

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS & DOMESTIC ANIMALS

DANGER



POISON

POISONOUS 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, or with proper respiratory protection (a full-face canister, self-contained or air-supplied respirator approved by NIOSH).

Avoid contact with eyes, skin, and clothing. In general, it is recommended that the minimum clothing practical be worn when working with this material. Rubber or leather protective wear, including gloves, should not be worn. Outer wear of polyethylene is recommended for situations where there is a substantial chance of liquid methyl bromide contacting an individual. Do not allow re-use of clothing or shoes contaminated with liquid methyl bromide until free of fumigant, for shoes, aerate for at least one week.

PHYSICAL HAZARDS: Gaseous liquid under pressure

CHEMICAL HAZARDS: Do not use containers made of aluminum, magnesium or their alloys.

DIRECTIONS FOR USE

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

FOR USE BY PEST CONTROL OPERATORS/OTHER TRAINED PERSONNEL

STORAGE AND DISPOSAL

STORAGE: Store in a cool, dry, ventilated place — away from dwellings. It is recommended that the storage site be isolated from locations where foods, food grade materials, drugs, seeds, and feed stuffs are stored. Do not remove protective caps until cylinder is in position for connections to be made. **Leaking cylinders:** Evacuate area (or building) and do not allow unprotected individuals in area until clear of gas. If desired, cylinder may be moved to a safe place by an experienced individual wearing proper personal protective devices.

DISPOSAL: For spilled material, allow to evaporate off. Applying water to spill complicates detection of spilled material and increases evaporation time. Empty cylinders: close valve clockwise, or to the right, hand tight. Disconnect lines and replace both the small and large protective caps. Return empty cylinders to manufacturer by following instructions on POISON Shipping tag attached to cylinder. Cylinders containing product should be returned only after contacting manufacturer for proper shipping instructions.

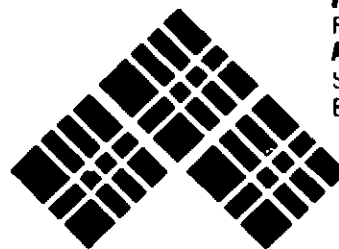
NOTICE TO BUYER/USER: State and/or local laws and regulations restrict the use of the material in many localities. Consult local pesticide authorities for regulations restricting your proposed usage. Comply with laws and regulations.

See attached pamphlet for specific use directions and precautions.

SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THIS MATERIAL OR 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.

RESTRICTED USE PESTICIDE

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.



NAMCO

NAMFUME

(METHYL BROMIDE ODORIZED WITH CHLOROPICRIN)

For use as an aid in the control of structural pests, household insect pests, and as a pre-plant soil treatment.

ACTIVE INGREDIENTS: Methyl Bromide 99.75%
Chloropicrin 0.25%

KEEP OUT OF REACH OF CHILDREN

DANGER



POISON

STATEMENT OF PRACTICAL TREATMENT

SEEK IMMEDIATE MEDICAL ASSISTANCE IN CASE OF POISONING

If inhaled: Carry patient to fresh air. Get medical assistance at once. Make sure patient can breathe freely. Keep patient warm and quiet. Give artificial respiration if breathing has stopped. Oxygen should be administered only by qualified personnel. **In case of contact:** For skin, immediately remove all contaminated skin coverings including shoes, clothing, personal articles and adhesive or other bandages. Wash skin thoroughly with soap and running water. If irritation or blisters develop get medical attention. For eyes, flush thoroughly with plenty of water for at least 15 minutes and seek immediate medical attention. **Note to Physician:** Keep patient at rest and under observation for 24 to 48 hours. Secondary infection of burns (blisters) are common.

SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS!



Manufactured By
Van Waters & Rogers
division of Univar

San Mateo, CA 94403

EPA Est. 550-CA-01 12-78

(EPA Reg. No. 550-131-AA)

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BEST AVAILABLE COPY



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STRUCTURAL PESTS

For use as an aid in the control of structural pests (termites, lyctid or powder post beetles, old house borers, death watch beetles, household pests, roaches, bedbugs, spiders, ants, millipedes, carpet beetles, clothes moths) in garages, barns, storage buildings, and other structures. Also for use in fumigating bedding, clothing, and other articles required to be treated by federal, state, local laws and regulations.

PREPARING FOR FUMIGATION: Remove from the structure to be fumigated all persons, pets (including fish), domestic animals, and growing plants. Medicinals, food and feedstuffs (including iodized salt, salt blocks for cattle, baking soda) should be removed from the structure or placed in polyethylene bags of 4 mil or greater thickness and sealed with masking tape or clamps. Should medicinals, food or feedstuffs be overlooked and inadvertently exposed during fumigation, they should be destroyed. Extinguish all flames, including pilot lights. Open closed doors and doors between rooms and off hallways, and openings into crawl spaces of attics and sub-floors. For control of fabric pests, open storage chests, drawers, and closets.

Structures to be fumigated should be sealed. The type of seal will depend upon construction characteristics. For example, some types of construction might require enveloping in an impervious tarpaulin. Tarpaulins, when used, should be secure, sealed together and held to the soil or other surface with soil, sand, snakes or water snakes. With certain soils and conditions it would be advisable to enhance the soil tarpaulin seal by weighting the mutual contact area. A band of wet soil established between desirable plants adjacent to the structure and the area to be fumigated may prevent injury to these plants.

DOSEAGE AND EXPOSURE TIME: Use 1 to 3.34 pounds for an exposure time of 12 to 24 hours or longer. Under special conditions, fumigation may be accomplished in less time by adjusting dosage upwards. This would be impractical under six hours.

RELEASING THE FUMIGANT: When practical, the fumigant should be released from outside the structure. Liquid methyl bromide should be held from the shipping container into the structure using suitable leak-proof tubing. One quarter-inch copper or polyethylene tubing is satisfactory. The outlet of the tubing should be fastened to an evaporating pan to prevent the liquid methyl bromide from dripping or splashing on furniture, rugs, walls, etc. Gaseous methyl bromide may also be injected into the structure by passing the liquid methyl bromide through a suitable heat exchanger. Since it is the capacity of the heat exchanger — not the size of the tubing — which is the limiting factor in this system, any size tubing is permissible provided the tubing material is resistant to both liquid and gaseous methyl bromide and the pressures and heat created. The flow rate of the liquid methyl bromide should be regulated so that no liquid methyl bromide is allowed to come out of the end of the shooting tube.

In a reverse case, the point where the liquid or gaseous methyl bromide is released should be in an open area within the structure. For the average structure, the entire amount may be released in one place, but for large or complex structures release it at two or more locations so chosen as to insure even distribution of the gas. For best results and distribution of the fumigant (where power is available) run a suitable fan during the application and for 30 minutes or longer after application is finished.

AERATION: At the end of the exposure period, remove all seals and open all doors and windows that are operable. Use ventilation fans whenever possible to remove fumigant from dead air pockets. If this is not practical, a longer aeration time may be required. Check for completeness of aeration with a suitable gas detector.

USE PRECAUTIONS

Due to the presence of chloroform, fumigant must be used in the usual fumigation areas, such as garages, barns, and other out-gate living plants, fresh fruits or vegetables.

Methyl bromide may react with certain materials, such as copper, iron, zinc, and lead. The following list of materials is not intended to be all-inclusive, but is a general guide:

- (1) Foodstuffs: a. Dried fruits, nuts, and seeds. b. Animal products, such as wool, hair, and feathers. c. Plant products, such as tobacco, hops, and other agricultural products. d. Rubber, plastic, and other synthetic materials.
- (2) Fur, hair, and skin. Animal and feather products.
- (3) Fur, hair, and skin. Animal and feather products.
- (4) Leather goods, such as shoes, belts, and bags.
- (5) Women's: extreme caution should be exercised when fumigating in the presence of women and children. Extreme caution should be exercised when fumigating in the presence of women and children.

Control Desired	Type of Turf or Material	Usage	Minimum Exposure Time*	Minimum Time Before Planting†
Nematodes, insects and weed seeds	Turf Renovation ¹ Lawns, parks, golf greens, athletic fields, and other ornamental and recreational turf areas			
	Nonfood and Nonfeed Crop Areas Seed and plant beds for tobacco, flowers, shade and forest trees, ornamental shrubs and trees, and other similar plants. Also vegetable and fruit production of transplants only. Permanent planting sites for tobacco, flowers, shade and ornamental shrubs and trees and other similar plants.	1 lb per 100 sq ft	24 hours	48 hours
	Well-fotted compost and mature soil and loess	1 lb per cu yd	24 hours	72 hours
	Mulching straw or hay ² TREATED STRAW OR HAY ARE NOT TO BE FED TO ANY ANIMAL	1 lb per 4 bales	48 hours	48 hours
Damping-off and organisms such as <i>Pythium</i> , <i>Rhizoctonia</i> , <i>Fusarium</i>	Turf Renovation: Same sites as listed above	2 lbs per 100 sq ft	24 hours	72 hours or longer
	Nonfood and Nonfeed Crop Areas Same plants as listed above	1 lb per cu yd	24 hours	72 hours or longer

¹Suggestions for establishing weed-free turf: Lawn grass (seed or sprigs) may be planted following treatment with NAMCO Nemtume in order to establish a weed-free lawn. Treat the soil according to the above directions. Where an old lawn is to be renovated, the turf is usually worked up before fumigating. Recent experiments have shown that the undisturbed turf may be killed by fumigation and the dead sod sprigged or seeded after removal of the cover. Frequent sprinkling after seeding will insure a uniform stand.

²Suggestions for fumigating mulching materials: Straw or hay should be thoroughly soaked several days prior to treatment since seeds must be moist at time of fumigation for best results. At the time of treatment the bales are merely piled up and covered with a plastic cover with edges sealed in the same manner as recommended for soil.

*Exposure and aeration times should be doubled if soil temperature is between 50°F and 60°F. NAMCO Nemtume should not be used if temperature is below 50°F.

Seeds of certain species of plants, such as clover, round leaf mallow, morning glory, lily, and others with hard seeds may

Every grower should use methyl bromide and/or chloropicrin containing fumigants on a small scale under his growing conditions for at least a full growing season before extensive use on any crop. These materials have given excellent results with a wide variety of soils and plants, however, for reasons not clearly understood, plant growth has occasionally been unsatisfactory following treatment. For example, some difficulty has been experienced with tomatoes, salvia, snapdragons, carnations, multibora roses, holly, as well as certain other plants. The following precautions must be observed if good results are to be expected:

1. Fumigation with methyl bromide and/or chloropicrin fumigants sometimes slows down the rate of nitrification (the conversion of ammonia to nitrates from ammonia by bacterial 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 $\frac{1}{2}$ and preferably all of the nitrogen 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. Phosphorous, potassium and other plant nutrients should be used according to soil needs.
2. Application should be made several months prior to planting in soils high in organic matter such as muck, compost, heavily manured soils, since they seem more likely to undergo some change (possible effect on microorganisms) resulting in poor growth.
3. Do not treat very cold, below 50°F., or very wet or frosty soils.
4. Be sure treated plots are free from gas before planting and, if treated, do not plant in the same soil until the gas has evaporated from the soil after treatment. Wash particularly when the soil is to be reused.
5. Do not contaminate fumigated areas by walking from unfumigated to fumigated areas, or by shoes that carry soil from one place to another. If the treated beds are in a location where walking or walking shoes are likely to be used, lay down a tarp or other material to make a trench around the treated area for proper drainage. Warden frames or other devices are available for installing tarpaulins to prevent soil contamination.
6. Hay or straw treated directly or harvested from treated soils should be fed to animals.

GAS MASKS: A gas mask should always be worn whenever there is any possibility of exposure to methyl bromide or chloropicrin. When working in an atmosphere containing methyl bromide or chloropicrin be sure to check the mask for leaks. To make certain the mask is working properly, breathe and exhale freely, but do not breathe out into the mask.

SUGGEST MAXIMUM TIME (IN MINUTES) THAT CANISTERS SHOULD BE USED IN FUMIGATIONS

Type of Canister	Concentrations of methyl bromide in lb. per 1000 cubic feet			
	1 lb or less	1 to 2 lb	2 to 3 lb	3 to 4 lb
Super Black (For organic vapors)	120 min	60 min	45 min	30 min
Regular Size Black (For organic vapors)	60	30	22	15
Supersize Yellow (For acid gases and organic vapors)	30	20	10	5
Regular Size Yellow (For acid gases and organic vapors)	18	13	10	5
Red (All purpose)	18	13	10	5

NOTE: Destroy all used canisters by crushing outlet hose connections so that these cannot be mistaken for fresh canisters.

