



2/3/2010

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Brenda K. Burgess
State Registration Associate
ICL-IP America, Inc.
95 MacCorkle Avenue, S.W.
South Charleston, WV 25303

FEB - 3 2010

Subject: 50-50 Preplant Soil Fumigant
EPA Reg. No. 8622-39
Your amendment dated October 20, 2008
EPA Decision Number 402542

Dear Ms Burgess:

The revised amended label referred to above, submitted September 18, 2009 in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act as amended is acceptable provided the following changes are made to the label:

1. On page 1, revise the last sentence in the **FIRST AID** table to read as follows: "Have the product container or label with you when calling a poison control center (1-800-222-1222) or doctor or when going for treatment."
2. On page 2 in the section **AIR CONCENTRATION LEVELS** change "...5 ppm 20mg/m³)." to "...5 ppm (20 mg/m³)."
3. On page 4, change the subheading "Physical Hazards" to "Physical and Chemical Hazards".
4. Move the entire **PLACARDING OF FUMIGATED AREAS** section from page 4 to the **SPECIFIC DIRECTIONS FOR USE** section on page 6.
5. On page 8, under the "Note" section, replace the first and second sentence with the following sentence: "Following soil fumigation, if undesirable concentrations of chloropicrin drift to nearby areas, immediately cover the treated area with a plastic tarpaulin."
6. On page 9 in the section **GREENHOUSE SOILS**:
 - a. Change "...one or move chisels...." to "...one or more chisels...."
 - b. Capitalize "use" in line 3.

One copy of the label stamped "Accepted with comments" is enclosed for your records. This label supersedes all labels previously accepted for this product. Please submit one copy of the final printed label that incorporates the required changes before the product is released for shipment.

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If you have any questions, please contact Robert Westin by phone at (703) 305-5721 or via email at westin.robert@epa.gov.

Sincerely,



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

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.

50-50

PREPLANT SOIL FUMIGANT

**FOR CONTROL OF NEMATODES, WIREWORMS, WEED SEEDS, FUNGUS DISEASES,
GRUBS, AND SOIL-BORNE INSECTS**

ACTIVE INGREDIENT:	By Wt.
METHYL BROMIDE.....	50%
CHLOROPICRIN.....	50%
TOTAL.....	100%

ACUTELY TOXIC CHEMICAL

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

KEEP OUT OF REACH OF CHILDREN

**ACCEPTED
with COMMENTS
In EPA Letter Dated**

FEB - 3 2010

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

DANGER

PELIGRO



8622-39 **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.)**

FIRST AID	
If inhaled	• Move person to fresh air. • If person is not breathing call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth if possible. • Call poison control center or doctor for treatment advice.
If on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call poison control center or doctor for treatment advice.
If in eyes	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes then continue rinsing eye. • Call a poison control center or doctor for treatment advice
Have the product container of label with you when calling a poison control center or doctor, or going for treatment.	

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NOTE TO PHYSICIAN

Early symptoms of overexposure are intense lachrimation and irritation of mucous membranes, 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.

See side panel for additional precautionary statements

Produced for:

ICL-IP America, Inc.
95 MacCorkle Ave., SW
South Charleston, WV 25303
Tel: (304) 720-3950
Fax: (304) 746-3101

EPA Reg. No. 8622-39

EPA Est.
No. _____

IN CASE OF EMERGENCY, CONTACT:

CHEMTREC: (800) 424-9300 or (703) 527-3887 (Collect calls accepted) [24 Hrs.]
or ICL-IP America/HyYield-Bromine/Clearon Emergency Response: (304) 746-3000 [24 Hrs.]
or HyYield Bromine, Inc: (910) 675-9409 or (813) 752-4244 [Business Hrs. ONLY]

Net Contents: _____ **Lbs.** / _____ **Kgs.**

AB04-Rev.8

09-18-09

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS & DOMESTIC ANIMALS

DANGER

HIGH ACUTE TOXICITY

Extremely hazardous liquid and vapor under pressure. Do not breathe vapor. Inhalation or ingestion 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, a volatile-liquid tear gas. Chloropicrin vapor is very irritating to the upper respiratory tract, and even at low levels can cause painful irritation to the nose and throat, and to the eyes, producing tearing. If these symptoms occur, leave the fumigation area immediately. Continued exposure after irritation is evident, or higher concentrations may cause painful irritation to the eyes or temporary blindness which may cause panic that may in turn lead to further accidents.

AIR CONCENTRATION LEVELS

The acceptable air concentration level for persons exposed to chloropicrin is **0.1 ppm** (0.7 mg/m³). The acceptable air concentration level for persons exposed to methyl bromide is **5 ppm** 20mg/m³). The air concentration level is measured by a direct reading detection device, such as Matheson-Kitagawa.

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PERSONAL PROTECTIVE EQUIPMENT (PPE)

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 (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 chloropicrin in the working area is measured to be less than 0.1 ppm AND 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 0.1 ppm for chloropicrin OR 5 ppm for methyl bromide 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).

Under normal soil fumigation conditions, the air concentration level of chloropicrin in the working area will not generally exceed 0.1 ppm AND the air concentration level of methyl bromide in the working area will not generally exceed 5 ppm. Therefore, 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 effected 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 was thoroughly and put on clean clothing.
- Remove PPE Immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS: This pesticide is toxic to wildlife. Do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water

mark. Do not contaminate water when disposing of equipment washwater or rinsate.

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

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 regulations.

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 and Chloropicrin Fumigants 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 chloropicrin is measure to be less than 0.1 ppm AND the air concentration level of methyl bromide is measure to be less than 5 ppm. Signs must remain legible during the entire posting period.

Only certified applicator (or someone under his/her supervision) may remove warning signs at entrances to fumigated structures.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Workers 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 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 chloropicrin in the working area is measured to be less than 0.1 ppm AND 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

chloropicrin in their working area remains less than 0.1 ppm AND the air concentration level of methyl bromide in their working area remains less than 5 ppm. If tarps are used for the application, non-handlers entry is prohibited during tarp removal and until the air concentration level of chloropicrin in the working area is measured to be less than 0.1 ppm AND the air concentration level of methyl bromide in the working area 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.

Greenhouse-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.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in dry, cool, well-ventilated area under lock and key. Post as a pesticide storage area.

Store cylinders upright, secured to a rack or wall to prevent tipping. Do not subject cylinders to rough handling or mechanical shock such as dropping, bumping, dragging or sliding. Do not use rope slings, hooks, tongs, or similar device 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.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture or rinsate 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 empty or partially empty cylinders.

CONTAINER DISPOSAL: Return empty or partially empty cylinder to the manufacturer or distributor for reuse. 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.

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RETURN OF CYLINDERS:

- 1) Cylinders are the property of the manufacturer or distributor where purchased and must 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 instructions.
- 4) Do not refill the cylinder or use it for any other product or purpose.

SPECIFIC DIRECTIONS FOR USE

This fumigant is a highly hazardous material and may be used only by individuals trained in its proper use. Before using, read and follow all label precautions and directions.

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.

Do not fumigate with this product when soil temperature is below 50°F at 6 to 8 inches.

Do not use application devices incorporating natural rubber or aluminum or magnesium or their alloys; do not use water to clean them (Diesel oil is satisfactory).

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

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 "upwind" 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: Do not apply this fumigant 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. Do not open the system when there are people or structures downwind.

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 without the required PPE until the spill has evaporated or the leak has been fixed.

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

GENERAL INFORMATION

50-50 Preplant Soil Fumigant is used for the control of soil-borne pests such as:

- Wireworms. June beetle larvae, white grubs and garden symphylians in the soil at the time of planting.
- Soil-borne fungi, including Verticillium, Fusarium, Pythium, Rhizoctonia, Phytophthora, Pyrenochaeta, Sclerotinia, Sclerotium, Armillaria, and the clubroot organism, Plasmodiophora.
- Nematodes (such as Criconemoides, Tylenchus, Pratylenchus, Xiphinema and Paratylenchus species)
- Broadleaf and grassy weeds, such as annual bluegrass, broomrape, common lambsquarters, torpedograss, nutsedge, Bermudagrass and quackgrass at higher rates.

50-50 Preplant Soil Fumigant is not effective against mallow, filaree dodder, some species of clover and certain other hard seeded weeds. Crops listed below can be treated.

SOIL PREPARATION

Before treatment the soil should be in condition for planting and with sufficient moisture to support seed germination.

If fumigation is being done to control nutsedge, till the soil to a depth of at least 15".

APPLICATION

Apply with chisels spaced from 12" to 18" apart, and inject 50-50 Preplant Soil Fumigant to a depth of 5" to 8" below soil surface. Seal fumigant with a drag or cultipacker immediately behind chisels and then cover with a gas-tight tarpaulin.

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DOSAGE TABLE

Crops To Be Planted:	Lbs. 50-50 Preplant Soil Fumigant Per Acre^{1,2}
Strawberries	300-480
Tomatoes	300-480
Cauliflower	300-480
Broccoli	300-480
Muskmelons ⁵	300-480
Peppers	300-480
Eggplant	300-480
Floral Crops ⁴	400-540
Nursery Crops ⁴	400-540
Plants & Seed Beds ^{3,4}	400-540

¹ 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. The usual chisel spacing for methyl bromide treatment is 12" and it is assumed that each chisel treats a 12" strip when injected at a depth of 5" to 8".

² Use the higher rates for nutsedge control.

³ Plants grown for transplanting.

⁴ Growing difficulties in treated soil may be experienced with Carnations, Conifers, Delphiniums, Holly, Multiflora Rose, Salvia, Snapdragons, and certain other crops.

⁵ For use on muskmelons, (all *Cucumis melo* melons, excludes watermelons) cantaloupes, Persian melons, honeydew melons, casabas, crenshaws, mango melons and their hybrids.

After 48 hours remove tarpaulin and allow the soil to aerate for two weeks before planting. Pepper seeds can be direct seeded through the use of plug mix after 72 hours.

CITRUS SOIL TREATMENT 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 have harvestable fruit for a period of at least 24 months. Use a minimum of 1 1/3 lbs. /100 sq. ft. Expose to fumigation for 96 hours covering treated area with a 4-mil tarpaulin. Treatment will control disease to a depth of 4 feet. Aerate 2 weeks before setting transplants in treated area.

Apply with chisels spaced 12 inches apart to a depth of 8 inches. Seal fumigant with a drag or cultipacker immediately behind chisels. Cover with a gas-proof tarpaulin. Remove tarpaulin after fumigation period and aerate soil for 2 weeks before planting. If odors persist, disc or plow the soil to assist aeration.

Do not apply 50-50 Preplant Soil Fumigant when there is little or no air movement.

Do not apply near buildings inhabited by humans or livestock or in area adjacent to fields where valuable crops are growing.

*Phytophthora diseases controlled are root rot and crown rot.

NOTE: Following soil fumigation, undesirable concentrations of chloropicrin may drift to nearby areas. If this occurs, immediately cover treated area with a plastic tarpaulin. Leave tarpaulin on overnight and remove during the daytime. Recover the area if eye irritation indicates that the undesirable concentration is continuing. These concentrations are most likely to occur in the evening or at night when the air is most likely to be static in movement. Do not make

application of 50-50 Preplant Soil Fumigant when there is little or no air movement or there is an inversion condition in the atmosphere.

NOTE CAREFULLY: Following fumigation, the level of soluble salts and ammonia nitrogen may be raised. This is most likely to occur when heavy rates of fumigant and fertilizers are applied to soils that are acid, wet, cold, or high in organic matter. Fertilizers containing ammonium salts should not be used. Apply only fertilizers containing nitrates until after the crop is well established and the soil temperature is above 65° F in order to avoid ammonia injury, nitrate starvation, or both. After fumigation, fertilize as indicated by soil test to protect against injury to plant roots. It is best that highly acid soils be limed before application to stimulate nitrification and reduce the possibility of ammonia toxicity.

GREENHOUSE SOILS: This product may be used for the control of plant parasitic nematodes, soil insect pests, and for the suppression of soil-borne disease organisms. Apply with one or more chisels to a depth of 14 inches. Use a minimum of 1½ lb./100 sq. feet. Expose to fumigation for 24 to 48 hours covering treated areas with a 4-mil gas-proof tarpaulin. Remove tarpaulin after fumigation period and aerate 2 weeks before setting transplants in treated areas.

NOTICE

The Fumigation Directions are based on the best available information, and if followed carefully excessive residues will not be present at harvest.

Warranty; Seller warrants that this product complies with the specifications expressed in this label. To the extent consistent with applicable law, Seller makes no other warranties, express or implied, including but not limited to warranties of merchantability and fitness for the intended purpose. To the extent consistent with applicable law, Seller's liability or default, breach or failure under this label shall be limited to the amount of the purchase price. To the extent consistent with applicable law, Seller shall have no liability for consequential damages