PM 22 11220-21 10/15

NOV 25 1996

Tom Duafala, Ph.D.
Trical
P.O. Box 1327
Hollister, CA 95024

Dear Dr. Duafala:

Subject: Request to Amend Telone Registrations in Response to Telone Negotiations
Tri-Form 30
EPA Registration No. 11220-21
Your Submissions Dated September 23 and November 7, 1996

The amendment referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended is acceptable provided that you:

1. Make the labeling changes listed below before you release the product for shipment bearing the amended labeling:

a. In the Engineering Control Requirements section the reference to "Telone Soil Fumigants - A Guide to Application" makes this part of the labeling for the product and it must be submitted for Agency review and approval.

b. When printing the label assure that on the front panel POISON is the color red on a background of distinctly contrasting color.

2. Submit one (1) copy of your final printed labeling before you release the product for shipment.

A stamped copy of the labeling is enclosed for your records.

The amended labeling supersedes all previously accepted labeling.

Sincerely yours,

Philip V. Errico
Acting Product Manager (22)
Fungicide-Herbicide Branch
Registration Division (7505C)

Enclosure

cc: Lisa Nisenson
Special Review Branch
Special Review and Reregistration Branch (7508W)

RESTRICTED USE PESTICIDE
DUE TO HIGH ACUTE INHALATION TOXICITY AND CARCINOGENICITY
For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification.

TRI-FORM 30

A MULTI-PURPOSE LIQUID FUMIGANT
FOR PREPLANT TREATMENT OF SOIL
TO CONTROL NEMATODES, SYMPHYLANS, WIREWORMS
AND CERTAIN SOIL BORNE DISEASES IN CROPLAND.
NOT FOR USE IN GREENHOUSES OR OTHER ENCLOSED AREAS

ACTIVE INGREDIENTS:	
1,3-Dichloropropene	65.8%
Chloropicrin	30.0%
INERT INGREDIENTS:	4.2%
TOTAL	100.0%

One gallon of Tri-Form 30 weighs about 11.0 pounds.

Contains 7.2 pounds of 1,3-Dichloropropene and 3.3 pounds of chloropicrin per gallon.

KEEP OUT OF REACH OF CHILDREN

DANGER  **PELIGRO**

POISON

Peligro: 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

IF INHALED: Remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Call a physician.

IF ON SKIN: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician. If water is not immediately available, remove excess chemical from skin with adsorbent material such as towel or dry soil, then proceed at once to a location where water is available and thoroughly wash contaminated skin with plenty of water. Call a physician.

IF IN EYES: Immediately flush eyes with plenty of water for at least 15 minutes. Call a physician.

IF SWALLOWED: Do not induce vomiting. Call a physician or Poison Control Center immediately. Never give anything by mouth to an unconscious person.

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. 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 Panel For Additional Precautionary Statements.

TRICAL

P.O. Box 1327, Hollister, CA 95024

E.P.A. EST.11220-CA-1,2,3,4;FL-1 E.P.A. REG. NO.11220-21

NET CONTENTS ..... LBS.

ACCEPTED with COMMENTS In EPA Letter Dated

NOV 25 1996

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 11220-21

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS
AND DOMESTIC ANIMALS:
DANGER PELIGRO
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.

AIR CONCENTRATION LEVEL

The acceptable air concentration level for persons exposed to chloropicrin is 0.1 ppm (0.7 mg/M^3). The air concentration level is measured by a direct reading detection-device, such as a Matheson-Kitagawa, Draeger, or Sensidyne.

PERSONAL PROTECTIVE EQUIPMENT(PPE)

Chemical-Resistant Materials: Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category H on an EPA 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 when contact with this product is possible. Coveralls must be loose-fitting and constructed of woven fabrics (e.g. tight knot cotton or cotton/polyester), non-woven fabrics (e.g. Tyvek or Sontara), or fabrics containing microporous teflon.

(1) Handlers Performing Direct-Contact Tasks: Direct-contact tasks are tasks performed outdoors or in a well-ventilated area. They include:

- equipment calibration or adjustment
- equipment cleanup and repair
- product sampling
- any activity less than 6 feet from an unshielded pressurized hose containing this product
- removal of tarp or plastic film
- rinsate disposal
- fumigant transfer
- cleanup of small spills
- preparing containers for aeration
- any other handling task not otherwise listed in (2), (3), (4) or (5) below.

Handlers performing direct-contact tasks must wear: (a) Coveralls over short-sleeved shirt and short pants; (b) Chemical-resistant gloves, such as barrier laminate (EVAL) or viton; (c) Chemical-resistant footwear plus socks; (d) Chemical-resistant headgear for overhead exposure; (e) Chemical-resistant apron; (f) A full-face respirator with either an organic-vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G). See further respirator requirements in the "User Safety Requirements" section of this label.

(2) Handlers in Enclosed Cabs: Applicators and other handlers in enclosed cabs must wear: (a)Coveralls; (b) Shoes and socks; (c) A full-face respirator with either an organic-vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G). A respirator is not required if the occupants are within an enclosed cab that is in conformance with one of the following: (1) ASAE Standard S525 sections 7.1.5, 7.1.7, 7.2.3, and 9, or 2) the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides--40 CFR 170.240(d)(5). The cab must be equipped with a vapor-adsorptive filter containing a minimum of 1000 grams activated charcoal. The filter must be changed after no more than 50 hours of applications time. See further respirator requirements in the "User Safety Requirements" section of this label; (d) In addition, the PPE specified in (1) for direct-contact activities must be immediately available in the enclosed cab and must be worn if the handler leaves the enclosed cab to perform any direct-contact activity.

(3) Applicators Outside an Enclosed Cab: Applicators applying this soil fumigantproduct (or sealing the soil following application of this product) who are not inside an enclosed cab that meets requirements specified above must wear:

(a) Coveralls over short-sleeved shirt and short pants; (b) Chemical-resistant gloves, such as barrier laminate (EVAL) or viton; (c) Chemical-resistant footwear plus socks; (d) Chemical-resistant headgear for overhead exposure, (e) A full-face respirator with either an organic-vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C) or canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G). See further respirator requirements in the "User Safety Requirements" section on this label.

(4) Handlers in Treated Area Within 5 Days After Application: Only the following handler tasks may be performed in the treated area within 5 days after the application is complete: (a) Assessing/adjusting the soil seal; (b) Assessing pest control, application technique, or application efficacy; (c) Sampling air or soil for this product.

All other tasks are prohibited until the 5 day period has expired. Unless in an enclosed cab as described in (2) above, handlers performing the above tasks in the treated area within 5 days after application must wear: (a) Coveralls; (b) Chemical-resistant gloves,such as barrier laminate (EVAL) or viton; (c) Chemical-resistant foot-wear and socks; (d) A full-face respirator with either an organic-vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G). See further respirator requirements in the "User Safety Requirements" section on this label.

See Requirements Continued In Third Column

Label Column 3

Requirements, Continued:

(5) Handlers Exposed to High Concentrations: 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: (a) Chemical-resistant suit; (b) Chemical-resistant gloves, such as barrier laminate (EVAL) or viton; (c) Chemical-resistant footwear plus socks; (d) Chemical-resistant headgear; (e) Supplied-air respirator with MSHA/NIOSH approval number prefix TC-19C or self-contained breathing apparatus (SCBA) with MSHA/NIOSH approval number prefix TC-13F. See further respirator requirements in the "User Safety Requirements" section of this label.

NOTE: In-tank cloaning of bulk tanks must be performed only by persons who have been specifically trained for this activity according to OSHA guidelines as described in 29 CFR Part 1910.146. Refer to Application Guide section on storage tanks.

USER SAFETY REQUIREMENTS

1. **Respirator Requirements:** When a respirator is required for use with this product, the following criteria must be met: (a) Full-face respirators must be worn; (b). Cartridges or canisters must be replaced daily or when odor or irritation from this product becomes apparent, whichever is sooner; (c) Respirators must be fit-tested and fit--checked using a program that conforms to OSHA's requirements (described in 29 CFR Part 1910.134); (d) Respirator users must be trained using a program that conforms to OSHA's requirements (described in 29 CFR Part 1910.134); (e) Respirator users must be examined by a qualified medical practitioner to ensure physical ability to safely wear the style of respirator to be worn.
2. **Never Fumigate alone.** It is imperative to always have an assistant and proper protective equipment in case of accidents.
3. **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.
4. **Dispose of Contaminated Clothing:** Discard clothing and other absorbent materials that have been drenched or heavily contaminated with liquid from this product. Do not reuse them.
5. **Clean and Maintain PPE:** Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. Wash PPE after each day's use.
6. **Contact With Mouth:** Never siphon this product by mouth or use mouth to blow out clogged lines, nozzles, etc.
7. **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 inside. 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.

EMERGENCY: In case of an emergency endangering health or the environment involving this product, call the 24 Hour Emergency Phone Number (800) 424-9300.

ENVIRONMENTAL HAZARDS

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water by disposal of equipment washwaters. See "Storage, Shipment and Disposal" section. In case of spills, properly dispose of contaminated materials.

Ground Water Advisory: 1,3-dichloropropene is known to move through soil and under certain conditions has the potential to reach ground water as a result of agricultural use. Application in areas where soils are permeable and ground water is near the surface, or in karst geology, could result in ground water contamination.

PHYSICAL OR CHEMICAL HAZARDS

FLAMMABLE: Do not use, pour, spill, or store near heat or open flames. Do not cut or weld container.

STORAGE, SHIPMENT AND DISPOSAL

SHIPPING, STORAGE: Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

STORAGE: Store in tightly-closed original container in a cool place away from dwellings. Do not allow contamination of seeds, plants, fertilizers, or other pesticide chemicals. Do not contaminate food, feedstuffs, drugs, or domestic water supplies.

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.

METAL CONTAINER DISPOSAL: To dispose of container emptied during application operation, remove bungs, invert container in the field just treated and ensure that the container is free of liquid. Orient container such that ventilation of bung holes is not restricted. Allow containers to aerate for at least 14 days. Replace bungs prior to transport. After aeration, offer container to qualified reconditioner or dispose of as directed by State or local regulations.

REFILLABLE CONTAINERS: Follow cleaning and handling directions in the Telone User's Guide.

ENGINEERING CONTROLS REQUIREMENTS

MECHANICAL TRANSFER SYSTEM: Personal protective equipment specified for "Direct Contact Activities" must be worn by the operator of the mechanical transfer system. The operator of the mechanical transfer system must follow instructions on proper operation of the system found in the "Telone Soil Fumigants - A Guide to Application" manual. Contact your product distributor for more information of these materials.

END-ROW SPILLAGE CONTROL: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. The applicator must follow instructions on proper operation and maintenance of the system found in the "Telone Soil Fumigants - A Guide to Application" manual. Contact your product distributor for more information or these materials. (1). 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. (2). Check valves must be replaced immediately if continuous drip occurs. (3). Place check valves above the orifice. (4). Isolate the check valve from upstream pressure by installing a main line shut off or bypass valve prior to the manifold. (5). Do not exceed 1/4 inch diameter tubing. (6). Do not use any method of end-row spillage control other than that stated on this label. (7). An alternative to shutoff devices is a purge system which clears the line of all liquid. Consult your product representative for purge system description. Do not use any method of end-row spillage control other than that stated on this label.

WITH ALL BULK AND MINI-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.

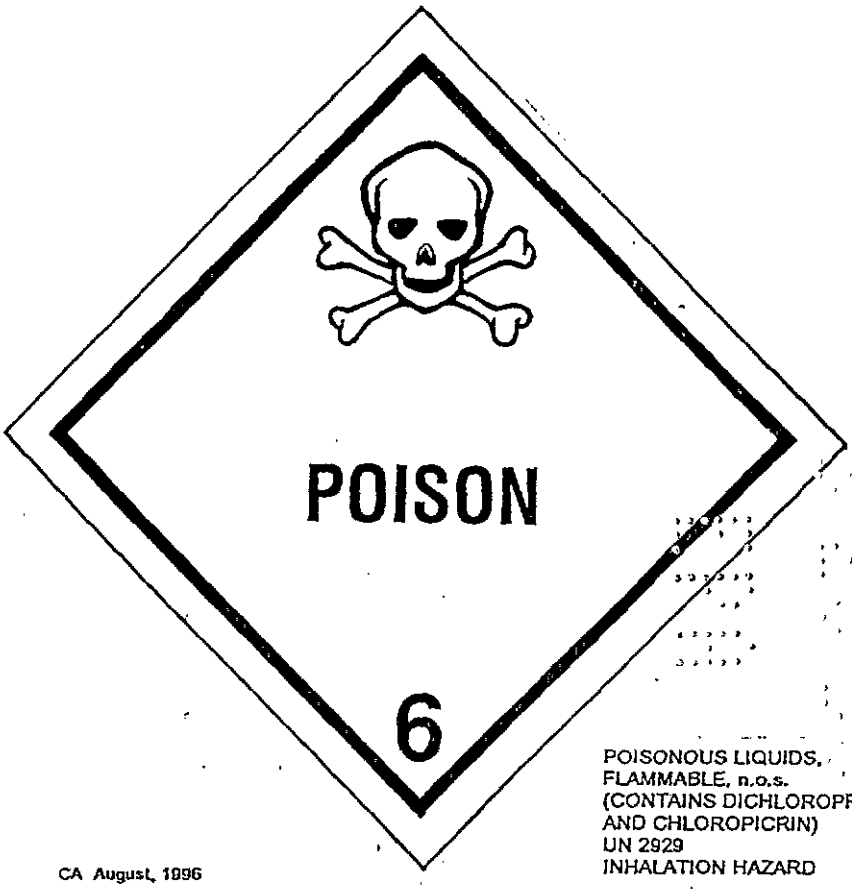
1. All hoses, piping, and tanks used in connection with this product shall be of type appropriate for use under the pressure and vacuum conditions to be encountered.
2. External sight gauges shall be equipped with valves so that pipes to sight gauge can be shut off in case of breakage and leakage.
3. The mechanical transfer system must be adequate to make necessary measurements of the pesticide being used.
4. 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.
5. The pressure in hoses used to move this product beyond a pump must not exceed the manufacturer's maximum pressure specification.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read all Directions for Use carefully before applying. 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.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR 170. Refer to label booklet under "Agricultural Use Requirements" in the Direction for Use section for information about this standard.



POISONOUS LIQUIDS, FLAMMABLE, n.o.s.
(CONTAINS DICHLOROPROPENE, AND CHLOROPICRIN)
UN 2929
INHALATION HAZARD

Label Column 5

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".

REFER TO LABEL BOOKLET FOR ADDITIONAL PRECAUTIONARY INFORMATION AND DIRECTIONS FOR USE.

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 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. All such risks shall be assumed by buyer.

LIMITATION OF REMEDIES: 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. 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. In no case shall the company 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 statement 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.

Booklet Column 1

RESTRICTED USE PESTICIDE

DUE TO HIGH ACUTE INHALATION TOXICITY AND CARCINOGENICITY

For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator's certification.

LABEL BOOKLET

DIRECTIONS FOR USE INCLUDING STORAGE, SHIPMENT AND DISPOSAL; PRECAUTIONARY INFORMATION, INCLUDING REQUIREMENTS FOR PERSONAL PROTECTIVE EQUIPMENT; ENGINEERING CONTROL AND REQUIREMENTS; AND AGRICULTURAL USE REQUIREMENTS.

TRI-FORM 30

MULTI-PURPOSE LIQUID FUMIGANT FOR PREPLANT TREATMENT OF SOIL TO CONTROL NEMATODES, SYMPHYLANS, WIREWORMS AND CERTAIN SOIL BORNE DISEASES IN CROPLAND. NOT FOR USE IN GREENHOUSES OR OTHER ENCLOSED AREAS.

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Chloropicrin	30.0%
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TOTAL	100.0%

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Contains 7.7 pounds of 1,3-Dichloropropene and 3.3 pounds of chloropicrin per gallon.

TRICAL

P.O. Box 1327, Hollister, CA 95024E.P.A.

EST.11220-CA-1,2,3,4;FL-1 E.P.A. REG. NO.11220-21

NET CONTENTS . . . . . LBS.

KEEP OUT OF REACH OF CHILDREN

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FIRST AID

IF INHALED: Remove to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Call a physician.

IF ON SKIN: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Call a physician. If water is not immediately available, remove excess chemical from skin with adsorbent material such as towel or dry soil, then proceed at once to a location where water is available and thoroughly wash contaminated skin with plenty of water. Call a physician.

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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. 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.

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(1) Handlers Performing Direct-Contact Tasks: Direct-contact tasks are tasks performed outdoors or in a well-ventilated area. They include:

- equipment calibration or adjustment
- equipment cleanup and repair
- product sampling
- any activity less than 6 feet from an unshielded pressurized hose containing this product
- removal of tarp or plastic film
- rinsate disposal
- fumigant transfer
- cleanup of small spills
- preparing containers for aeration
- any other handling task not otherwise listed in (2), (3), (4) or (5) below.

Handlers performing direct-contact tasks must wear: (a) Coveralls over short-sleeved shirt and short pants; (b) Chemical-resistant gloves, such as barrier laminate (EVAL) or viton; (c) Chemical-resistant footwear plus socks; (d) Chemical-resistant headgear for overhead exposure; (e) Chemical-resistant apron; (f) A full-face respirator with either an organic-vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G). See further respirator requirements in the "User Safety Requirements" section of this label.

(2) Handlers in Enclosed Cabs: Applicators and other handlers in enclosed cabs must wear: (a)Coveralls; (b) Shoes and socks; (c) A full-face respirator with either an organic-vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G). A respirator is not required if the occupants are within an enclosed cab that is in conformance with one of the following: (1) ASAE Standard S525 sections 7.1.5, 7.1.7, 7.2.3, and 9, or 2) the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides--40 CFR 170.240(d)(5). The cab must be equipped with a vapor-adsorptive filter containing a minimum of 1000 grams activated charcoal. The filter must be changed after no more than 50 hours of applications time. See further respirator requirements in the "User Safety Requirements" section of this label; (d) In addition, the PPE specified in (1) for direct-contact activities must be immediately available in the enclosed cab and must be worn if the handler leaves the enclosed cab to perform any direct-contact activity.

(3) Applicators Outside an Enclosed Cab: Applicators applying this soil fumigantproduct (or sealing the soil following application of this product) who are not inside an enclosed cab that meets requirements specified above must wear:
(a) Coveralls over short-sleeved shirt and short pants; (b) Chemical-resistant gloves, such as barrier laminate (EVAL) or viton; (c) Chemical-resistant footwear plus socks; (d) Chemical-resistant headgear for overhead exposure, (e) A full-face respirator with either an organic-vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C) or canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G). See further respirator requirements in the "User Safety Requirements" section on this label.

(4) Handlers in Treated Area Within 5 Days After Application: Only the following handler tasks may be performed in the treated area within 5 days after the application is complete: (a) Assessing/adjusting the soil seal; (b) Assessing pest control, application technique, or application efficacy; (c) Sampling air or soil for this product.
All other tasks are prohibited until the 5 day period has expired. Unless in an enclosed cab as described in (2) above, handlers performing the above tasks in the treated area within 5 days after application must wear: (a) Coveralls; (b) Chemical-resistant gloves,such as barrier laminate (EVAL) or viton; (c) Chemical-resistant foot-wear and socks; (d) A full-face respirator with either an organic-vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G). See further respirator requirements in the "User Safety Requirements" section on this label.

See Requirements Continued in Third Column

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Requirements, Continued:

(5) **Handlers Exposed to High Concentrations:** 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: (a) Chemical-resistant suit; (b) Chemical-resistant gloves, such as barrier laminate (EVAL) or viton; (c) Chemical-resistant footwear plus socks; (d) Chemical-resistant headgear; (e) Supplied-air respirator with MSHA/NIOSH approval number prefix TC-19C or self-contained breathing apparatus (SCBA) with MSHA/NIOSH approval number prefix TC-13F. See further respirator requirements in the "User Safety Requirements" section of this label.

NOTE: In-tank cleaning of bulk tanks must be performed only by persons who have been specifically trained for this activity according to OSHA guidelines as described in 29 CFR Part 1910.146. Refer to Application Guide section on storage tanks.

USER SAFETY REQUIREMENTS

1. Respirator Requirements: When a respirator is required for use with this product, the following criteria must be met: (a) Full-face respirators must be worn; (b) Cartridges or canisters must be replaced daily or when odor or irritation from this product becomes apparent, whichever is sooner; (c) Respirators must be fit-tested and fit-checked using a program that conforms to OSHA's requirements (described in 29 CFR Part 1910.134); (d) Respirator users must be trained using a program that conforms to OSHA's requirements (described in 29 CFR Part 1910.134); (e) Respirator users must be examined by a qualified medical practitioner to ensure physical ability to safely wear the style of respirator to be worn.

2. Never Fumigate alone. It is imperative to always have an assistant and proper protective equipment in case of accidents.

3. 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.

4. Dispose of Contaminated Clothing: Discard clothing and other absorbent materials that have been drenched or heavily contaminated with liquid from this product. Do not reuse them.

5. Clean and Maintain PPE: Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry. Wash PPE after each day's use.

6. Contact With Mouth: Never siphon this product by mouth or use mouth to blow out clogged lines, nozzles, etc.

7. 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 inside. 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.

EMERGENCY: In case of an emergency endangering health or the environment involving this product, call the 24 Hour Emergency Phone Number (800) 424-9300.

ENVIRONMENTAL HAZARDS

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water by disposal of equipment washwaters. See "Storage, Shipment and Disposal" section. In case of spills, properly dispose of contaminated materials.

Ground Water Advisory: 1,3-dichloropropene is known to move through soil and under certain conditions has the potential to reach ground water as a result of agricultural use. Application in areas where soils are permeable and ground water is near the surface, or in karst geology, could result in ground water contamination.

PHYSICAL OR CHEMICAL HAZARDS

FLAMMABLE: Do not use, pour, spill, or store near heat or open flames. Do not cut or weld container.

STORAGE, SHIPMENT AND DISPOSAL

SHIPPING, STORAGE: Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

STORAGE: Store in tightly-closed original container in a cool place away from dwellings. Do not allow contamination of seeds, plants, fertilizers, or other pesticide chemicals. Do not contaminate food, foodstuffs, drugs, or domestic water supplies.

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.

METAL CONTAINER DISPOSAL: To dispose of container emptied during application operation, remove bungs, invert container in the field just treated and ensure that the container is free of liquid. Orient container such that ventilation of bung holes is not restricted. Allow containers to aerate for at least 14 days. Replace bungs prior to transport. After aeration, offer container to qualified reconditioner or dispose of as directed by State or local regulations.

REFILLABLE CONTAINERS: Follow cleaning and handling directions in the Telone User's Guide.

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ENGINEERING CONTROLS REQUIREMENTS

MECHANICAL TRANSFER SYSTEM: Personal protective equipment specified for "Direct Contact Activities" must be worn by the operator of the mechanical transfer system. The operator of the mechanical transfer system must follow instructions on proper operation of the system found in the "Telone Soil Fumigants - A Guide to Application" manual. Contact your product distributor for more information or these materials.

END-ROW SPILLAGE CONTROL: The dispensing system must shut off the feed streams when chisels are raised out of the ground. Do not stop or park near any area where dribble from chisel tips has fallen. The applicator must follow instructions on proper operation and maintenance of the system found in the "Telone Soil Fumigants - A Guide to Application" manual. Contact your product distributor for more information or these materials. (1). 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. (2). Check valves must be replaced immediately if continuous drip occurs. (3). Place check valves above the orifice. (4). Isolate the check valve from upstream pressure by installing a main line shut off or bypass valve prior to the manifold. (5). Do not exceed 1/4 inch diameter tubing. (6). Do not use any method of end-row spillage control other than that stated on this label. (7). An alternative to shutoff devices is a purge system which clears the line of all liquid. Consult your product representative for purge system description. Do not use any method of end-row spillage control other than that stated on this label.

WITH ALL BULK AND MINI-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.

1. 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.
2. External sight gauges shall be equipped with valves so that pipes to sight gauge can be shut off in case of breakage and leakage.
3. The mechanical transfer system must be adequate to make necessary measurements of the pesticide being used.
4. 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.
5. The pressure in hoses used to move this product beyond a pump must not exceed the manufacturer's maximum pressure specification.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read all Directions for Use carefully before applying. 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.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR 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).

ENTRY RESTRICTION: Entry (including early entry that would otherwise be permitted under the WPS) by any person—other than a correctly trained and equipped handler who is performing a handling task permitted on this labeling—is prohibited from the start of application until 5 days after application. In addition, if tarps are used for the application, non-handler entry is prohibited while tarps are being removed.

NOTIFICATION: Notify workers of the application by warning them orally and by posting fumigant warning signs at entrances to treated areas. The sign must bear the skull and crossbones symbol and state: (1) "DANGER/PELIGRO," (2) Areas under fumigation, DO NOT ENTER/NO ENTRE," (3) the date and time of fumigation, (4) 1,3-Dichloropropene and Chloropicrin fumigants in use, and (5) name, address, and telephone number of the applicator. Post the fumigant warning 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.

PPE FOR REENTRY 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.

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".

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 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. All such risks shall be assumed by buyer.

LIMITATION OF REMEDIES: 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. 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. In no case shall the company 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 statement 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.

CA August, 1996

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, a soil fungicide and nematicide, may be applied as a preplant soil treatment to control or to aid in reducing the damaging effects of certain soil borne diseases [soil rot (soil pox) of sweet potatoes; Granville (bacterial) wilt, black root rot, black shank diseases of tobacco; Verticillium wilt of mint, pink root of onions, pod rot of peanuts]; plant parasitic nematodes [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]; 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 USE PRECAUTIONS

Soil fumigation using this product should be conducted only according to directions and conditions of use described in this labeling.

FORMULATOR USE OF 1,3-DICHLOROPROPENE: Labeling for end use products containing 1,3-dichloropropene that are prepared and sold by formulators must comply with all precautionary statements, use precautions, environmental hazards, handling and protective equipment requirements, maximum application rates and other exposure mitigation measures specified in this product labeling. Any product formulated from this product and/or any product which is formulated from the repackaging of this product must be labeled only as a pre-plant soil injected and/or soil fumigant product. Each formulator is responsible for obtaining EPA registration for each end use product.

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 1,3-dichloropropene 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.

APPLICATION DIRECTIONS

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. The following soil temperature and moisture conditions should exist at time of treatment. Failure to meet these conditions may result in unsatisfactory product performance.

SOIL CONDITIONS:

SOIL TEMPERATURE at the depth of application must be between 40 degrees F and 80 degrees F. In areas where the soil temperature in the spring may not reach 40 degrees F in time to allow application of this product prior to planting, late summer or early fall treatment is recommended.

SOIL MOISTURE: It is critical to manage soil moisture properly before fumigation. Plan fumigation for seasons, crop rotations, or irrigation schedules which leave moisture in the soil. The soil must be moist from two inches below the soil surface to at least 12 inches deep as determined by the feel method (see below). The amount of moisture needed in this zone will vary according to soil type. The surface soil generally dries very rapidly and should not be considered in this determination. If there is insufficient moisture at the two to six inch depth, the soil moisture must be adjusted. If irrigation is not available and there is adequate soil moisture below six inches, it may be brought to the surface by disking or plowing before or during the injection. To conserve existing soil moisture, pretreatment or treatment tillage practices should be done as close to the time of application as possible. 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 you do not know how to determine the soil moisture content of the area to be treated, consult your local extension service or soil conservation service specialist or pest control advisor (Ag Consultant) for assistance.

Application Directions, Continued:

In general, no irrigation should immediately precede subsoiling or fumigation; however, when irrigation is available and surface soil moisture conditions are not likely to provide an adequate seal against fumigant loss, a very light sprinkler irrigation to wet the top 1 to 2 inches of soil may be used to bring soil moisture content to the desired level.

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

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

PLACEMENT OF FUMIGANT: This product may be applied as either a broadcast (overall) or row treatment. It must be placed at least 12 inches below the final soil surface. When soil conditions allow, placement a minimum of 14 inches below the final soil surface is recommended. Deeper placement is recommended when fumigating soil to be planted to deep-rooted plants, such as perennial fruit and nut crops, or to control deeply distributed pests. For row application, the fumigant must be placed at least 12 inches from the nearest soil/air interface (e.g. furrow).

APPLICATION METHODS AND EQUIPMENT

BROADCAST APPLICATION: 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 as described under "Soil Preparation". Choose application equipment which allows the deepest application and best soil seal under existing conditions.

The fumigant outlet spacing varies with the type of application equipment used:
With chisel equipment a fumigant shank spacing of 12 to 24 inches is recommended. The outlet spacing for this equipment may be up to 1 1/2 times the application depth but generally should be equal to the application depth and should not exceed the soil-shattering capability of the chisels. The maximum outlet spacing should not exceed 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 9-12 inches along the sweeps.

Broadcast application can be made in the same direction or at an angle to the direction of row planting.

ROW APPLICATION (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). Regardless of the number or spacing of chisels used, the fumigant must be placed at least 12 inches from the nearest soil/air interface (e.g. furrow). 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.

SEALING THE SOIL AFTER APPLICATION: Immediately after chisel application of this product, the soil must be "sealed" to prevent fumigant loss and ensure that an effective concentration of fumigant is maintained within the soil for a period of several days.

For broadcast treatment (flat fumigation), sealing can be accomplished with equipment that will uniformly mix the soil to a depth of 3 to 4 inches to effectively eliminate chisel or plow traces which can allow direct escape of the fumigant. A tandem disc or similar equipment may be used for this purpose. To maximize sealing, steps should also be taken to compact the soil surface to further retard the rate of fumigant loss by following with a ring roller, cultipacker or roller in combination with tillage equipment. Compaction of the soil surface alone does not effectively disrupt chisel or plow traces.

For row treatment, forming the beds at the time of application should be accomplished in a manner that places the fumigant at least 12 inches from the nearest soil/air interface (e.g. furrow). The closest soil/air interface could be the furrow for multiple knife applications or the top of the bed for single knife applications. Row treatments into preformed beds must be sealed by disrupting the chisel trace using press sealers, ring rollers or by reforming the beds and following with such equipment.

Sealing can also be improved by applying non-perforated plastic film, such as polyethylene, over the entire area or in strips. Use of a film to seal the soil surface does not eliminate the need to eliminate chisel traces prior to application of the plastic film unless simultaneous application and tarp laying by the same piece of equipment occurs and the tarp is a minimum of 1 mil thick.

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

SOIL FUMIGATION INTERVAL: Leave the soil undisturbed 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.

APPLICATION METHODS AND EQUIPMENT (Continued):

After the fumigation interval, 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 300 feet of an occupied structure, 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. This buffer zone does not apply to use on soils to be planted with perennial crops that will not experience additional 1,3-D treatment for at least three years, for example pineapple, perennial vines, hops, mint, fruit and nut trees.

APPROVED USES

This product is recommend for control of nematodes, symphylans and wireworms in soils to be planted to vegetable crops, field crops, fruit and nut crops and nursery crops.

TABLE I
TRI-FORM 30
Broadcast Application Rates and Use Information for Control of Nematodes, Symphylans, Wireworms and Certain Soil-Borne Diseases in Soils Planted to Crops Listed.

		Application Rates [a]	
		Broadcast	Fl oz per/1000 L
Crop	Soil Type	*Gallons/Acre*	*ft/Outlet*
Vegetable Crops [2]	Mineral	12.0 to 19.5 [3]	35 to 55
	Muck or Peat	31.0 [4] to 34.0	89 to 98
Field Crops [5]	Mineral	12.0 to 19.5	35 to 55
	Muck or Peat	24.5	70
Fruit and Nut Crops [6]	Mineral, Muck, or Peat	37.0 to 48.0	105 to 137
Nursery Crops	Mineral, Muck, or Peat	57.5 to 75.5	164 to 215

[a] Do not exceed specified maximum application rates.

[1] Flow rates are based on a 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.

[2] Row treatment is not recommended for potatoes in irrigated areas of western and northwestern states. In Idaho, Nevada, Oregon, Utah, and Washington, refer to supplemental labeling entitled: "For Nematode and Wireworm Control in Soils to be Planted to Potatoes or Onions" for directions for use.

[3] For cyst-forming nematodes increase dosage to 24 gallons/acre (70 fl oz/1000 ft row per chisel).

[4] For muck soils containing less than 30% organic matter use 24 gallons/acre.

[5] For mint, apply 30.5 gallons per acre.

[6] 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 23.5 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 supplemental labeling referenced in footnote 2 above.

Booklet Column 8

TABLE 2
Rate Conversion Chart for Various Row Spacings and Fumigant Flow Rates[1]

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/	Plant Row Spacing (Inches)								
1000 Ft	28	32	36	40	44	48	52	56	60
of Row	*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
9.0	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

[1] 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 Application: 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 63.6 to 100.4 fl oz per 1000 ft of row (note the broadcast rate is 31.8 to 50.2 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 63.6 to 100.4/2, or 31.8 to 50.2 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:

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

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