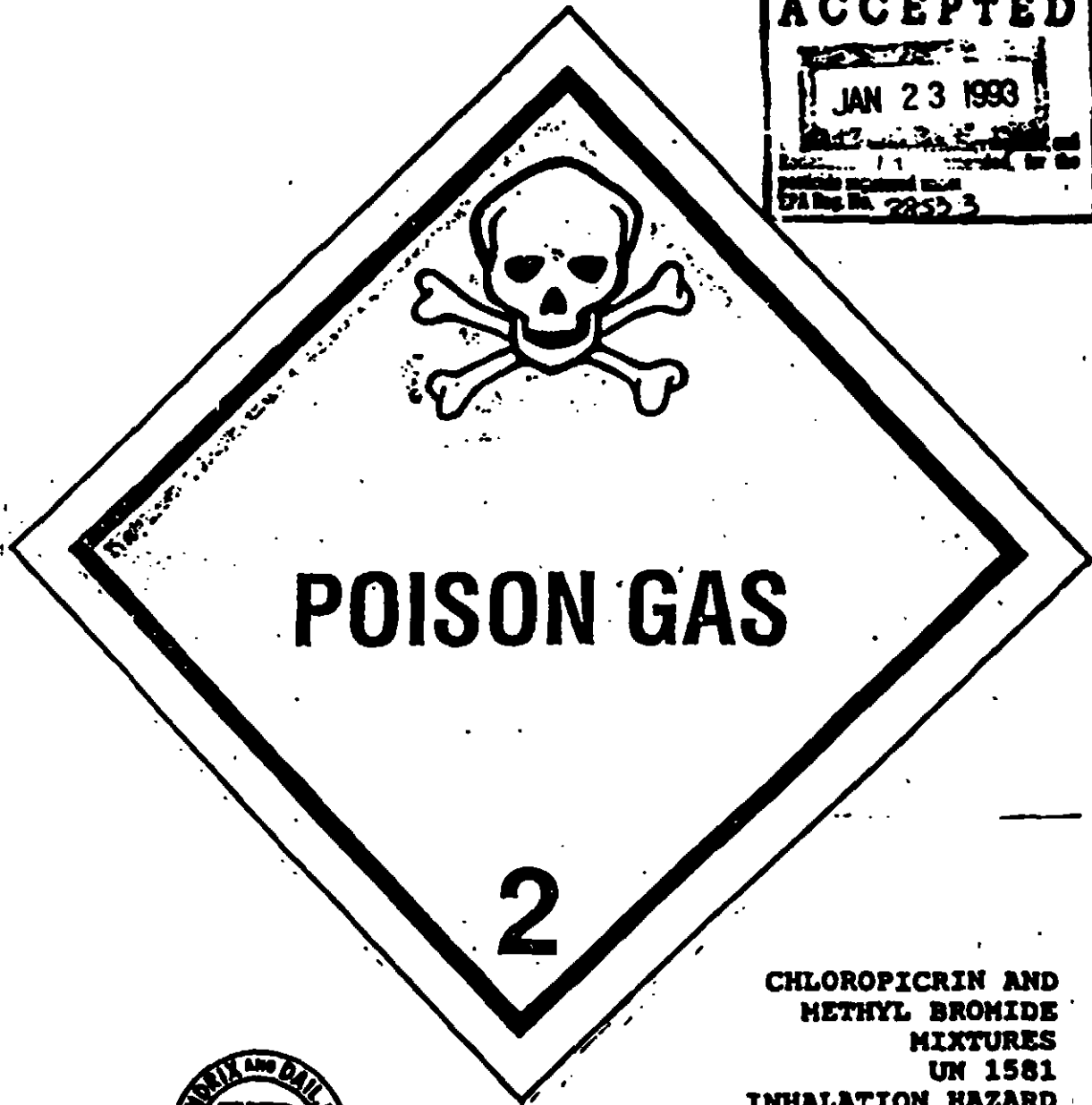


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8853-3 10/5



**ACCEPTED**  
 JAN 23 1993  
 EPA Reg. No. 2853



**CHLOROPICRIN AND  
 METHYL BROMIDE  
 MIXTURES  
 UN 1581  
 INHALATION HAZARD**



**HENDRIX and DAIL, Inc.**

HD 1-91\*

803 INDUSTRIAL BLVD.

TELEPHONE (919) 758-4263

GREENVILLE, NORTH CAROLINA 27634

205

# MBC-33 SOIL FUMIGANT

Active Ingredients .....	100%
Methyl Bromide .....	87%
Chloropicrin .....	13%

A preplant soil fumigant for the control of nematodes, insects, and weeds in certain plant beds, nurseries, and certain field crop areas. Typical nematodes controlled are root knot, lesion, dagger, stunt, spiral, cyst formers, lance, sting gird, and certain other species; damping off diseases caused by certain species of *Phytophthora*; Pythium, Fusarium, and certain others. Such insects as wireworms and white grubs present in the soil at time of treatment are also controlled. Examples of weeds that are controlled include chickweed, pigweed, nutgrass, crabgrass, goosegrass, crowfoot grass, barnyard grass, purslane, wild morning glory, and many other broad leaved weeds and grasses. MBC-33 soil fumigant will give excellent performance in forest tree, ornamental shrub and turf nurseries; in annual and perennial flower, forest tree, tomato, tobacco, strawberry, and ornamental plant beds; as well as in other soil where strawberries and tomatoes are grown as food crops. May also be used on tobacco crop land prior to transplanting for control of granville wilt, blackhank, and nematodes. Do not use more than 350 lbs. of MBC-33 per acre on all soils to be used for strawberries and tomatoes grown as food crops.

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

### USE DIRECTIONS

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.

**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 workable seed bed condition, warm (50-80 degrees F. at the five-inch level), with adequate moisture for good seed germination. Do not treat if the soil temperature is below 45 degrees F. at the five-inch level. Deep tillage, 12 to 18 inches, often improves results, especially in heavy or muck soils.

**APPLICATION:** Apply at the rate of 250-450 lbs. per acre with a special chisel-type applicator to inject MBC-33 soil fumigant about 5 inches into the soil. For tobacco cropland, apply at the rate of 85-120 lbs. per acre depending on soil conditions and disease pressure. Due to the volatility of this fumigant, treated areas must be covered with polyethylene film as soon as possible, preferably within 30 minutes of fumigant application. The film may be laid manually or mechanically with a tarp-layer.

### EXPOSURE PERIOD AFTER APPLICATION

For soil temperatures above 60 degrees F., keep the treated soil covered with the plastic film for at least 48 hours before removal to ensure maximum diffusion. For soil temperatures below 60 degrees F., extend the exposure period to 3 or 4 days for optimum results.

### WHEN TO PLANT AFTER THE EXPOSURE PERIOD

Crops can usually be seeded 2 to 3 days after the cover is removed. For transplants, aerate for 7 to 10 days. If rains or low temperatures (below 60 degrees F.) occur during aeration, extend the aeration period. For tomato and strawberry transplants, aerate 2 weeks.

WEIGHT, 14.2 POUNDS PER GALLON

**BEST AVAILABLE COPY**

# 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.

**DANGER: PELIGRO:**  
**KEEP OUT OF REACH OF CHILDREN**

READ COMPLETE PRECAUTIONS ON SIDE PANEL

### USE PRECAUTIONS

**NOTE CAREFULLY:** 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 any fertilizers containing nitrate nitrogen until after the crop is well established and the soil temperature is above 65 degrees F. Certain crops are tolerant to ammonia therefore the above rule does not apply to them. Liming high acid soils before fumigation stimulates nitrification and reduces the possibility of ammonia toxicity.

Do not contaminate fumigated areas by walking from unfumigated to fumigated soil. If the treated area is in a location where flooding or washing is possible after rains, plow a furrow or make a trench around it for proper drainage. Wooden frames around the beds are also satisfactory for preventing this type of contamination.

MBC-33 soil fumigant is toxic to plants; therefore, do not apply to areas containing roots or desirable vegetation. The edge of the cover should be at least 18 inches beyond foliage drip line of living plants.

Some difficulty has been experienced through the use of MBC-33 on soil planted to the following crops: conifers, salvia, snapdragons, carnation, multiflora roses, Burford's Chinese holly, as well as certain other plants. Fumigate on a small scale until safety to plants is determined under growing conditions.

Avoid reinfestation of treated soil. Do not use transplants, roots, or crop remains infested with soil-borne plant parasitic pests and weed seeds. Clean applicator carefully before and after use.

Do not use containers or application equipment made of aluminum, magnesium or their alloys, as under certain conditions MBC-33 soil fumigant may be severely corrosive to such materials.

Store MBC-33 soil fumigant in tightly closed cylinders in a cool open shelter away from dwellings and out of the reach of children.

**NOTICE:** Seller warrants that the product conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with directions under normal conditions of use, but neither this warranty nor any other warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE, expressed 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.

# To Control Many Weeds, Grasses, Nematodes And Insect Pests In Plant Beds And Nurseries

## DANGER - PELIGRO

### HAZARDS TO HUMANS

Extremely hazardous liquid and vapor under pressure. Inhalation may be fatal or cause serious acute illness or delayed lung, nerve or brain injury. Do not breathe vapor. 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.

### 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, 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.

### 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 overexposures 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.



# POISON



## DO NOT SPILL OR DISCHARGE CONTENTS OUTSIDE GROUND COVER

## KEEP CHILDREN AND ANIMALS AWAY FROM PLO'S UNDER TREATMENT

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.

NET CONTENTS: 200 Pounds

E.P.A. est.

E.P.A. REGISTRATION  
No. 8853-3

8853-FL-1		
8853-GA-1		
8853-NC-1		←
8853-KY-2		
8853-NC-2		

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### 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 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.

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/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.

### 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.

### STORAGE AND DISPOSAL

**STORAGE:** 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 slings, hooks, tongs, or similar devices to unload cylinders. Transport cylinders using hand truck, fork truck or other device to which the cylinders 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 representative at the nearest EPA Regional Office for guidance.

**BEST AVAILABLE COPY**