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8622-12

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

JUN 17 1997

OFFICE OF
PREVENTION, PESTICIDES, AND
TOXIC SUBSTANCES

Beverly M. Zapel
Regulatory Affairs Department
AmeriBrom, Inc.
52 Vanderbilt Avenue
New York, NY 10017

Subject: Label Amendment
98-2; EPA Reg. No. 8622-12
Your Letter Dated March 26, 1997

Dear Ms. Zapel:

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, is acceptable subject to the conditions below:

1. Modify the **ENVIRONMENTAL HAZARDS** section to read: "This pesticide is toxic to wildlife. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA." per PR Notices 93-10 and 95-1.
2. Delete **WARNING** from the statement: "**WARNING:** Contains methyl bromide, a substance which harms public health and environment by destroying ozone in the upper atmosphere." because it is considered a signal word. The signal word for this product is **DANGER**, not **WARNING**. You may substitute **ATTENTION** or **NOTE** for **WARNING**.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions. Please submit one (1) copy of your final printed labeling before you release the product for shipment. An EPA stamped copy is enclosed for your records.

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If you have any questions, then please contact Terri Stowe of my staff at (703) 305-6117.

Sincerely,

Mary L. Waller

Mary L. Waller
Acting Product Manager (21)
Fungicide Branch
Registration Division (7505C)

Enclosure

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RESTRICTED USE PESTICIDE DUE TO ACUTE TOXICITY

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.

98-2 CONTAINS 2% CHLOROPICRIN Preplant Soil Fumigant

ACTIVE INGREDIENT:	By Wt.
METHYL BROMIDE	98.0%
INERT INGREDIENTS*	2.0%
*Contains CHLOROPICRIN (warning odorant tear gas)	
TOTAL	100%

ACUTELY TOXIC CHEMICAL

14.1 LBS. Active Ingredient per gal. (LIQUID IN CYLINDER)

KEEP OUT OF REACH OF CHILDREN

DANGER  **PELIGRO**
POISON

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.)

STATEMENT OF PRACTICAL TREATMENT

In all cases of overexposure, get medical attention immediately. Take person to a doctor or emergency treatment facility.

If inhaled — Get exposed person to fresh air. Keep warm. Make sure person can breathe freely. If breathing has stopped apply artificial respiration. Do not give anything by mouth to an unconscious person.

If on skin — Immediately remove contaminated clothing, shoes, jewelry, and any other item on skin. Wash contaminated skin area thoroughly with soap and water.

If in eyes — Hold eyelids open and flush with a steady, gentle stream of water for at least 15 minutes.

See side panels for additional precautionary statements.

EPA REG. NO. 8622-12

- EPA EST. NO. 67545-AZ-01
- EPA EST. NO. 15298-IS-01
- EPA EST. NO. 29516-FL-04
- EPA EST. NO. 29516-NC-01

IN CASE OF EMERGENCY CONTACT:

Chemtrec (800) 424-9300

or

AmeriBrom, Inc.

ACCEPTED
with COMMENTS
In EPA Letter Dated

1997

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 8622-12

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. As soon as possible, wash thoroughly and change into clean clothing.

DIRECTIONS FOR USE

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.

PLACARDING OF FUMIGATED AREAS

The applicator (or supervisor of the application) must placard all entrances to the fumigated area with signs bearing:

- skull and crossbones symbol
- "DANGER/PELIGRO,"
- "Area under fumigation, DO NOT ENTER/NO ENTRE,"
- "Methyl Bromide Fumigant in use,"
- the date and time of fumigation, and
- name, address, and telephone number of the applicator.

Do not allow entry by unprotected persons into the fumigated area until the signs are removed. Such signs must only be removed when the air concentration level of methyl bromide is measured to be less than 5 ppm (3 ppm in residential and commercial structures). Signs must remain legible during entire posting period.

To determine whether aeration is complete, each fumigated site or vehicle must be monitored and shown to contain less than 5 ppm methyl bromide in the air space around and, when feasible, in the mass of the commodity. If 5 ppm or greater methyl bromide is detected, the placard must be transferred with the commodity to the new site. Workers who transfer or handle incompletely aerated commodity must be informed and appropriate measure must be taken (i.e., ventilation or respiratory protection) to prevent exposures from exceeding 5 ppm of methyl bromide.

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 in this labeling about personal protective equipment, 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.

ENTRY RESTRICTIONS:

Greenhouse Space Fumigation: 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 by the WPS — is PROHIBITED in the entire greenhouse (entire enclosed structure/building) from the start of application until aeration reduces the air concentration level of methyl bromide in the working area to less than 5 ppm.

Greenhouse Soil Fumigation: 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 by the WPS — is PROHIBITED in the entire greenhouse (entire enclosed structure/building) from the start of application until 48 hours after application AND until the air concentration level of methyl bromide in the working area is measured to be less than 5 ppm. Until the aeration of the soil is complete (usually 10-14 days), non-handlers are permitted in the greenhouse ONLY while the air concentration level of methyl bromide in their working area remains less than 5 ppm. If tarps are used for the application, non-handler entry is prohibited during tarp removal and until the air level is measured to be less than 5 ppm.

Outdoor Soil Fumigation: 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 48 hours 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, as described in the "Placarding of Fumigated Areas" section of this labeling. 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.

Greenhouses — Soil or Space Fumigation: Post the fumigant warning signs outside all entrances to the entire greenhouse (entire enclosed structure/building).

Outdoor Soil Fumigation: Post the fumigant warning signs at entrances to treated areas.

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.

PESTICIDE STORAGE, HANDLING AND DISPOSAL

PESTICIDE STORAGE AND HANDLING: Store in a secure manner either outdoors under ambient conditions, or indoors in a well ventilated area. Post as a pesticide storage area.

Do not contaminate water, food or feed by storage. Store 50, 100, 175, 200 and 365 lb. cylinders upright, in a secure manner to prevent tipping. Store 1500 lb. cylinders (pigs) either in a horizontal position or upright, in a secure manner to prevent tipping or rolling. Cylinders should not be subjected to rough handling or mechanical shock such as dropping, bumping, dragging or sliding. Do not use rope slings, hooks, tongs, or similar devices to unload cylinders. Transport cylinders using hand truck, fork truck or other device to which the cylinder can be firmly secured.

Do not remove valve protection bonnet and safety cap until immediately before use. Replace safety cap and valve protection bonnet when cylinder is not in use.

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

DANGER

HIGH ACUTE TOXICITY

Extremely hazardous liquid and vapor under pressure. Do not breathe vapor. Inhalation may be fatal or cause serious acute illness or delayed lung or nervous system injury. Liquid or vapor can cause serious skin or eye injury which may have a delayed onset. Do not get liquid on skin, in eyes or on clothing.

This product contains chloropicrin as a warning odorant. Chloropicrin may be irritating to the upper respiratory tract, and even at low levels can cause painful irritation to the eyes, producing tearing. If these symptoms occur, leave the fumigation area immediately.

NOTE TO PHYSICIAN: Early symptoms of overexposure are dizziness, headache, nausea and vomiting, weakness and collapse. Lung edema may develop in 2 to 48 hours after exposure, accompanied by cardiac irregularities; these effects are the usual cause of death. Repeated overexposure can result in blurred vision, staggering gait and mental imbalance, with probable recovery after a period of no exposure. Blood bromide levels suggest the occurrence, but not the degree of exposure. Treatment is symptomatic.

ENVIRONMENTAL HAZARDS: This pesticide is toxic to wildlife. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

PHYSICAL HAZARDS: Do not use or store near heat, open flames, or sparking electrical equipment.

CHEMICAL HAZARDS: Do not use application devices incorporating natural rubber or aluminum or magnesium or their alloys.

AIR CONCENTRATION LEVEL

The acceptable air concentration level for persons exposed to methyl bromide is 5 ppm (20 mg/M³), except that for entry into residential and commercial structures the acceptable air concentration level is 3 ppm. The air concentration level is measured by a direct reading detection device, such as a Matheson-Kitagawa, Draeger, or Sensidyne.

PERSONAL PROTECTIVE EQUIPMENT

Applicators and other handlers must wear:

Loose fitting or well ventilated long-sleeved shirt and long pants.

Shoes and socks.

Full-face shield or safety glasses with brow and temple shields when handling the liquid product (Do NOT wear goggles.) When the air concentration level is above 5 ppm and a respirator is required, protect the eyes by wearing a full-face respirator.

No respirator is required if the air concentration level of methyl bromide in the working area is measured to be less than 5 ppm.

A respirator is required if the acceptable air concentration level of 5 ppm is exceeded at any time. The respirator must be one of the following types: (a) a supplied-air respirator (MSHA/NIOSH approval number prefix TC-19C) OR (b) a self-contained breathing apparatus (SCBA) (MSHA/NIOSH approval number prefix TC-13F).

See Product Manual No. AM-210 for more information.

Under normal soil fumigation conditions, the air concentration level of methyl bromide in the working area will not generally exceed 5 ppm as a time-weighted average and no respiratory protection is required. However, there is the possibility of a spill or leak during soil fumigation. Therefore, a respirator of a type specified above must be available and will be required for entry into an affected area in the event of a leak or spill.

WORK SAFETY REQUIREMENTS

1. Do not wear jewelry, gloves, goggles, tight clothing, rubber protective clothing, or rubber boots when handling. Methyl bromide and chloropicrin are heavier than air and can be trapped inside clothing and cause skin injury.
2. Immediately after contamination remove outer clothing, shoes, and socks and do not reuse until thoroughly aerated or ventilated. Keep such clothing and shoes outdoors until thoroughly aerated. Then follow the PPE manufacturer's instructions for cleaning/maintaining PPE. If there are no such instructions for washables, use detergent and hot water. Keep and wash PPE and work clothing separately from other laundry.
3. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product. Do not reuse them.
4. Follow PPE manufacturer's instructions for cleaning/maintaining protective eyewear and respirators.

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. As soon as possible, wash thoroughly and change into clean clothing.

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other item on skin. Wash contaminated skin area thoroughly with soap and water.

If in eyes — Hold eyelids open and flush with a steady, gentle stream of water for at least 15 minutes.

See side panels for additional precautionary statements.

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EPA REG. NO. 8622-12

EPA EST. NO. 67545-AZ-01

EPA EST. NO. 15298-IS-01

EPA EST. NO. 29516-FL-04

EPA EST. NO. 29516-NC-01

IN CASE OF EMERGENCY CONTACT:

AmeriBrom, Inc.

Chemtrec (800) 424-9300

or

52 VANDERBILT AVENUE

AmeriBrom West

NEW YORK, NY 10017

5419 Santa Clara Ave.

TELEPHONE: (212) 286-4000

Camarillo, CA 93010

FAX: (212) 286-4475

Call Collect: (805) 988-9719 (CA)

(212) 286-4000 (NY)

AB29/Rev 5 Net contents: _____ LBS./ _____ KGS. 10/96

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, either contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance, or follow registrant's instructions for return of partially empty cylinders.

CONTAINER DISPOSAL: When cylinder is empty, close valve by turning clockwise until hand tight, screw safety cap onto valve outlet, and replace protection bonnet before returning to shipper. Only the registrant is authorized to refill cylinders. Do not use cylinders for any other purpose. Follow registrant's instructions for return of empty or partially empty cylinders.

RETURN OF CYLINDERS:

- (1) Cylinders are the property of the manufacturer or distributor where purchased and should be returned promptly by collect freight.
- (2) Do not ship cylinders without safety caps or valve protection bonnets.
- (3) When a cylinder is partially full and there is no further requirement for the product, contact the manufacturer or distributor for return instruction.
- (4) Containers should never be refilled by the consumer or used for any other product or purpose.

SPECIFIC DIRECTIONS FOR USE

This fumigant is a highly hazardous material and should be used only by individuals trained in its proper use. Before using, read and follow all label precautions and directions, including those in the Manual for the Safe Handling and Application of Methyl Bromide Products No. AM-210.

All persons working with this fumigant must be knowledgeable about the hazards, and trained in the use of required respirator equipment and detector devices, emergency procedures, and proper use of the fumigant (see the Product Manual No. AM-210).

PRECAUTIONS FOR USAGE PRIOR TO, DURING, AND AFTER SOIL FUMIGATION

Specific instructions for application appears in the Manual for the Safe Handling and Application of Methyl Bromide Products No. AM-210.

Prior to Fumigation: Post all treated areas with warning signs.

Comply with all local regulations and ordinances. Obtain an application permit from Agricultural Regulatory Agencies as required.

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

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.

Handle this fumigant in the open, with the operator "up wind" from the container where there is good ventilation.

Check fumigant pressure systems for leaks before beginning operation.

Two trained persons must be present during introduction of the fumigant.

When fumigating soil from a tractor, 5 gallons of water must be carried on the tractor and placed where it is readily accessible. In addition to water available on the tractor, at least 5 gallons additional water must be available from the service truck. This water must be potable and in containers marked "Decontamination water not to be used for drinking."

All trash should be cleared from the field before starting fumigation.

During Fumigation: This fumigant should not be applied when there is an atmospheric inversion. Since uncomfortable concentrations of chloropicrin may drift to nearby areas, immediately cover treated area with plastic tarpaulin for a minimum of 48 hours.

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Do not lift injection shanks to turn at the end of a pass until fumigant has drained from system following closure of shutoff valve.

If trash is inadvertently pulled by the shanks to the ends of the field when fumigating, it must be covered by lifting the shanks, then covering the trash with polyethylene film before making the turn for the next pass.

When changing the cylinders, be certain they are turned off and fumigant system is not under pressure.

After Fumigation: Keep pets, livestock, and other domestic animals out of the treated area during application, during the exposure period as specified for applications in Directions for Use, and during removal of tarpaulin. Two trained persons must be present during removal of tarpaulins.

Spill and Leak Procedures for Soil Fumigation: In case of a rupture of hose or fitting while applying fumigant, immediately stop tractor and motor. Evacuate everyone from the immediate area of the spill or leak. Wear the personal protective equipment (including prescribed respirators) specified in the Hazards to Humans section of this labeling for entry into affected area to correct problem. Approach from upwind to make necessary repairs. Do not enter area without the required PPE until the spill has evaporated or the leak has been fixed.

PRECAUTIONS FOR USAGE IN ENCLOSED SPACES

When used for fumigation of soil in enclosed spaces (e.g., greenhouses and tarpaulin covered areas) two persons trained in the use of the product must be present during introduction of the fumigant, initiation of aeration, and after aeration when testing for reentry. Two persons do not need to be present if monitoring is conducted remotely (outside the area being fumigated).

Do not fumigate with this product when soil temperature is below approx. 50°F. at 6-8 in. Specific directions for use in greenhouses are given in the Product Manual No. AM-210.

Aeration and Reentry:

1. After fumigation, fumigated areas must be aerated until the air concentration level of methyl bromide is measured to be less than 5 ppm (3 ppm for residential and commercial structures).
2. Until the acceptable air concentration level is reached, do not allow any person to enter into the fumigated area unless he/she is wearing the personal protective equipment (including prescribed respirator) specified in the Hazards to Humans section of this labeling. In greenhouses, additional Worker Protection Standard restrictions apply.

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 respirators) specified in the Hazards to Humans 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. 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 air concentration level of methyl bromide is measured to be less than 5 ppm.

Contaminated soil, water, and other cleanup debris is a toxic hazardous waste. Report spill to the National Response Center (800-424-8802) if the reportable quantity of 1000 lbs. is exceeded.

PREPLANT SOIL FUMIGATION

SPECIAL INSTRUCTIONS FOR THE CONTROL OF *ARMILLARIA MELLEAE* (OAK ROOT FUNGUS) ON DECIDUOUS FRUITS AND NUTS, CITRUS AND VINEYARDS.

Preparation for Application: To obtain the maximum control of *Armillaria melleae* with 98-2, soil must be tilled to a depth requiring treatment. This can be accomplished by: a) planting sudangrass in the spring, irrigating until the grass has established itself, then withholding further irrigation. b) naturally, by allowing plants to grow without irrigation. When soil is dry, cut and remove grass, plants and debris. Rip soil to a depth of 36 inches and disc to smoothness.

Dosage and Method of Application: This is a preplant or replant treatment. Crops which are planted in this treated soil will not bear harvestable fruit for a period of at least 24 months. Methods and dosage application are as follows.

Treatment Site	Rate (lbs./A)	Exposure Time
Fields to be planted to Citrus and Deciduous fruits and nuts (non-food)	400-870	24-48 hrs.

1. **Non-Tarp Chisel Application.** After the soil has been properly prepared inject 400-870 pounds of 98-2 per acre by chisel application with 2 chisels spaced 66 inches apart to a depth of 24-30 inches. For non-tarp applications be sure to properly seal the chisel line which may be accomplished by the following equipment modifications. Weld a wing behind the chisel 2 to 4 inches above the chemical outlet to break the chisel mark. Place a shovel behind the chisel at the soil surface to push dirt into the upper chisel mark. Follow with a cone-shaped press wheel with a shovel to pull additional soil into the chisel line. This is followed by a flat roller to press the soil even with the adjacent soil surface. This treatment will treat a strip 96 inches wide.
2. **Tarp Chisel Application.** After soil has been properly prepared, apply 400-870 pounds of fumigant per acre by chisels spaced 48-66 inches apart and cover with adequate polyethylene film seal.
3. **Deep Injection Auger-Probe Treatment.** Use one pound of 98-2 in light soils (two pounds in fine-textured soils) to a depth of 36 inches or more below the soil surface. Assume one injection site per 100 square feet (on a 10 ft. x 10 ft. grid pattern) with the injection in the center of the area to be treated.

Exposure and Aeration Period:

1. To insure the proper time-concentration relationship to control oak root fungus for chisel application, we recommend a seven day exposure period before removing the polyethylene film cover, and a one day interval with Deep Injection Auger-Probe Treatment after which planting or replanting of trees, vines or other deep-rooted crops may begin 14 days later.
2. 98-2 will not usually control weed seeds under very dry conditions. However, some control may be observed on deep-rooted perennials such as morningglory (bindweed) and rhizomes of Johnsongrass.

NON-TARP NEMATODE CONTROL

For control of nematodes (including *Meloidogyne* spp., *Xiphinema* spp., *Criconeoides*, *Pratylenchus*, and *Paratylenchus*) on almonds, apples, apricots, cherries, citrus, grape vineyards, peaches, pecans, pistachios, plums, prunes, strawberries, tomatoes and walnuts.

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... a shovel behind the chisel at the soil surface to push dirt into the upper chisel mark. Follow with a cone-shaped press wheel with a shovel to pull additional soil into the chisel line. This is followed by a flat roller to press the soil even with the adjacent soil surface. This treatment will treat a strip 96 inches wide.

2. Tarp Chisel Application. After soil has been properly prepared, apply 400-870 pounds of fumigant per acre by chisels spaced 48-66 inches apart and cover with adequate polyethylene film seal.

3. Deep Injection Auger-Probe Treatment. Use one pound of 98-2 in light soils (two pounds in fine-textured soils) to a depth of 36 inches or more below the soil surface. Assume one injection site per 100 square feet (on a 10 ft. x 10 ft. grid pattern) with the injection in the center of the area to be treated.

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2. 98-2 will not usually control weed seeds under very dry conditions. However, some control may be observed on deep-rooted perennials such as morningglory (bindweed) and rhizomes of Johnsongrass.

NON-TARP NEMATODE CONTROL

For control of nematodes (including *Meloidogyne* spp., *Xiphinema* spp., *Criconemoides*, *Pratylenchus*, and *Paratylenchus*) on almonds, apples, apricots, cherries, citrus, grape vineyards, peaches, pecans, pistachios, plums, prunes, strawberries, tomatoes and walnuts.

Pretreatment Soil Preparation: Plow or rip the soil to the depth to which effective treatment is required. The soil should be worked until free of clods or large lumps. Residue from previous crops should be worked into the soil to allow for decomposition prior to fumigation. Soil moisture should be optimum for seed germination. For best results soil should be kept moist for at least four days prior to treatment. Do not fumigate when soil temperature is below 50°F. For best results, fumigate when soil temperature is 60°F. to 90°F. at the depth of 6 inches.

Use the higher labelled rates for muck and heavy clay soils.

Dosage and Method of Application: This is a preplant or replant treatment. Do not apply to soil where trees or vines will bear harvestable fruit within 24 months. A waiting period of at least 14 days should be observed between application and planting. Methods and dosage of application are as follows:

1. Chisel Application. After the soil has been properly prepared, inject 400-870 pounds of 98-2 per acre by chisel application with 2 chisels spaced 66 inches apart to a depth of 24-30 inches. For non-tarp applications be sure to properly seal the chisel line which may be accomplished by the following equipment modifications:

Weld a wing behind the chisel 2 to 4 inches above the chemical outlet to break the chisel mark. Place a shovel behind the chisel at the soil surface to push dirt into the upper chisel mark. Follow with a cone-shaped press wheel with a shovel to pull additional soil into the chisel line. This is followed by a flat roller to press the soil even with the adjacent soil surface. This treatment will treat a strip 96 inches wide.

2. Deep Injection Auger-Probe Treatment. Use one pound of 98-2 per injection site in lighter soils; two pounds of 98-2 in fine textured soils. Use one injection site per 100 square feet (on a 10 ft. x 10 ft. grid pattern) with the injection in the center of the area to be treated. Tamp or compact the soil at the point of injection.

98-2 used without a tarp will not usually control most weed seeds. However, some control may be observed on deep-rooted perennials such as morningglory (bindweed) and rhizomes of Johnsongrass.

98-2 may be used as a preplant soil fumigant for land in which plants may be grown for nonfood and nonfeed crop uses. These uses are for seed and plant beds, nurseries and permanent planting sites for tobacco, lawns and other ornamental and recreational turf areas, forest and shade trees, ornamental flowers, vines and shrubs and other similar plants. 98-2 may be used in vegetable seed beds for production of plants that are later transplanted in untreated soil or soil treated to label directions for registered products, and in orchard and vineyards planting sites and soils where tomatoes, strawberries, pineapples, cauliflower, broccoli, eggplants, onions (dry bulb), asparagus, lettuce and muskmelons are to be grown for food.

APPLICATION: SEED AND PLANT BEDS (PLANTS GROWN FOR TRANSPLANTING)

Prior to planting apply 98-2 at the rate that appears in the dosage table by means of tractor mounted chisels spaced 12 inches apart and at a depth of 5-8 inches below the soil surface. To seal fumigant after application cover immediately with a gas-tight tarpaulin by means of a mechanical tarp layer. Do not remove tarpaulin until after the proper exposure period indicated on the dosage table has passed. Prior to fumigation, the soil should be in seed bed condition with adequate moisture to support seed germination. The soil should be worked to the depth it is desirable for the fumigant to penetrate. Plant refuse should be worked into the soil and time allowed for refuse to decompose before treatment.

TURF, NURSERIES, AND FLORAL CROPS: Follow directions for seed and plant beds. If fumigating old turf, the soil should be worked up before fumigating. It is desirable that the old turf be incorporated into the soil by rototilling, discing or plowing. Use rate and exposure time that is indicated in the dosage table.

TOMATOES, STRAWBERRIES, PINEAPPLES, CAULIFLOWER, BROCCOLI, MUSKMELON*, EGGPLANTS, PEPPERS, ONIONS (DRY BULB), ASPARAGUS, AND LETTUCE. Follow directions for seed and plant beds. Use rate and exposure time that is indicated in the dosage table.

Row or 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.

Hot Gas Method: The "hot gas method" consists of using a commercially manufactured heat exchanger, or a copper coil immersed in a vessel containing hot water, to vaporize the fumigant before introduction.

This method may be useful where large amounts of fumigant are required and rapid vaporization is advantageous.

GRAPES: Prior to planting apply 98-2 at the rate that appears in the dosage table by means of tractor mounted chisels spaced not more than 5 1/2 feet apart. Inject the 98-2 at a depth of not less than 20 inches. To seal fumigant after application for disease control, cover immediately with a gas-tight tarpaulin by means of a mechanical tarp layer. Do not remove tarpaulin until after the proper exposure period indicated on the dosage table has passed. Prior to application the soil should be ripped to not less than 30 inches and the subsurface should be as dry as possible. Excess moisture will block deep penetration of the 98-2. Peat soils and soils very high in organic content should not be fumigated to control *Armillaria mellea* with 98-2. Clay soils and soils that drain poorly may be dried out by planting sudangrass and withholding water from it during the summer. This will increase penetration of 98-2. Do not apply 98-2 to soil where vines will bear within 24 months.

DECIDUOUS FRUITS, NUTS, CITRUS, VINEYARDS AND OTHER PERENNIAL CROPS (Do not harvest crop for 24 months after fumigation)

Prior to planting apply 98-2 at a rate and exposure time that is indicated in the dosage table. To seal fumigant after application for disease control, cover immediately with a gas-tight tarpaulin by means of a mechanical tarp layer. The soil should be ripped to not less than 30 inches and the subsurface should be as dry as

possible. Excess moisture will block deep penetration of the 98-2. Peat soils and soils very high in organic content should not be fumigated to control *Armillaria mellea* with 98-2. Clay soils and soils that drain poorly may be dried out by planting sudangrass and withholding water from it during the summer. This will increase penetration of 98-2. Back hoeing and augering are alternative methods of applying 98-2 to the tree site. Attach a 98-2 dispenser to the cylinder of 98-2 and to it attach a polyethylene applicator tube. The correct dosage can be measured with the dispenser and then applied through the tube.

BACK HOEING: Field tests have demonstrated that this is an effective method for preparing the replant site for fumigation, especially in areas where a hardpan has developed through compaction of the soil. The size of the prepared site is dependent upon the degree of soil compaction. Deeply compacted soil requires preparation of a site and size of the "planter box" in which the tree is to be grown.

For stratified soils, a single cut the width of the back hoe, 5 feet deep and 6 feet long, is satisfactory. Backfill site with 2 feet of soil, place applicator tube at this level, complete back fill and release entire dose of fumigant for 100 square foot tree site. When fumigant has been released, remove tube and tamp soil lightly over opening to seal fumigant in the site.

AUGERING: This method is suitable in noncompacted soils or soils that are lightly stratified. Dig hole 5 feet deep with auger, backfill hole two feet, insert applicator tube, fill hole, and release entire dose of fumigant for 100 square foot tree site. When fumigant has been released, remove applicator and tamp or compact hole with soil to prevent too rapid escape of fumigant.

DOSAGE AND EXPOSURE TABLE FOR SOIL FUMIGATION WITH 98-2

PEST CONTROL DESIRED	TYPE OF SOIL and/or CROP	DOSAGE Do not treat when temp. below 50°F	MIN. EXP.	AERATION TIME BEFORE PLANTING
Nematodes Weed Seeds and Insects	Turf renovation, lawns and other recreational turf areas	400-500 #/ac.	24 hrs.	3 days
	Nonfood and nonfeed crop areas: seed and plant beds for tobacco, flowers, shade and forest trees, ornamental shrubs and vines, vegetables for production of transplants only, floral and nursery crops.	400-500 #/ac.	24 hrs.	3 days
Damping-off diseases such as Pythium Rhizoctonia, Fusarium	TURF RENOVATION: same sites as listed above NONFEED AND NONFOOD CROP AREA: Same plants as listed above. Vegetables for production of transplants only, floral and nursery crops.	800 #/ac.	24 hrs.	14 days if planted to transplants 3 days if seeded
Nematodes Weed Seeds and Insects	Permanent planting for tomatoes, strawberries, pineapples, cauliflower, broccoli, eggplants, peppers, onions (dry bulb), asparagus, lettuce and muskmelons*.	240-400 #/ac.	24-42 h.s.	3 days if seeded 7-14 days if vegetative growth set in treated soil
Crown rot fungus Armillaria root rot Phytophthora root rot Nematodes (root knot-citrus, lesion, pin, ring and dagger)	Grapes: For control of Nematodes in light sandy soils and fine textured clay soils	400-600 #/ac.		
	Control Phytophthora in light sandy and fine textured clay soils	600 #/ac.	5-7 days	Treat in summer or fall and plant following spring
	Control Armillaria in light sandy soils	400 #/ac.		
Armillaria root rot Phytophthora root rot Crown rot fungus Citrus Nematodes Burrowing Nematodes.	in fine textured clay soils	600 #/ac.		
	DECIDUOUS FRUITS, NUTS, CITRUS, AND OTHER PERENNIAL WOODY PLANTS Phytophthora root rot	400-650 #/ac.	5-7 days	
	Armillaria root rot in sandy light soils and fine textured clay soil	400-650 #/ac.	5-7 days	

*For use on muskmelons, (all *Cucumis melo* melons, excludes watermelons), cantaloupes, Persian melons, honeydew melons, casabas, crenshaws, mango melons and their hybrids.

Not effective against mallow, dodder, and some species of clover.

Citrus Soil For Control of Phytophthora in Florida Sandy Soils. This is a preplant or replant treatment. Trees which are planted in this treated soil will not bear harvestable fruit for a period of at least 24 months. Use a minimum of 1-1/4 pounds per 100 square feet. Exposure to fumigation for 24 hours covering treated area with a 4 mil. tarpaulin. Will control disease to depth of 4 feet. Aerate 2 weeks before setting transplants in treated area.

WARNING: Contains methyl bromide, a substance which harms public health and environment by destroying ozone in the upper atmosphere.

METHYL BROMIDE

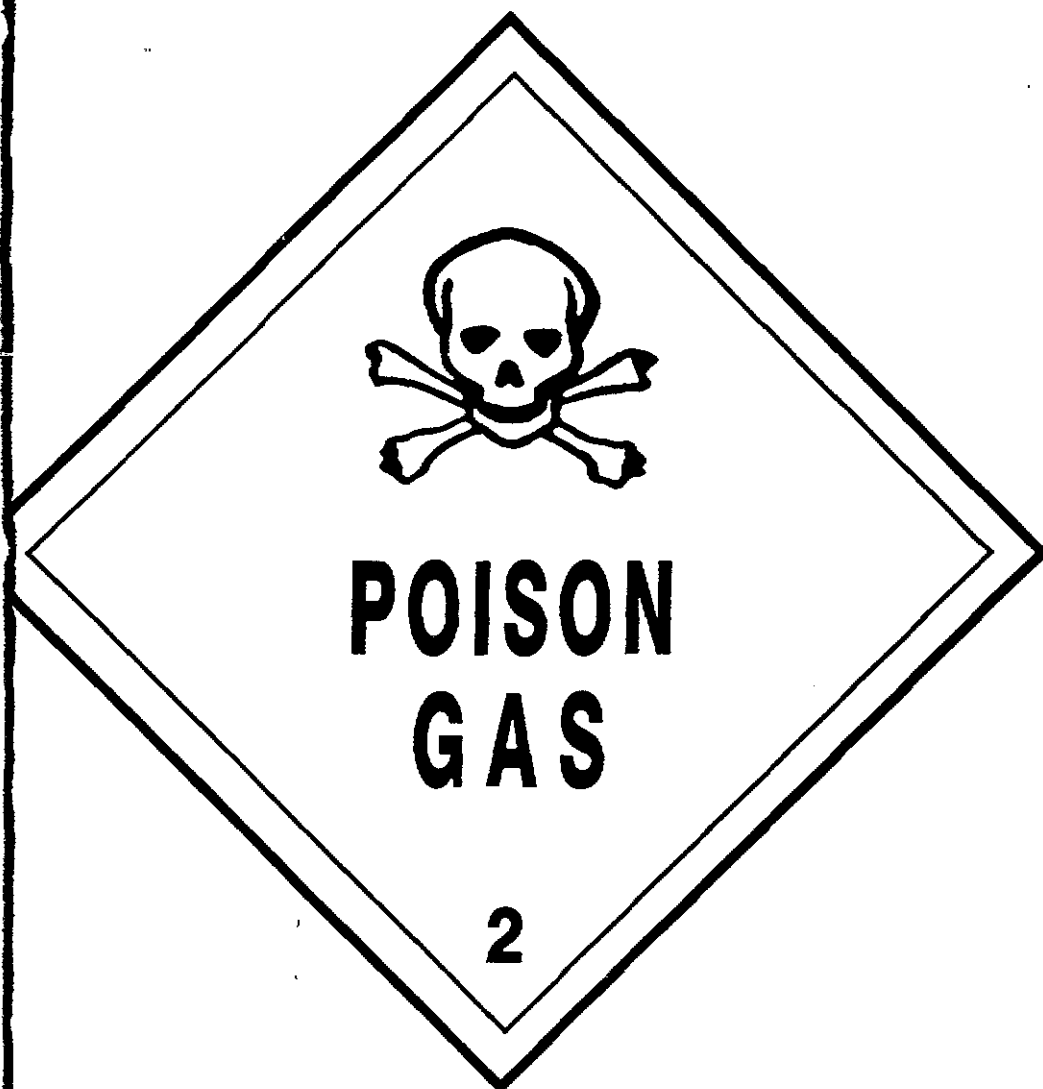
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10/11

WARNING: Contains methyl bromide, a substance which harms public health and environment by destroying ozone in the upper atmosphere.

**METHYL BROMIDE
UN 1062
INHALATION HAZARD**



Warranty: Seller warrants that the product conforms to its chemical description and is reasonably fit for the purpose stated on the label when used in accordance with directions under normal conditions of use, but neither this warranty nor other warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE, express or implied, extends to the use of this product contrary to label instructions or under abnormal conditions, or under conditions not reasonably foreseeable to seller, and buyer assumes the risk of any such use. Buyer assumes all risks of use, storage or handling of this material not in accordance with directions given herewith.