

SPECIMEN LABEL (BACK)

APPLICATION: Materials required include evaporating containers, a gasproof cover of polyethylene or other material impervious to DOWFUME MC-2, cover supporters, polyethylene tubing and an applicator to dispense the fumigant.

Start by digging a 4 to 6 inch deep trench or furrow around the border of the area to be treated. This will later provide an easy and effective way of sealing the gasproof cover before releasing the fumigant. Next place cover supports at regular intervals on the prepared bed. Supports should be high enough to hold the cover above the soil surface and evaporating containers so that the fumigant vapors can diffuse and circulate freely. Any handy object that will not puncture or tear the cover can be used for support purposes including inflated polyethylene bags, crumpled fertilizer bags, burlap bags stuffed with hay or straw, inverted flower pots, bottles or cardboard boxes. With the supports in place set the evaporating containers about 30 feet apart in the area to be treated. The containers are essential

IMPORTANT Use and handling instructions on this overwrap. DO NOT DISCARD. Read precautions on can before using.

for volatilization and uniform dispersion of the fumigant. Anything convenient to hold the fumigant and keep it from soaking into the ground as a liquid can be used including tin pans or basins made of cover material. Do not use containers made of aluminum or its alloys. Containers should be shallow - 4 to 5 inches deep at most - to allow ready dispersion of fumigant vapors and with sufficient capacity to hold about one pint volume for each 1 1/2 lb can of DOWFUME MC-2 dispensed.

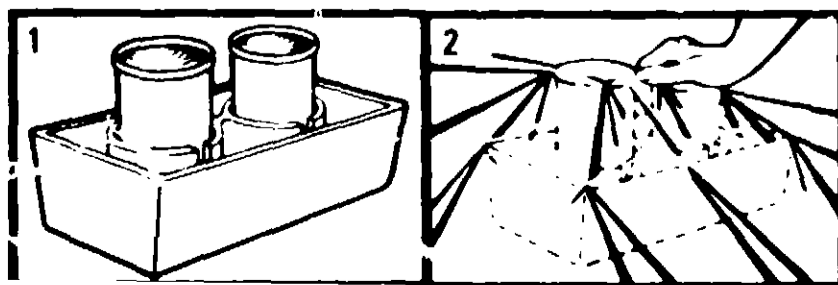
After placing the evaporating containers on the seed bed, fasten a polyethylene applicator tube to each, making sure the end is directed into the container. Tubes should extend out from under the gasproof cover when in place, and be long enough to allow the fumigant applicator to be easily attached.

Lay the gasproof cover over the area to be treated placing the edges of cover in the trench or furrow previously dug and seal with earth. Use enough earth to cover the edges to a width of 6 to 10 inches and tamp down firmly. During this operation use special care not to damage the cover. A cover should last several years if handled and stored properly.

Apply DOWFUME MC-2 using a Star Model 1.5 applicator previously described. Only one applicator is needed as it is transferred from one polyethylene tube to the next. **CAUTION:** Transfer applicator to next tube only after can of DOWFUME MC-2 to which it is connected is completely empty. Have cans of fumigant warm (60 F. to 90 F.) so fumigant will flow rapidly through the polyethylene tube into the evaporating container. A can should empty in less than one minute. Discharge necessary number of cans into each container being careful not to disturb the earth seal along the cover edge. After application is complete do not disturb either gasproof cover or polyethylene applicator tubes - gas may escape and create a hazard to the operator and reduce effectiveness of the soil treatment.

An alternate method of application involves vaporizing DOWFUME MC-2 before release under the gasproof cover. The purpose of this method is to ensure maximum fumigant efficiency by obtaining a uniform concentration of gas throughout the treated area as quickly as possible. Because the fumigant is released as a gas rather than as a liquid, evaporating containers are not needed. DOWFUME MC-2 is vaporized by submerging the punctured can in hot water while applying. This can be achieved by puncturing can in conventional manner, immediately turning it upside down and submerging both the punctured can with applicator attached into the hot water. Keep submerged until empty. Additional hot water should be available as the original supply will be cooled by the rapid vaporization of the fumigant. A small stove of the type commonly used by campers may be used to keep the water hot.

SIMPLEX 2 TRAY OPENER



The SIMPLEX 2 Tray Opener, which serves both as an air-piercing device designed specifically for 1.5-lb. cans, and as an evaporation tray is used only for soil fumigation under polyethylene covers.

Soil Fumigants Company, Box 7901, Orlando, Florida 32804.

1. Place tray(s) (one for every 300 sq. ft. to be treated) upright on prepared seedbed. Carefully insert two 1.5-lb. cans into guides to rest lightly upon nails in bottom. **NOTICE:** Do not allow nail to puncture can.

2. With tray(s) positioned near edge of seedbed, cover tray(s) and bed with polyethylene, using soil to seal all edges in prepared trenches. Walk toe-to-heel around entire perimeter, compacting soil to prevent wind from breaking seal during fumigation.

3. From outside gas-tight polyethylene cover, press palm down firmly against each can to turn to puncture can against nail. Use only palm of hand, never use a foot, board, shovel or other hard object which might tear plastic and permit fumigant to escape. Have masking tape or plastic tape available to repair accidental punctures. Do not attempt to remove trays or cans until cover is removed after the 24- to 48-hour exposure period.

EXPOSURE AND AERATION. Let fumigated area stand undisturbed for 24 to 48 hours depending on temperature. Remove cover and let the soil aerate for 24 to 72 hours, if possible. Work thoroughly to speed further aeration. Some kinds of seed can be planted immediately, sensitive species, such as the peach, 1 unit after several days aeration. Do not set out young plants for at least one week.

WELL-ROTTED COMPOST AND MANURE: Follow the general instructions given above for soil treatment. For soil fumigations either outdoors or in a well-ventilated place, the material should be loose, moist enough for good seed germination, and at a temperature above 60 F. For best results pour the material into a 1/2 to 1 foot deep on wet ground or on a concrete floor. Press up to three feet high cup, when necessary, the fumigated material every 12 inches. Support the cover a few inches above the material to permit gas to diffuse and introduce DOWFUME MC-2 at the highest point of the pile. After exposure, aerate material for one day. Then stir thoroughly and aerate 48 hours or longer before using.

MULCHING MATERIALS: Straw or hay should be thoroughly soaked several days before treatment. At time of treatment, pile the bales up and cover with a gasproof cover sealing edges in the same manner as recommended for soil.

ESTABLISHING WEED-FREE TURF: Lawn grass (seeded or sprigged) may be planted after treatment with DOWFUME MC-2 has killed existing grass and weeds. Follow directions given above for seed and plant bed treatment. Water and lawn, the turf is usually worked up before fumigating. If desired, the turf may be left undisturbed. In this case dig a shallow trench around the area in which to seal the edges of the cover before fumigating. After exposure and removal of the cover the treated area may be seeded or sprigged without removing the dead sod. **NOTE:** Frequent sprinkling after seeding will help ensure a uniform stand.

ADDITIONAL USES: DOWFUME MC-2 fumigant may also be used for the control of insect pests infesting lumber and bagged or bulk grains in railroad boxcars or by treatment under a gas proof cover (tarpaulin). DOWFUME MC-2 may also be used for pre-

planting application to control citrus nematode, burrowing nematode, root-knot nematode, *Armillaria* root rot fungus, *Phytophthora* root rot and crown rot fungus in sandy and fine textured clay soil tree replant sites in peach and almond orchards and citrus groves. Before using DOWFUME MC-2 for these purposes consult complete directions given in the following literature available from The Dow Chemical Company, Ag-Organics Department, Midland, Michigan 48640.

DOW Methyl Bromide for Boxcar Fumigation (Form No. 132-89)

Operating Information on Tarpaulin Fumigation with DOW Methyl Bromide (Form No. 132-59)

Preplant Soil Fumigation with DOWFUME MC-2 for Control of Certain Soil-borne Pests in Replant Tree Sites (Form No. 133-408)

USE PRECAUTIONS: DOWFUME MC-2 has given excellent results with a wide variety of soils and plants. However, for reasons not clearly understood, plant growth has occasionally been un-

satisfactory following treatment. Difficulty has been experienced with carnations, conifers, holly, muliflora roses, snapdragons, and certain other ornamental plants and shrubs. Every grower should experiment on a small scale for at least a full season before extensive use.

For best results, observe the following precautions:

1. Do not treat soil when very cold, very wet or very dry.
2. DOWFUME MC-2 is toxic to all plants. Do not fumigate too close to desirable vegetation. Keep the edge of the cover at least a foot away from the roots of desirable plants and water the root zone thoroughly in area not covered by the tarp or polyethylene cover. If possible, pre-soak root zone around desirable plants immediately adjacent to cover to help contain the gas under the cover.
3. Be sure treated soil or material is free from DOWFUME MC-2 before seeding or using. Working it will be penetration.

4. Prevent contamination of fumigated areas. If necessary, to avoid flooding, trench around them or build wooden or earthen dams. Clean your shoes carefully when walking from untreated to treated soil. Do not use tools, transplants or crop remains that may carry pests from unfumigated areas.

5. Fumigation with DOWFUME MC-2 sometimes slows down the rate of nitrification in the conversion to nitrates from ammonia by bacteria action. Certain ammonia-sensitive plants, such as tomatoes, may suffer growth inhibition or stand reduction when planted in fumigated soils containing high amounts of ammonia nitrogen. To lessen this hazard, at least 72 and preferably 90 days after fumigation, fertilizer added immediately before or soon after fumigation should be in the form of nitrate nitrogen. This hazard may also be reduced by delaying planting until several months after fumigation. If a nitrate form of nitrogen such as sodium or calcium nitrate is not readily available, ammonium nitrate used sparingly will supply the nitrogen needed without risk. Phosphorus, potassium, and other plant nutrients should be used as needed to soil needs.

6. Fumigation with DOWFUME MC-2 may cause soil compaction and heavy mulching may be necessary to break up soil and to prevent soil crusts from forming. Fumigation should be repeated at least two months before planting.

HANDLING PRECAUTIONS: DOWFUME MC-2 fumigant is a highly hazardous material and should be handled in accordance with following precautions:

1. Before using read carefully the label and the following precautions.
2. Do not breathe vapor.
3. Do not spill. If liquid DOWFUME MC-2 spills on shoes or clothing, remove them at once and do not wear them again until aired outdoors for several days. Do not wear gloves when applying DOWFUME MC-2.
4. Keep animals and children away from plots while under treatment and for at least 30 minutes after the cover is removed. The warning agent in DOWFUME MC-2, by irritating the eyes, will warn of leaks or spillage in handling and storage. It disappears in a few hours, however, and will not keep children or animals from creeping under the cover.
5. When fumigating inside buildings, keep doors and windows open at all times until after aeration is completed. Good ventila-

tion is essential both for safety and for satisfactory results in pre-planting when fumigating compost and manure.

6. Store DOWFUME MC-2 in a cool place away from fire.

7. Application of DOWFUME MC-2 to plants to be treated immediately eliminates the need for a gas mask during application. However, one should always be at hand for emergency use.

8. Always have a helper on hand with applicator and any emergency.

NOTICE: See our warranty that the product is fit for the use stated on the label and is reasonably fit for the purpose stated on the label when used in accordance with directions under normal conditions of use. It neither this warranty nor any other warranty, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE, express or implied, extends to the use of this product contrary to label instructions, or other abnormal conditions or under conditions not reasonably foreseeable. Seller shall not be liable for the risk of any such use.

Active Ingredients:
Methyl Bromide 98%
Chloropicrin 2%
E.P.A. Registration No. 464-104-AA E.P.A. Est. 464-MI-1

DANGER POISON

KEEP OUT OF REACH OF CHILDREN

EXTREMELY HAZARDOUS LIQUID AND VAPOR UNDER PRESSURE • INHALATION MAY BE FATAL OR CAUSE DELAYED LUNG INJURY • LIQUID AND VAPOR CAUSE BURNS WHICH MAY BE DELAYED • DO NOT BREATHE VAPOR • USE ONLY WITH ADEQUATE VENTILATION • DO NOT GET IN EYES, ON SKIN, ON CLOTHING • DO NOT USE ORDINARY RUBBER PROTECTIVE CLOTHING INCLUDING GLOVES AND BOOTS • KEEP AWAY FROM HEAT • WEAR A FULL FACE GAS MASK WITH BLACK CANNISTER MEETING SPECIFICATIONS OF U.S. BUREAU OF MINES FOR ORGANIC VAPORS. CHLOROPICRIN MUST NEVER BE DEPENDENT UPON AS A WARNING AGENT WHEN A GAS MASK IS WORN • SEND FOR A DOCTOR IMMEDIATELY IN CASE OF EXPOSURE

FIRST AID

IF INHALED - CARRY PATIENT TO FRESH AIR. CALL A PHYSICIAN AT ONCE. MAKE SURE PATIENT CAN BREATHE FREELY. KEEP PATIENT LYING DOWN AND WARM. GIVE ARTIFICIAL RESPIRATION IF BREATHING HAS STOPPED. OXYGEN SHOULD BE ADMINISTERED ONLY BY QUALIFIED PERSONNEL.

IN CASE OF CONTACT - IMMEDIATELY REMOVE ALL CONTAMINATED SKIN COVERING INCLUDING SHOES, CLOTHING, AND ADHESIVE OR OTHER BANDAGES. WASH SKIN THOROUGHLY WITH SOAP AND WATER. IF IRRITATION OR BLISTERS DEVELOP, GET MEDICAL ATTENTION FOR EYES. FLUSH IMMEDIATELY WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES AND GET MEDICAL ATTENTION. DO NOT REUSE SHOES OR CLOTHING UNTIL FREE OF ALL CONTAMINATION.

NOTE TO PHYSICIAN: KEEP PATIENT AT REST AND UNDER OBSERVATION FOR 24 TO 48 HOURS.

DO NOT SPILL OR DISCHARGE CONTENTS OUTSIDE OF AREAS CONFINED FOR TREATMENT. KEEP CHILDREN AND ANIMALS AWAY FROM AREAS UNDER TREATMENT.



F·I·A^{*} "80-20"

(FLAME INHIBITOR ADDED)

GRAIN FUMIGANT

CONTAINS CARBON TETRACHLORIDE AND CARBON DISULFIDE



**POISON
DANGER**

Keep Out of Reach of Children

HAZARDOUS VAPOR AND LIQUID
MAY BE FATAL IF INHALED OR SWALLOWED

Use only with adequate ventilation. Do not breathe vapor. When entering or working in enclosed space containing vapor of this product wear a gas mask with a black canister as approved by the U.S. Bureau of Mines for protection against the inhalation of organic vapors. Avoid contact with skin, eyes, clothing.

EMERGENCY TREATMENT — CALL A PHYSICIAN IMMEDIATELY — If inhaled, move victim to fresh air, keep warm. If breathing stops, give artificial respiration. Internal, if conscious induce vomiting by giving a tablespoon of salt in a glass of warm water and repeat until vomit fluid is clear.

HEAVILY VOLATILE — Keep container closed. Store in a cool place out of sunlight.

4-24-68
476-1112

RECOMMENDATIONS

F.I.A. "80-20" GRAIN FUMIGANT is formulated for the control of insects, in bulk-stored, seeds (for future planting use only) and grains (barley, corn, oats, rice, rye, sorghum [milo], wheat), including the following:

Angoumois Grain Moth	Hairy Fungus Beetle
Cadelle	Indian Meal Moth
Confused Flour Beetle	Lesser Grain Borer
Flat Grain Beetle	Red Flour Beetle
Foreign Grain Beetle	Rice Weevil
Granary Weevil	Saw-Toothed Grain Beetle

Fumigate during mild weather for best results. A grain temperature of 65° to 75° F. is near optimum.

DOSAGE RATES:

FOR SMALL GRAINS (BARLEY, OATS, RICE, RYE, WHEAT) AND SMALL SEEDS.

FARM STORAGE BINS Apply fumigant at the rate of 3 to 5 gallons per 1000 bushels (1250 cubic feet) of grain depending on tightness of bin. Seal crevices with heavy paper and paste before treating.

SMALL EVER-NORMAL GRANARY BINS: Apply 3 to 4 gallons of fumigant per 1000 bushels. Deep bins should be treated fractionally.

LARGE EVER-NORMAL GRANARY BINS AND COUNTRY ELEVATORS: Apply 2 to 3 gallons of fumigant per 1000 bushels. Bins containing over 5000 bushels should be treated fractionally.

CONCRETE AND STEEL TERMINAL ELEVATORS: Hoppers should be tight; stuff with burlap or sacking before treating, if necessary. Apply 2 to 3 gallons of fumigant per 1000 bushels at every 1000 bushel level. Bottom and top 1000 bushels should receive a double dosage.

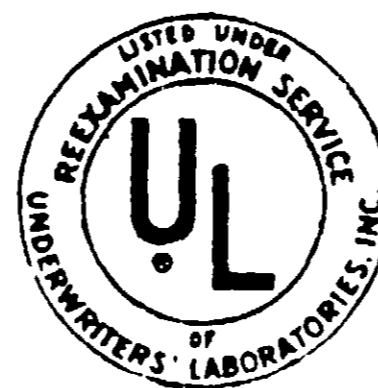
RAILROAD CARS: Apply 4 to 6 gallons of fumigant per car depending on tightness and size of car.

DOSAGE FOR LARGE SEEDS & GRAINS (CORN, GRAIN SORGHUM [milo]): Apply 7½ gallons per 1000 bushels for wooden bin storage. Apply 5 gallons per 1000 bushels for elevator and metal bin storage.

IMPORTANT: If possible, leave grain undisturbed for a minimum period of 72 hours after treating. Treated bins should not be entered without an approved gas mask and treated grains should not be used for food or feed purposes until fumigant vapors have completely dissipated or have been removed by thorough aeration.

Consult State Agricultural Experiment Stations or the State Agricultural Extension Service for additional information as the timing, number and rate of applications needed will vary with local conditions.

In respect to fire hazard, Stauffer F.I.A. "80-20" Grain Fumigant is rated by Underwriters' Laboratories, Inc., 1 to 5 in a class less hazardous than paraffin oil, according to schedule in which



Ether is rated	100
Gasoline	90-100
Alcohol (ethyl)	60-70
Kerosene	30-40
Paraffin Oil	10-20

S-SF-680229 Natl

USDA Reg. No. 476-1112

Made in U.S.A.

Stauffer Chemical Co., New York

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476-1112



F·I·A* "80-20"

*(FLAME INHIBITOR ADDED)

GRAIN FUMIGANT

ACTIVE INGREDIENTS:

Carbon Tetrachloride
Carbon Bisulfide (Carbon Disulfide)
Petroleum Ether

	Wt.	Vol.
	83.0%	79.0%
	16.4	19.8
	0.6	1.2
	<u>100.0%</u>	<u>100.0%</u>

A FIRE-SAFE "80-20" GRAIN FUMIGANT FOR CONTROL OF INSECTS INFESTING BULK STORED SEEDS (for future planting use only), & GRAINS (barley, corn, oats, rice, rye, sorghum [milo], wheat) IN FARM BINS, GRANARIES, AND ELEVATORS.



POISON DANGER

Keep Out of Reach of Children

HAZARDOUS VAPOR AND LIQUID.
MAY BE FATAL IF INHALED OR SWALLOWED

Use only with adequate ventilation. Do not breathe vapor. When entering or working in enclosed space containing vapor of this product wear a gas mask with a black canister as approved by the U.S. Bureau of Mines for protection against the inhalation of organic vapors. Avoid contact with skin, eyes, clothing.

EMERGENCY TREATMENT — CALL A PHYSICIAN IMMEDIATELY — If inhaled, move victim to fresh air, keep warm. If breathing stops, give artificial respiration. Internal, if conscious induce vomiting by giving a tablespoon of salt in a glass of warm water and repeat until vomit fluid is clear.

HIGHLY VOLATILE. Keep container closed. Store in a cool place out of sunlight.

STAUFFER CHEMICAL COMPANY

NEW YORK

GAL NET

APPLICATION

- Application should be made wearing approved safety
- Always wear a snug-fitting canister specific for the time canister is in use. Only a specified period. W
- Work in pairs; never fumigant man should always remain outside. Enter only to give assistance.

FARM BIN PREPARATION

the grain should be leveled. should not be higher than 6 infested bins a damp, mold to several feet below the surface up in advance of fumigation. solid it should be removed. grain is heating badly it should be treated.

FARM BIN APPLICATION:

lated bins to apply treatment practice on farms to treat with fumigant while walking. be a very hazardous practice bins. To be safe, therefore, a pressure applicator is needed. remove spray nozzle and apply fumigant over entire surface of

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 (milo, wheat)

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APPLICATION

- Application should be made only by experienced personnel wearing approved safety equipment
- Always wear a snug-fitting gas mask, equipped with a canister specific for the fumigant used. Keep record of time canister is in use. Canisters provide protection for only a specified period. When exhausted, protection stops.
- Work in pairs; never fumigate alone. The stand-by safety man should always remain outside fumigated area and enter only to give assistance in emergencies

FARM BIN PREPARATION: Before treating, the surface of the grain should be leveled off to an even depth. Grain level should not be higher than 6 inches from top of bin. In heavily infested bins a damp, moldy layer may extend from an inch to several feet below the surface. This layer should be broken up in advance of fumigation. If layer is sprouting and very solid it should be removed before the surface is stirred. If grain is heating badly it should be moved and aerated before treating.

FARM BIN APPLICATION: Do not enter large or poorly ventilated bins to apply treatment. While it is fairly common practice on farms to treat small, well ventilated bins with fumigant while walking over surface of grain, this can be a very hazardous practice in large or poorly ventilated bins. To be safe, therefore, treat bins only from outside. If a pressure applicator is needed to reach all parts of the bin, remove spray nozzle and project solid stream of liquid fumigant over entire surface of grain.

APPLICATION (Concluded)

ELEVATOR BIN APPLICATION: Do not enter bin to pour fumigant. Preferably, pour fumigant in grain stream at opening of receiving bin. Apply fractionally to each 1000 bushels. Allow about a foot of bin space to fill while applying each portion. Bottom and top 1000 bushels should receive a double dosage.

RAILROAD CAR APPLICATION: Use pressure applicator to reach entire surface of grain from door of car with solid stream of fumigant. Apportion dosage according to depth of grain. Fumigant may also be applied with sprinkling cans, sprinkling nozzles removed, by two men working from opposite ends of the car toward the open door. Fumigant should be poured rapidly to avoid fumes and apportioned according to depth of grain. Car should be sealed for 24 hours, preferably longer after treatment.

EMPTY DRUM: DRAIN AND ALLOW VENTING FOR SEVERAL DAYS TO PERMIT VOLATILIZATION OF RESIDUAL CONTENTS. DO NOT RE USE FOR FILLING WITH ANY OTHER PRODUCTS OR COMMODITIES. THIS PROCEDURE SHOULD BE DONE IN A FENCED, LOCKED ENCLOSURE, TO PREVENT ACCESS BY UNAUTHORIZED PERSONS AND TO PROTECT CHILDREN.

100% NO

NOTICE: Stauffer Chemical Company makes no warranty, express or implied, including the warranties of merchantability and/or fitness for any particular purpose, concerning this material, except those which are contained on Stauffer's label.