

33

# RESTRICTED USE PESTICIDE DUE TO ACUTE TOXICITY

For retail sale to and use only by certified applicators or under the direct supervision, and only for those uses covered by the applicator's certification.

## PRECAUTIONAL USAGE

Si usted no lee los Ingles, no use este producto hasta que la etiqueta sea explicada ampliamente.

# M-B-R

## PREPLANT SOIL FUMIGANT

FOR PREPLANT CONTROL OF MANY SOIL-BORNE PESTS  
IN PLANT BEDS AND NURSERIES

### ACTIVE INGREDIENTS:

METHYL BROMIDE

CHLOROPICRIN

KEEP OUT OF REACH OF CHILDREN

*red* → **DANGER**

**PELIGRO**



IN ALL CASES OF OVER-EXPOSURE, GET TO A HOSPITAL IMMEDIATELY. TAKE PERSON TO NEAREST HOSPITAL OR EMERGENCY TREATMENT FACILITY.

### STATEMENT OF PRACTICAL TREATMENT

**IF INHALED** — Get exposed person to fresh air. Keep warm. Make sure they breathe freely. If breathing has stopped, apply artificial respiration. Do not give artificial respiration to an unconscious person.

**IF ON SKIN** — Immediately remove contaminated clothing, shoes, and jewelry. 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 15 minutes.

ETHYL CORPORATION

451 Florida Street  
Baton Rouge, LA 70801

**Ethyl**

In case of an emergency endangering life or property involving this product call collect (504) 344-7147

## PRECAUTIONARY STATEMENT HAZARD TO HUMANS AND DOMESTIC ANIMALS

### DANGER

**EXTREMELY HAZARDOUS LIQUID AND VAPOR UNDER PRESSURE. DO NOT BREATHE VAPOR. INHALATION CAN BE FATAL OR CAUSE SERIOUS ACUTE ILLNESS. LIQUID CAN CAUSE SERIOUS SKIN OR EYE INJURY. LIQUID CAN CAUSE SERIOUS SKIN OR EYE INJURY. LIQUID CAN HAVE A DELAYED ONSET. DO NOT GET LIQUID IN EYES OR ON CLOTHING.**

This product contains chloropicrin. Chloropicrin may be irritating to the upper respiratory tract. High concentrations can cause painful irritation to the eyes, producing tearing. If these symptoms occur, flush the affected area immediately.

### NOTE TO PHYSICIAN

Early symptoms of overexposure are dizziness, headache, nausea and vomiting. Skin edema may develop in 2 to 48 hours after exposure, accompanied by cardiac irregularities. Inhalation is the usual cause of death. Repeated overexposure can result in blurred vision, staggering gait, and probable recovery after period of no exposure. Blood bromide levels suggest degree of exposure. Treatment is symptomatic. See the product MSDS for additional information.

### RESPIRATORY PROTECTION

If the concentration of methyl bromide in the working area, as measured by a suitable method, is less than 5 ppm (20 mg/m<sup>3</sup>), no respiratory protection is required.

This detection method requires a small hand held pump and methyl bromide detector tubes. The detector tubes are capable of measuring methyl bromide concentrations of 2 ppm. The detector tubes and pumps listed below are available from safety supply distributors.

1. Sensidyne Gaslec pump, part number F-7010657, detector tube #136
2. Draeger pump, part number CH 304, detector tube #67-1211
3. Matheson-Kitagawa pump, part number 8014K, detector tube #1575b

If the 5 ppm methyl bromide and the 0.1 ppm chloropicrin concentrations are exceeded at any time, all persons in the fumigation area must wear a NIOSH/MSHA approved self-contained breathing apparatus or combination air-supplied/SCBA respirator.

The Matheson-Kitagawa pump (8014) and detector (tube #1575b) are used for measuring chloropicrin concentration of 0.1-15 ppm.

After fumigation, treated areas must be aerated until the concentration of methyl bromide is below 5 ppm and chloropicrin is below 0.1 ppm. No one should enter the treated area by any person before this time unless protective clothing and a respirator (SCBA or combination air-supplied/SCBA) is worn.

### PROTECTIVE CLOTHING

Wear loose fitting long sleeve shirts and pants, shoes and socks that are cleaned after use. Do not wear jewelry, gloves or boots when handling. Methyl bromide is heavier than air and may cause skin injury. If full-face respiratory protection is not required, wear goggles. After application, immediately remove clothing, shoes and socks. Wash contaminated clothing or shoes until cleaned. Drenched clothing cannot be adequately cleaned.

### PLACARDING OF FUMIGATED AREAS

The applicator must placard or post all entrances to the fumigated area with signs bearing the following information:

1. The signal word DANGER/PELIGRO and the skull and crossbones symbol.
2. The statement, "Area under fumigation, DO NOT ENTER/NO ENTRE."
3. The date of fumigation.

AND MORE THAN 2% CHLOROPICHLIN MIXTURE

LIQUID  
NA 1581



**POISON**

6

**ENVIRONMENTAL HAZARD**

This pesticide is toxic to wildlife. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or public waters unless this product is specifically identified and addressed in an NPDES permit. Do not discharge effluent containing this product to sewer systems without previously notifying the sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

**CHEMICAL HAZARD**

M-B-R-75 is nonflammable. There is no danger from fire or explosion in use concentrations. However, it can change the chemical to produce some corrosive damage to items in the space being fumigated. Pilot lights and glowing wire heaters should be turned off.

Do not apply gas directly to metal surfaces because of possible corrosive effect on certain metals.

Do not use containers or application equipment made of magnesium, aluminum, zinc or their alloys.

**EPA NOB LEAK PROCEDURE**

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Store cylinders upright, secured to a rack or wall to prevent tipping. 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.

**CONTAINER DISPOSAL**  
When cylinder is empty, close valve, 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.

### DISPOSAL PESTICIDE

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, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representatives at the nearest EPA Regional Office for guidance.

## DIRECTIONS FOR USE

It is a violation of federal law to use this product in any manner inconsistent with its labeling.

When used for fumigation of enclosed spaces:

Two persons trained in the use of this 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 commodity temperature is below 50°F.

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 the attached product manual.

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.

Use M-B-R 75 soil fumigant for preplanting application in soil for control of nematodes, certain soil-borne diseases, insects, and weeds in nurseries and in certain seed bed, plant bed and field crop areas. Typical pests controlled are nematodes such as root-knot, lesion, dagger, stunt, spiral, cyst formers, lance, citrus, burrowing,

false root-knot, ring, stubby root, awl sheath, stunt, sting and pin damping off diseases caused by certain species of Rhizoctonia, Pythium, Fusarium, Phytophthora, Pyrenochaeta, Sclerotinia and certain others, insects (wireworms, cutworms, rootworms and

white grubs) in the soil at time of treatment, and weeds such as tickweed, pigweed and nutgrass, crabgrass, goosegrass, crowfootgrass, barnyardgrass, purslane, morning glory and many other broadleaf and grass weeds.

M-B-R 75 will give excellent performance in forest tree, ornamental shrub and turf nurseries. In annual and perennial flower, tomato, tobacco, strawberry and ornamental seed and plant beds; in vegetable seed beds for production of transplants only, and in soil where asparagus, broccoli, cauliflower, eggplants, lettuce, muskmelons, onions (dry bulb), peppers, pineapples, strawberry and tomatoes are to be grown for food.

**WHEN TO TREAT:** Treatments can be made in the spring, summer, or fall whenever soil conditions are suitable. In northern states, late summer or early fall treatments are best for land to be planted to early spring crops.

**SOIL PREPARATION:** To facilitate fumigant penetration crop residues should be worked into the soil and allowed time to decompose before treating. Soil must be in good and workable seed bed condition, with a temperature between 50°F and 80°F at the five-inch level and with adequate moisture for good seed germination. Deep tillage, 12 to 18 inches, often improves results, especially in heavy or muck soils.

**APPLICATION AND DOSAGE:** For overall application of M-B-R 75 use 200 to 300 pounds per acre with chisel-type applicator, having the chisels spaced no more than 12 inches apart and injecting the fumigant at a depth of 6 to 8 inches below the soil surface. For row applications, use of the same dosage rates per acre as suggested for over-all treatment. The actual amounts used per acre, however, will be proportionately less and dependent upon the distance between rows and the width of the treated row area. Due to the volatility of the fumigant, treated soil must be covered with polyethylene film immediately after treatment with simultaneous film laying equipment or by sealing with a roller or cultipacker immediately behind the injection chisels and covered within 20 minutes with polyethylene film or other suitable gas tight tarpaulin.

**GREENHOUSES:** The use of methyl bromide and chloropicrin in enclosed spaces presents a potential hazard to humans and plant life. Before fumigation, train all personnel involved in fumigation (including use of safety equipment). Never fumigate alone. Follow USE PRECAUTIONS. Follow directions for row application with doors open and fans running. After application and tarping, secure and post the structure to prevent unprotected persons and domestic animals from entering. After the exposure period, open doors and turn on fans prior to removing tarpaulins. Do not allow entry into treated areas without respiratory protection until methyl bromide level is below 5 ppm and chloropicrin is below 0.1 ppm. Follow directions for AERATION and USE PRECAUTIONS.

**FLORIDA CITRUS:** Preplant or replant treatment of citrus soil for control of Phytophthora and citrus nematodes in Florida sandy soils. Trees which are planted in this treated soil will not bear harvestable fruit for a period of at least 24 months. Apply M-B-R 75 at the rate of 1.5 lbs per 100 square feet with chisels spaced 12 inches apart to a depth of 6-8 inches. Seal immediately with polyethylene film and expose soil to fumigation for 96 hours. Remove cover after exposure and aerate for two weeks before setting transplants in treated soil.

→ 240 R  
320  
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**DIRECTIONS FOR USE (Continued)**

**EQUIPMENT CALIBRATION:** For best results, accurately calibrate fumigation equipment before application. Consult the Dosage Calibration Chart to determine proper orifice size and pressure required to deliver the desired dosage. Calibrations are based on equipment with chisels spaced 12 inches apart.

**AERATION:** Remove tarpaulin after 48 hours. Allow the soil to aerate for two weeks before planting. If, after this period, M-B-R 35 persists in the soil as indicated by odor or by eye irritation on close examination, disc or plow the soil to help aeration. Crop seeds may be planted after 96 hours following the end of exposure period. Where polyethylene film is to be utilized as a mulch, aeration is accomplished by making holes in the film and planting the crop directly throughly the film.

**DOSAGE CALIBRATION CHART**

DOSAGE POUNDS PER ACRE	TRACTOR SPEED		TRACTOR SPEED	
	2 MILES PER HOUR (176 ft. per min.)		3 MILES PER HOUR (264 ft. per min.)	
	ORIFICE DIAMETER IN INCHES	APPROXIMATE PRESSURE PSI	ORIFICE DIAMETER IN INCHES	APPROXIMATE PRESSURE PSI
200	.029	23	.029	34
250	.029	28	.035	30
300	.029	34	.035	36
350	.035	28	.043	29

**USE PRECAUTIONS**

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 plants, fertilize as indicated by plant nutrient tests made after fumigation. To avoid ammonia injury or nitrate starvation, or both, to crops, avoid using fertilizers containing ammonium salts and use only those containing nitrate nitrogen until after the crop is well established and the soil temperature is above 65°F. Certain crops are tolerant to ammonia, therefore the above rule does not apply to them. Liming highly acid soils before fumigation stimulates nitrification and reduces the possibility of ammonia toxicity.

**NOTE:** To avoid the possibility of exceeding tolerance levels, food crops other than those listed should not be grown to maturity in soil treated with M-B-R 35 soil fumigant. Transplant such crops to untreated soil or to soil treated according to registered pesticide uses. Vapors of M-B-R 35 are extremely irritating to the eyes. Provide good ventilation when applying or transferring it to other containers.

If the 5 ppm methyl bromide and the 0.1 ppm chloropicrin concentration is exceeded at any time, all persons in the fumigation area must wear a NIOSH/MSHA approved self-contained breathing apparatus (SCBA) or combination air-supplied/SCBA respirator.

M-B-R 35 should not be applied when there is little or no air movement nor when there is an atmospheric inversion. Do not apply to areas adjacent to fields where valuable crops are growing or near buildings inhabited by humans or livestock.

**PRIOR TO FUMIGATION**

- 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 system 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 cleaned 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.
- 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 lying 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**

- Post all treated areas with warning signs.
- Keep all animals, children and unauthorized people away from area under fumigation for 48 hours after fumigation and during removal of tarpaulin.
- Two trained persons must be present during removal of the tarpaulin.

**FOR SPILL OR LEAK DURING FUMIGATION**

In case of a rupture of hose or fitting while applying fumigant, immediately stop tractor and motor. Evacuate immediate area of spill or leak. Use SCBA or combination air-supplied/SCBA respirator for entry into affected area to correct problem. Approach from upwind to make necessary repairs. Do not reenter area without respiratory protection until a spill has evaporated or a leak has been fixed.

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