

Center Panel Front Page

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.

PRECAUTION AL USUARIO

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

M-B-R 33

SOIL FUMIGANT

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

ACTIVE INGREDIENTS:
METHYL BROMIDE 67%

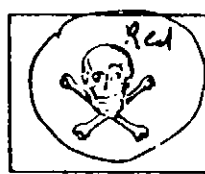

CHLOROPICRIN - - - - - 33%

ACCEPTED
FEB 9 1987
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KEEP OUT OF REACH OF CHILDREN

DANGER

PELIGRO

IN ALL CASES OF OVER EXPOSURE, GET MEDICAL ATTENTION IMMEDIATELY. TAKE PERSON TO A DOCTOR OR EMERGENCY TREATMENT FACILITY.

STATEMENT OF PRACTICAL TREATMENT

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, 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.

ETHYL CORPORATION
451 Florida Street
Baton Rouge, LA 70801



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

EPA Reg No 3377-17
EPA Est No 3377-AR-1

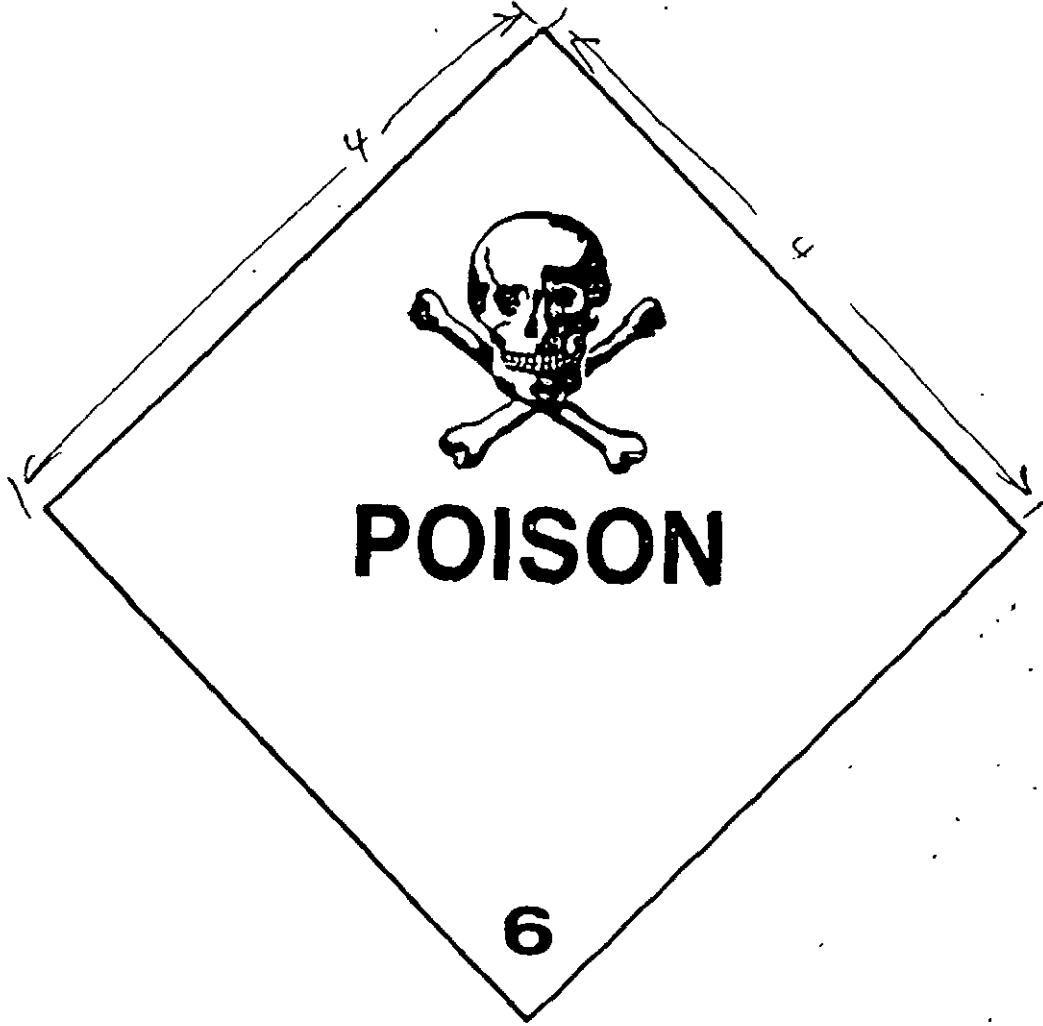
NET CONTENTS LBS.

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**METHYL BROMIDE
AND MORE THAN 2%
CHLOROPICRIN MIXTURE,
LIQUID
NA 1581**



WARRANTY

Seller makes no warranty, expressed or implied, concerning the use of this product other than indicated on the label. Buyer assumes all risk of use and/or handling of this material when such use and/or handling is contrary to label instructions.

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STORAGE AND DISPOSAL

STORAGE AND HANDLING

Store in dry, cool, well-ventilated area under lock and key. Post as a pesticide storage area. Do not contaminate water, food, or feed by storage.

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 straps, hooks, lings, or similar devices to unload cylinders. Transport cylinders using hand truck to a 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.

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 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.

SPILL OR LEAK PROCEDURE

Evacuate the immediate area for 15 minutes. Do not enter until the area has been decontaminated. Do not enter until the area has been decontaminated. Do not enter until the area has been decontaminated. Do not enter until the area has been decontaminated.

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 is exceeded.

of 1000 lbs

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 440 is slightly nonflammable. There is no danger from fire or explosion in use concentrations. However, flame 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, or zinc.

The following materials can develop undesirable odors when encountered in structural fumigation and should be removed from the space being fumigated:

1. Foods: (a) lodged salt (b) Full fat soya flour (c) Any kinds of materials that contain reactive sulfur compounds, such as some soap powders, some baking sodas and some salt blocks used for cattle ticks.
 2. Certain rubber goods: (a) Sponge rubber (b) Foam rubber (c) In rug padding, pillows, cushions and mattresses (c) Rubber stamps and other similar forms of reclaimed rubber.
 3. Furs, horsehair and gloves. (Especially leather gloves).
 4. Leather goods, particularly white kid or any other leather goods tanned with sulfur processes.
 5. Woollens: Extreme caution should be used in the fumigation of any angora woollens and some adverse effect has been noted on the fumigation of woollen suits, coats, blankets, handkerchiefs, woollen socks, sweaters, shirts, and woollen yarn.
 6. Viscose Rayons: These rayons processed or manufactured by a process in which carbon bisulphide is used.
 7. Paper: (a) Sever polishing papers (b) certain lining papers cured by sulphide processes.
 8. Photographic chemicals as used in photo processing darkrooms. (Does not include camera film).
 9. Rug padding.
 10. Cinder blocks.
 11. Mixed concrete, which occasionally picks up odors.
 12. Any materials that may contain reactive sulfur compounds.
- These products may hinder effectiveness of the fumigant. Charcoal materials charcoal absorbs the Methyl Bromide, reducing the effective concentration and contaminating the charcoal.
13. If there is a question whether a material may develop an odor, a test fumigation may be run with a small quantity of the material.

Since this product is intended for soil fumigation only, this section should only include items related to soil fumigation.

Return empty containers for reuse

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PRECAUTIONARY STATEMENTS

HAZARD TO HUMANS AND DOMESTIC ANIMALS

DANGER

EXTREMELY HAZARDOUS LIQUID AND VAPOR UNDER PRESSURE. DO NOT BREATHE VAPOR. INHALATION MAY BE FATAL OR CAUSE SERIOUS ACUTE ILLNESS OR DELAYED LUNG, NERVE OR BRAIN 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. Chloropicrin may be irritating to the upper respiratory tract, and even at low levels can cause painful irritation to the eyes, provoking tearing. If these symptoms occur, leave the fumigation area immediately.

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.

RESPIRATORY PROTECTION

If the concentration of methyl bromide in the working area, as measured by a suitable detector, does not exceed 5 ppm (20 mg/m³) no respiratory protection is required. The detection method requires a small hand-held pump and methyl bromide detector tubes. The air to be drawn through two small chemical reagent tubes in which the methyl bromide is detected by an oxidizing agent to release bromine. The bromine concentration is then indicated by color formed in reaction with chlorine. The detector tubes are capable of measuring methyl bromide concentrations of 2.5-500 ppm. Methyl bromide detector tubes and pump test kits are available from safety supply distributors.

- 1. Sarcosine Gasloc pump part number F-7810657, detector tube #136
- 2. Draeger pump part number CH 304, detector tube #67 28211
- 3. Matheson-Knapex pump part number 80144, detector tube #1575b

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

PROTECTIVE CLOTHING

Wear loose cotton long sleeve shirts and pants, shoes and socks that are cleaned after each wearing. Do not wear jewelry, gloves or boots when handling. Methyl bromide is heavier than air and may be trapped inside clothing and cause skin injury. If full-face respiratory protection is not required, wear goggles or full face shield for eye protection when

handling liquid. After application, immediately remove clothing, shoes and socks. Do not reuse contaminated clothing or shoes until cleaned. Drenched clothing cannot be adequately decontaminated.

PLACARDING OF FUMIGATED AREAS

The applicator must placard or post all entrances to the fumigated area with signs bearing, in English and Spanish:

- 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.
- 4. Name of fumigant used.
- 5. Name, address, and telephone number of the applicator.

Only a certified applicator or someone under his/her supervision may remove placards, and only when the concentration of methyl bromide in the treated site or commodity is below 5 ppm. Any person who transfers a treated commodity to another site without aeration must ensure that the new site is placarded until the commodity is aerated below the threshold concentration.

NOTE TO PHYSICIAN

For symptoms of overexposure to methyl bromide, headache, nausea and vomiting, weakness and dizziness, long-term effects may occur. All health care workers should wear appropriate protective clothing and equipment. For more information, contact the manufacturer or the National Poison Data System (NPDS) at (800) 543-5861.

move to left hand side.

Add the variation and reentry statements found on page 27, item 5(d) of the Registration Standard for Methyl Bromide. This is required because of the greenhouse use.

Refer to the attached amendment

Move the Note to Physician.

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DIRECTIONS FOR USE

It is a violation of federal law to use this product in any manner inconsistent with its labeling. Use M-B-R 33 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, sting and pin damping off diseases caused by certain species of Rhizoctonia, Pythium, Fusarium and certain others, insects (wireworms and white grubs) in the soil at time of treatment, and weeds such as chickweed, pigweed and nutgrass, crabgrass, goosegrass, crowfootgrass, barnyardgrass, purslane, morning glory and many other broadleaf and grass weeds. M-B-R 33 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 strawberries and tomatoes are to be grown for food.

Insert the statements from the left side into chart. Add the use directions found on page 20, item 5(a) on the Registration Standard for Methyl Bromide. This is required because of the greenhouse use.

DIRECTIONS

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 33 use 250 to 350 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 at 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 this fumigant, treated soil must be sealed after application by rolling or cultipacking immediately behind the injection chisels and then covered as soon as possible, preferably within 20 minutes, with polyethylene film or other suitable gas tight tarpaulin.

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 24 to 48 hours. Allow the soil to aerate for two weeks before planting. If, after this period, M-B-R 33 persists in the soil as indicated by odor or by eye irritation on close examination, disc or plow the soil to help aeration.

GREENHOUSES: For production of tomatoes only. 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 24 to 48 hour exposure period, open doors and turn on fans prior to removing tarpaulins. Follow directions for AERATION and all other use precautions.

DOSAGE CALIBRATION CHART

DOSAGE POUNDS PER ACRE	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 bromide tolerances, food crops other than strawberries and tomatoes should not be grown to maturity in soil treated with M-B-R 33 soil fumigant. Transplant such crops to untreated soil or to soil treated according to registered pesticide uses.

Vapors of M-B-R 33 are extremely irritating to the eyes. Provide good ventilation when applying or transferring it to other containers. If it is necessary to be in discomforting vapor concentrations wear a full face gas mask with black canister, recommended for use in acid gases and organic vapors. Do not apply to areas adjacent to fields where valuable crops are growing or near buildings inhabited by humans or livestock.

M-B-R 33 should not be applied when there is little or no air movement nor when there is an atmospheric inversion, since uncomfortable concentrations of chloropicrin may drift to nearby areas. Immediately cover treated area with plastic tarpaulin. The tarpaulins should remain in place overnight and be removed during the daytime.

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DIRECTIONS FOR USE (CONTINUED)

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 cleared from the field before starting fumigation.

DURING FUMIGATION

This fumigant should not be applied when there is an atmospheric inversion. Since unacceptable 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 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

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/CO₂ 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.