection bonnet and safety cap should be removed only when fumigant is about to be removed from the cylinder. The safety cap and valve protection bonnet must be replaced when the cylinder is not in use. Cylinders should never be subjected to rough handling or to abnormal mechanical shock such as dropping, bumping, dragging, or sliding. Ropes, slings, hooks, tongs, and similar handling devices should not be used for unloading cylinders. A suitable hand truck, fork truck, or similar device to which the cylinders can be firmly secured should be used for transporting the heavier cylinders.

**PESTICIDE DISPOSAL:** Pesticide wastes are toxic. Improper disposal of excess pesticide and rinsates is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your state pesticide or environmental control agency, or the hazardous waste representative at the nearest EPA regional office for guidance. Because 1,3-dichloropropene is corrosive under certain conditions, flush all application equipment with fuel oil, kerosene or a similar type of petroleum solvent immediately after use. Fill pumps and meters with new motor oil or a 50% motor oil/fuel oil mixture before storing. Do not use water. Dispose of rinsate by applicable Federal, State and local regulations. Never introduce rinsate or unused product into surface or underground water supplies.

**REFILLABLE CONTAINER:** Only the registrant is authorized to refill cylinders. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

**CONTAINER DISPOSAL:** To clean the container before final disposal, remove any remaining liquid from the container, using dry air pressure if necessary. Allow container to aerate for at least 5 days. After aeration, wash container using hot water; then offer container to qualified reconditioner or dispose of as directed by State or local regulations.



**WARRANTY DISCLAIMER**

Seller warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. **SELLER MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.**

**INHERENT RISKS OF USE:** It is impossible to eliminate all risks associated with use of this product. Crop injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperatures, soil conditions, etc.) abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of the seller. To the extent consistent with applicable law, all such risks shall be assumed by buyer.

**LIMITATION OF REMEDIES:** To the extent consistent with applicable law, the exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability, or other legal theories), shall be limited to, at the company's election, one of the following: (1) Refund of purchase price paid by buyer or user for product bought, or (2) Replacement of amount of product used. To the extent consistent with applicable law, the company shall not be liable for losses or damages resulting from handling or use of this product unless the company is promptly notified of such loss or damage in writing. To the extent consistent with applicable law, the company shall not be liable for consequential or incidental damages or losses. The terms of the Warranty Disclaimer above and this Limitation of Remedies cannot be varied by any written or verbal statements or agreements. No employee or sales agent of the company or the seller is authorized to vary or exceed the terms of the Warranty Disclaimer or this Limitation of Remedies in any manner.

**ACCEPTED**  
**with COMMENTS**  
**In EPA Letter Dated**  
**MAY 3 2010**  
**Under the Federal Insecticide,**  
**Fungicide, and Rodenticide Act**  
**as amended, for the pesticide**  
**registered under EPA Reg. No.**  
**11220-15**