

Reg. # 45699-90

108-1
ACCEPTED
JUL 17 1985
Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 45699-90

FOR AGRICULTURAL USE ONLY

Vorlex

SOIL FUMIGANT

BEST AVAILABLE COPY

ACTIVE INGREDIENTS:

1,3-dichloropropene and related chlorinated hydrocarbons 40.0%
Methyl Isothiocyanate 20.0%

INERT INGREDIENTS

TOTAL 40.0%
100.0%

KEEP OUT OF REACH OF CHILDREN

 **DANGER - POISON** 
PELIGRO - VENENO

PRECAUCION AL USUARIO:

Si usted no lee ingles, no use este producto hasta que la etiqueta haya sido explicado ampliamente.

**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS & DOMESTIC ANIMALS.**

HAZARDOUS VAPOR AND LIQUID. MAY BE FATAL IF INHALED, SWALLOWED, OR ABSORBED THROUGH SKIN. CAUSES BURNS OF SKIN AND EYES. MAY PRODUCE KIDNEY AND LIVER DAMAGE UPON PROLONGED EXPOSURE.

Do Not Breathe Vapor. Do Not Get In Eyes, On Skin, Or On Clothing. Do Not Take Internally. Use Only With Adequate Ventilation. Wear Eye And Skin Protection Necessary To Prevent Contact When Handling. Wash Thoroughly After Handling And Before Eating Or Smoking.

If protective gear, such as boots or gloves, becomes contaminated, immediately wash with soap and water. Never wear protective gear having the odor of Vorlex. Aerate and wash all protective gear thoroughly after use until all odor is gone. Render unusable and dispose of contaminated leather goods, including shoes.

STATEMENT OF PRACTICAL TREATMENT.

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 all visible chemical from skin with sorbent material such as a towel or dry soil. Then proceed at once to 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 or a 3% solution of sodium bicarbonate for at least 15 minutes. Call a physician. Continue treatment with ophthalmic hydrocortisone ointment.

IF SWALLOWED, immediately call a physician or poison control center. **DO NOT INDUCE VOMITING.** NOTE TO PHYSICIAN: Empty stomach content gastric lavage.

SEE OTHER PANELS FOR ADDITIONAL PRECAUTIONS

FLAMMABLE

DO NOT USE, POUR, SPILL, OR STORE NEAR HEAT OR OPEN FLAME.
DO NOT CUT OR WELD CONTAINER. FIRE OR EXPLOSION MAY RESULT EVEN IF CONTAINER IS EMPTY.

ENVIRONMENTAL HAZARDS

This product is toxic to fish and wildlife. Do not spill or empty into streams, ponds or any other body of water. Do not contaminate water or wetlands by cleaning of equipment, disposal of wastes, or direct application.

HANDLING PRECAUTIONS

DO NOT INHALE VAPORS—NIOSH- or MESA- approved respiratory protection should be worn when VORLEX liquid soil fumigant is exposed to the atmosphere or when conducting operations which vent to the atmosphere. A NIOSH- or MESA- approved half-faced respirator with chemical worker's goggles or full-face respirators shall be used during small spills, repairs, calibrations, transfers, sampling and when working in poorly ventilated areas. When in use canisters or cartridges shall be replaced daily or sooner if specified by manufacturer or at first sign of odor breakthrough, whichever comes first. NIOSH-approved cartridges, such as a WILLSON-R21 will be adequate for short-term situations such as listed above.

Where very high concentrations of vapors might be expected (such as large spills in poorly ventilated areas) a self-contained or air-supplied respirator should be used.

DO NOT GET ON SKIN—When handling or working with VORLEX, wear clean body covering including gloves and heavy footwear. Immediately remove contaminated coverings. Aerate and wash all protective clothing and gear thoroughly after use.

There are no protective clothing materials that are completely impervious. Thin layers of polyethylene (minimum 1 mil) give short-term protection and shall be immediately discarded upon contamination. Heavy (3 - mil) polyethylene provides longer term protection. Leather gives no protection. If gear becomes contaminated, immediately wash with soap and water. Never wear protective gear having odor of VORLEX. Wash and aerate all protective gear thoroughly after use until all odor is gone.

DO NOT GET IN EYES—Wear eye protection such as chemical worker's goggles or full-face respirator when handling VORLEX.

DO NOT SWALLOW—Do not use the mouth to siphon VORLEX from containers or to blow out clogged lines, nozzles, etc.

For Chemical Emergency—Spill, Leak, Fire, Exposure Or Accident Call 800 424-9300 Day Or Night

STORAGE, SHIPMENT AND DISPOSAL

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, feed, stuffs, drugs, or domestic water supplies. In outside storage, store drums (make sure that bungs are tightly closed) on sides to avoid accumulation of rain water in top or bottom of recessed areas.

SHIPMENT—Do not ship or store with food, feeds, drugs, or clothing.

PESTICIDE DISPOSAL - Waste, including spills or rinsates, and leftover pesticide that cannot be used according to label instructions, must be disposed of according to applicable Federal, State or local procedures.

CONTAINER DISPOSAL - Triple rinse. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other approved state and local procedures.

DO NOT REUSE ORIGINAL CONTAINERS
UNLESS RECONDITIONED

DISCLAIMER OF WARRANTIES: THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE, WHICH EXTEND BEYOND THE STATEMENTS MADE ON THIS LABEL. No agent of NOR-AM Chemical Company is authorized to make any warranties beyond those contained herein or modify the warranties contained herein. UNDER NO CIRCUMSTANCES SHALL NOR-AM CHEMICAL COMPANY BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM FAILURE TO USE THIS PRODUCT IN ACCORDANCE WITH LABEL DIRECTIONS.

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DIRECTIONS FOR USE:

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling

USE PRECAUTIONS As with most soil fumigants, application of VORLEX may temporarily raise the level of ammonia nitrogen and soluble salts in the soil which may result in plant injury. This is most likely to occur when heavy rates of fertilizer or fumigant are applied to soils that are either cold, wet, acid or high in organic matter.

Do not add fertilizers containing ammonia or ammonium salts or undecomposed manure to the soil at or near the time of fumigation. Use only fertilizers containing nitrates until the soil temperature is above 65°F and the crop is well established.

Do not allow liquid or vapors to come in contact with lawn and desirable plants; do not apply on areas beneath which roots of desirable plants extend.

Do not use in greenhouses which contain living plants.

Do not fumigate if the soil temperature at 3 inch depths is over 90°F.

Avoid reinfestation of treated soil. Do not contaminate treated soil with untreated soil. Do not use transplants or tools which could carry soil-borne pests from infested land. Clean equipment carefully before using.

VORLEX may be corrosive under certain conditions. Flush all applicators with fuel oil or kerosene immediately after use. **DO NOT USE WATER.** Do not use containers or equipment of aluminum, magnesium or their alloys. Close containers tightly.

TIME OF APPLICATION Treatment can be made at any time the soil is workable. Fall or winter application is desirable for crops which are planted early in the spring.

Soil temperature: VORLEX is active in soils as cold as 35°F except against soil insects.

PREPARATION OF SOIL FOR OPTIMUM CONTROL WITH VORLEX FOLLOW THESE STEPS CAREFULLY (1) Work crop remains into the soil so that they are well decomposed before treatment. (2) In shrub and tree replant sites remove as much of the root system as possible. (3) Break up all clods and loosen soil thoroughly by cultivation one week before treatment. Deep tillage is recommended, particularly for deep-rooted crops. Always work soil deeper than intended application depth. (4) Keep soil moist from the surface down through the root zone and maintain in this condition for one week before fumigation. **DO NOT FUMIGATE DRY SOILS.**

APPLICATION Use injection type applicators.

Broadcast treatment: Set shanks 6 to 8' apart, for band treatment set shanks 6' apart. Inject at a depth of 6 to 8".

Row treatment: Adjust injection chisels to same spacing as planter. Seal the treated strips by bedding or listing. Always inject the fumigant at least 6-8" below the final soil (planting) surface. Before planting, remove the tops of the beds, being careful that none of this soil falls over on the fumigated band.

DOSAGE:

Pest	Soil Type	Overall (Broadcast) Application		Row or Band Application	
		Per Acre	Per 100 sq. ft.	Per Chisel	Per 100 Linear Ft.
Nematodes	Mineral	7-15 gal.	2 1/4 - 4 fl. oz.	40-87 ml.	1.4-3.0 fl. oz.
Nematodes	Organic/Muck	10-25 gal.	3-7 fl. oz.	58-146 ml.	2-5 fl. oz.
Symphytans	—	10-15 gal.	3-4 fl. oz.	—	—
Weeds, fungi, nematodes and soil insects (wire-worms)	Mineral	25-50 gal.	7 - 15 fl. oz.	145-290 ml.	5-10 fl. oz.
Weeds, fungi, nematodes and soil insects (wire-worms)	Organic/Muck	40-60 gal.	1 1/2 - 3 pints	232-348 ml.	8-12 fl. oz.

1. For best weed control, use the higher dosages indicated, inject at 4 inch depth and cover with a tarp for 4 days.

2. If VORLEX is used in heavy clay soils, an extended aeration period may be required.

3. To obtain best symphytan control remove all residues prior to fumigation.

4. For citrus and other orchard trees where deep penetration is desirable, use 60-70 gallons of VORLEX per acre (1 1/2 - 3 pints per 100 sq. ft.).

5. Row or band treatment does not give effective soil insect control.

6. Row fumigation may not effectively control nematodes on root crops where infestation is severe.

IMMEDIATELY after application, drag the soil to remove chisel marks, then firm with a smooth roller. If additional water is required, apply only the amount necessary to wet the soil to a depth of one-half inch. If a tarp seal is used, lower dosages may be effective.

In soils 70°F or higher at 6" depth, special attention should be given to sealing the surface of the soil. Tarping gives the best seal.

FUMIGATION PERIOD: After application at soil temperatures of 60°F or above, keep soil moist and undisturbed for a minimum of 4 days, 7 days is preferable. Use a shorter fumigation period only if it has been shown effective.

Colder soils require a longer fumigation period. If these conditions occur, allow at least one to three weeks for the fumigation period depending upon the temperature.

In fall or winter application the fumigation period should extend until spring. The soil should be undisturbed during this period.

AERATION PERIOD: For soil temperatures above 60°F (at 6" depth), aerate the soil at the end of the fumigation period by cultivation, e.g. disking. Repeated cultivation will aid release of the fumigant and is especially desirable if heavy rains occur during the fumigation period. If soil crusting occurs, it retards aeration and must be broken up. Repeated cultivation may be necessary to prevent soil crusting.

Aerate until the fumigant has completely escaped from the soil. This is usually accomplished by allowing a week between cultivation (end of fumigation period) and planting for each 12 gallons per acre of VORLEX.

For soil temperatures below 60°F (at 6" depth), longer aeration periods than those mentioned above will be required. Repeated deep cultivation is especially important when heavy rains or very wet soil accompany low soil temperatures, since these conditions retard aeration.

DO NOT PLANT WHEN THE ODOR OF THE FUMIGANT IS STILL DETECTABLE.

TREATMENT OF ORCHARD TREE REPLACEMENT SITES: Use VORLEX for control of fungi and nematodes in orchard tree replacement sites. For instructions regarding this use contact NOR-AM for bulletin entitled "Fumigation of Orchard Tree Replacement Sites."

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