

SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS!



Packaged By
NAMCO[®]
Van Waters & Rogers
2256 Junction Ave., San Jose, CA 95131

EPA Est. 550-CA-1

EPA Reg. No. 550-130-AA

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS & DOMESTIC ANIMALS

DANGER POISON

Poisonous Liquid and Vapor
Do Not Breathe Vapor
Highly Volatile Liquid Under Pressure
Liquid Very Injurious To Skin and Eyes
(Contact May cause Serious Burns)
Do Not Get In Eyes, on Skin, or on Clothing or Shoes
Penetrates Many Kinds of Protective Clothing

Wear goggles and protective clothing of polyethylene when handling. Do not wear rubber clothing. Wear a full-face mask with black canister suitable for organic vapors, as specified by NIOSH, or an approved self-contained breathing apparatus.

Do not allow re-use of contaminated clothing or shoes until free of fumigant; for shoes, aerate for at least one week.

PHYSICAL OR CHEMICAL HAZARDS

Gaseous liquid under pressure.

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 place — away from dwellings. 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 individual 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: Close valve clockwise, or to the right, hand tight. Disconnect lines and replace both the small and large protective caps. Return empty cylinders by following instructions on POISON/Shipping tag attached to cylinder cap. 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 local laws and regulations.

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STRUCTURAL PESTS

For use as an aid in the control of structural pests: termites, *Cyclops*, or powder post beetles, and house beetes, death watch beetles, roach and pest crickets, bedbugs, spiders, ants, millipedes, carpet beetles, clothes moths in garages, barn, 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.

Preparation For Fumigation. Remove from the structure to be fumigated all persons, domestic animals, pets, including fish and growing plants. Also remove all foods and medicinals or place in polyethylene bags of 4 mil or greater thickness and seal with masking tape or clamps. Fumigate at night, including pilot lights. Open doors between rooms and off hallways, and openings into crawl spaces of attic and sub floors. For control of fabric pests open storage chests, drawers, and closets. Provide for forced air circulation of the fumigant during the application period. For masonry or metal structures, seal all cracks and other air leaks with caulking material or tape and leave cracks around doors, windows, vents and other openings. Wooden structures and others that cannot be readily sealed, may be completely enveloped with an impervious tarpaulin material such as a 4 mil polyethylene sheeting. To prevent escape of gas through the soil and to avoid injury to nearby plants, wet the soil to a depth of six inches for a distance of one foot outward from the edge of the cover. Seal securely all sheeting seams, and seal the lower edges of the cover to the ground with mud or seal or with sand or water. Shakes.

Dosage And Exposure Time: For general fumigation under ideal conditions at temperatures of 70° F. and above use 2 1/2 to 3 pounds of this material per 1000 cubic feet for 24 hours exposure time. Under adverse conditions increase dosage to 3 to 3 1/2 pounds per 1000 cubic feet.

Releasing The Fumigant: Release the fumigant from outside the structure. Lead it from the shipping cylinder into an open space in the building through a suitable ear proof tube. 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 material from dripping or splashing or forming a pool, wax, etc. To accelerate distribution of the gas, run a spark proof electric fan during application, and for example, after application is finished. For an average structure, the entire amount may be released in one place, but for large ones, it best to turn release at 1/2 or more locations and chosen as to ensure even distribution of the gas. To prevent corrosion avoid spraying liquid directly to metal surfaces.

Aeration: At the end of the exposure period, remove all seals and open in doors and windows, or vent through fans, to remove fumigant from dead air pockets. Allow 48 hours for ventilation, then check for completeness of aeration with a suitable fumigant monitoring apparatus, such as a made Gas Detector.

USE PRECAUTIONS

Methyl bromide may react with other substances to cause unpleasant odors, irritate, or otherwise effect. For this reason, the following list is provided as a guide to those materials which should not normally be exposed to this product. This list is not necessarily complete.

- (1) Foodstuffs, including salt (baking salt), soda flour, etc. Any kind of material that may contain reactive sulfur compounds, such as some soap powders, some baking sodas, and some salt brines, used for water, pickled, fresh fruits, and vegetables.
- (2) Certain rubber goods, such as Spotted rubber, (b) Foam rubber, as in rug padding, pillows, cushions, and mattresses, (c) Rubber stamps, and other similar forms of reclaimed rubber.
- (3) Furs, horsehair and pelts (except any leather pelts).
- (4) Leather goods, particularly whole kid or any other leather goods tanned with sulfur products.
- (5) Woolens. Extreme caution should be used in the fumigation of any Angora wools, and some adverse effects have been noted on the fumigation of woolen suits, coats, blankets, hand knit woolen socks, sweaters, shawls and woolen yarn.
- (6) Viscose rayon, if these have been processed or manufactured by a process in which carbon bisulphide is used.
- (7) Paper, card, cover, blotting paper, (b) certain writing papers used by sulphide process.
- (8) Photographic chemicals. (This does not mean camera or film but photographic chemicals used in dark room).
- (9) Rug padding.
- (10) Cinder blocks or mixed concrete and cinder blocks (occasionally pick up odor).
- (11) Any materials that may contain reactive sulfur compounds.
- (12) Charcoal materials. If charcoal absorbs the methyl bromide and thereby not only wastes the fumigant but also reduces the gas concentration to a point where an adequate fumigation job might not be obtained.
- (13) Seeds and bulbs that are to be used for planting.
- (14) Pets, fish and birds.
- (15) Growing plants or nursery stock.

SPACE AND COMMODITY FUMIGATION

For prophylactic use in mills, warehouses, bins and fumigation vaults, flat or upright bulk grain storage, for the control of pest stored product insects including grain bugs, grain beetles, granary weevil, rice weevil, redweevils, mites, and meal worms. Fumigation must be carried out in gas tight chambers or under gas tight tarpaulins. For control of commodity storage insects, such as dried fruit beetles, grain weevils and flour moths in grain, flour, nuts, and dried fruit, the usual dosage is 1 to 1 1/2 pounds of methyl bromide per 1,000 cubic feet with exposure to 12 to 24 hours of atmospheric pressure or 2 to 3 pounds for 1 to 3 hours under vacuum. For use on nursery stock use 1 1/2 to 2 pounds per 1,000 cubic feet for 2 to 3 hours under vacuum, or 8 to 12 hours at atmospheric pressures.

GRAIN FUMIGATION

POUNDS PER 1,000 CU. FT.

Maize (corn)	
Wheat, barley, oats, rice	2
Grain, (grain) (Maize)	3

Do not fumigate tobacco or other high chlorophyll temperatures below below 60° F. or 60° F. There are no overdosage on grain food crops require fumigation at times, most of which are specified by certain quarantine regulations, and fumigate only those products for which a tolerance for residual bromide has been established by the U.S. Food and Drug Administration.

Fumigation must be carried out in gas-tight chambers or under gas-tight tarpaulins for control of common storage insects, such as dried fruit beetles, grain weevils and flour moths in grain, flour, nuts and dried fruits. The usual dosage is 1 to 1 1/2 pounds of methyl bromide per 1,000 cubic feet with exposure to 12 to 24 hours of atmospheric pressure or 2 to 3 pounds for 1 1/2 to 3 hours under vacuum. For use on nursery stock use 1 1/2 to 2 pounds per 1,000 cubic feet for 2 to 3 hours under vacuum or 8 to 12 hours at atmospheric pressures.

GRAIN FUMIGATION

POUNDS PER 1,000 CU. FT.

Sheep corn	2
Wheat, barley, rye, oats, rice	3
corn, sorghum, millet	4

Do not fumigate for storage of produce in high humidity. Soil temperature is low (below 60° F.) and soil there is too moist. The age of the stored crop requires fumigation at times, most of which are specified by certain quarantine authorities. Do not fumigate for fumigation and fumigate only those products for which a tolerance for residual bromide has been established by the U.S. Food and Drug Administration.

TREE PLANTING SITE FUMIGATION

NAMCO methyl bromide may be used as an aid in controlling nematodes (citrus, burrowing and root knot nematodes), fungus diseases (*Armillaria mellea* - Oak Root Fungus, *Phytophthora* root and crown rot), and other soil borne organisms and weeds, and to be planted or replanted, to deciduous fruits and nuts, citrus, and vineyards - WHERE THE CROPS WILL NOT BE HARVESTED FOR A PERIOD OF AT LEAST 24 MONTHS.

RATES & PRECAUTIONS:

FOR CITRUS, BURROWING AND ROOT KNOT NEMATODE - Apply 1 - 1 1/2 pounds per 100 square feet.

PHYTOPHTHORA ROOT ROT - Apply 1 - 2 pounds per 100 square feet and a 4 day exposure using tarping.

OAK ROOT FUNGUS (*Armillaria mellea*) - To facilitate deep penetration to the fumigant, the subsoil should be as dry as possible. This may be accomplished by allowing weeds to grow either without irrigation or by planting a crop of Sudan grass in the spring and withholding moisture throughout the summer. In the fall the soil should be further prepared as described elsewhere. Rates vary from 1 - 1 1/2 pounds in sandy soils, to 2 pounds per 100 square feet in clay loam soils. Peat and soils high in organic matter should not be fumigated for *Armillaria*. NOTE - Complete eradication of *Armillaria* is difficult and rarely achieved. Retreatment of localized areas should be made as necessary.

Note: Due to the absence of a warning agent - chloropicrin - in NAMCO methyl bromide, the treated area is required to be tarped when this material is used in any manner listed below.

APPLICATION METHODS:

BACKHOLING AND AUGERING - Remove soil to a depth of 5 feet - or as desired - back-fill hole with 2 feet - insert applicator tube or tree site injector, fill hole and release entire dose of fumigant for 100 square feet tree site. After removal of applicator, prevent too rapid escape of fumigant by tamping or compacting soil or tarping.

TREE SITE INJECTOR - insert the injector as far as possible, at least 18 inches, into the soil. Tamp soil tightly around injector to minimize escape of fumigant from soil. Release entire dosage of fumigant for 100 square feet tree site and move away from the injector until fumigant is completely released. Remove injector and seal hole with soil.

TARPING - Work up soil in an area 10x10 feet to a depth of 3 feet. Place one end of the applicator into an evaporating container in the center of the site. Run the other end of the applicator tube beyond the area to be tarped. The tarp should be supported above the soil surface within the site and sealed securely around the edges with soil. Attach the applicator tube to container, release fumigant, remove applicator tube and seal edge. Leave cover in place for 48 hours. For *Phytophthora* the cover should be left in place for 4 days.

TRACTOR DRAWN INJECTION EQUIPMENT - For *Armillaria mellea*, the soil should be ripped as deeply as possible (to 18 inches minimum) and further worked to eliminate clods and debris prior to fumigation. Inject the material not less than 20 inches deep from wheels, spaced not more than 5 1/2 feet apart. The area should be cultivated (not permitted in California) or covered with a gas-tight tarpaulin immediately after injection. The tarpaulin should be allowed to remain in place for at least 7 days. Strip fumigation is permissible.

STRIP FUMIGATION - To aid in the establishment of grape vineyards in land with high weed populations, in 1961 studies apply the fumigant at the rate of 3 to 4 pounds per acre calculated on the basis of actual area treated (centered on the future stake line). Inject the fumigant using tractor drawn equipment to 12 inches deep and cover immediately with a gas-tight tarpaulin. Note: This method is most effective when the soil is moist and worked to seed bed condition prior to treatment.

TREATMENT OF PLANT STAKES FOR CLEAN UP - PRIOR TO USE - Treat with 3 pounds of NAMCO Methyl Bromide per 1,000 cubic feet under tarp. Minimum exposure time should not be less than 48 hours. See soil label for Application instructions and directions.

SEED AND PLANT BED FUMIGATION

Preplant treatment of soil or other planting media with NAMCO Methyl Bromide will aid in the control of the following pests: bottom pest, insects (wireworms), nematodes, (meadow or lesion, root knot, citrus, shrub, stubby root, dagger, cyst, nematode), and diseases (*Verticillium* and *Fusarium* wilts, damping off), some broadleaf and grassy weeds, and their seeds.

Prepare Seed or Plant Bed as You Would For Planting. The soil of areas to be treated should be worked into a fine, loose condition just prior to treatment. Soil should be free of clods and un-pauperized pieces of soil except in sandy soils. The fumigant will effectively penetrate only as deep as the soil is properly worked, except in loose soil.

After the soil has been prepared, make a furrow or trench around the margins. This will provide an easy and effective way of sealing the gasproof cover by burying its edges in the furrow before releasing the fumigant.

Decomposed compost and manure can be treated in the same manner, but such material should have a temperature above 60° F., be loose, and have sufficient moisture for good weed seed germination. Piles of these materials should be located on wet ground or a concrete floor and be leveled to not more than 18 inches in depth before application. Piles two to three feet high can also be fumigated if perforated at 12 inch intervals. The gas should always be applied above the pile to allow for the diffusion of the gas. These materials in bulk or in flats and pots can also be treated in a gas-tight vault or drum, conduct such fumigation in a well-ventilated area or outdoors.

Place Cover Supports at Regular Intervals. Because the gas must circulate freely under the gasproof pile, cover to keep satisfactory control, the cover should be supported above the evaporating container. Do not allow the cover to be flat on the surface of the material to be treated during fumigation.

Place Evaporating Containers on Prepared Bed, Insert Applicator Tubing in Containers. Evaporating containers are essential for the volatilization and uniform dispersion of the fumigant. These may be in pans or basins made of plastic, covering. Evaporators should be placed at intervals of approximately 30 feet. NOTE: Evaporating containers are not needed if vaporized fumigant is used.

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Place Cover Supports at Regular Intervals. Because the gas must circulate freely under the gasproof plastic cover to give satisfactory control, the cover should be supported above the evaporating containers. *Do not* allow the cover to be flat on the surface of the material to be treated during fumigation.

Place Evaporating Containers on Prepared Bed. Insert Applicator Tubing in Containers. Evaporating containers are prepared for the volatilization and uniform dispersion of the fumigant. There may be flats, pots, or barrels made of plastic, covering evaporators should be placed at intervals of approximately 10 feet. NOTE: Evaporating containers are not needed if vaporized fumigant is used.

Attach one end of each length of polyethylene tubing from the applicator into each evaporating container with one end length cut 2 feet long with other suitable weights so that the liquid is directed into the container. The other free end of the polyethylene tubing should extend out from under the cover so that the applicator can be readily attached to them to the cylinders containing the fumigant.

Place Gasproof Plastic Cover Carefully Over Area To Be Treated. Seal Edges Of The Cover With Dirt. After the supports and tubing are in place, the gasproof cover should be laid with its edges in the furrow and sealed with earth. Enough earth should be used to cover the edges to a width of 6 to 10 inches, after which it should be tamped down firmly. Exercise care in preventing damage to cover. It is wise to place a shovelful of dirt on the edge of the cover every few feet as it is being laid to keep the wind from blowing it. The sides and other end are then sealed tightly with earth.

Applying The Fumigant. The fumigant may be applied as either a liquid or a gas. The gas results from heating of the fumigant using a coil of copper tubing placed in heated water. This method eliminates the need for the evaporating container. In either case the cylinder should be fitted with the proper adapters which allows the gas to be dispensed beneath the tarpaulin.

Remove Cover After Recommended Exposure Period, Aerate, Prepare Seed or Plant Bed For Planting. The minimum exposure period is 24 hours. If the soil temperature is below 60°F, a 48-hour exposure period is necessary.

When To Plant After Treatment. The treated soil must be aerated before planting. Some seeds, such as tobacco, can be planted 48 hours after the removal of the cover. A longer aeration period may be required before planting certain flower seeds. Usually a period of several days is necessary for proper soil aeration. Set living plants in treated soil after it has been aerated for a week to ten days. It is advisable to work the soil thoroughly one day after the removal of cover to accelerate the aeration of the soil.

Plant Control Desired	Type of Soil or Material	Dosage	Minimum Exposure Time*	Aeration Time Before Planting*
Fertilizers, manure, and weed seeds	Turf Renovation: 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 vines, and other similar plants. Also vegetables for production of transplants only. Permanent planting sites for tobacco, flowers, shade and ornamental shrubs and vines and other similar plants.	1 lb. per 100 sq. ft.	24 hours	48 hours
	Well-rotted compost, manure, potting soil, and top soil.	1/2 to 1 lb. per cu. yd.	24 hours	72 hours
	Muching straw or hay - TREATED STRAW OR HAY ARE NOT TO BE FED TO ANY ANIMAL	1 lb. per 4 bales	48 hours	48 hours
Plant Control Desired	Type of Soil or Material	Dosage	Minimum Exposure Time*	Aeration Time Before Planting*
Fighting off and eradicating such as: <i>Pythium</i> <i>Rhizoctonia</i> <i>Fusarium</i>	Turf Renovation: Same sites as listed above.			
	Nonfood and Nonfeed Crop Areas: Same plants as listed above.	2 lbs. per 100 sq. ft.	24 hours	72 hours or longer
	Well-rotted compost and manure.	1 lb. per cu. yd.	24 hours	72 hours or longer

Suggestions for establishing weed-free turf. Lawn grass seed or sprigs may be planted following treatment with NAMC (O Methyl Bromide) 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 sparged or seeded after removal of the cover. Frequent sprinkling after seeding will insure a uniform stand.

Suggestions for fumigating muching materials. Straw or hay should be thoroughly soaked several days prior to treatment. Seed needs must be met at time of fumigation for best results. At the time of treatment the bales are merely piled up and covered with a gasproof cover with edges sealed in the same manner as recommended for soil.

Exposure and aeration time should be doubled if soil temperature is between 50°F and 60°F. NAMC (O Methyl Bromide) should not be used if temperature is below 50°F.

Seeds of certain species of plants, such as clover, round leafed melon, morning glory, flax, and others, with hard seed, may require a higher dose or longer exposure period for effective control.

Plants which produce tubers or roots should be aerated for a week to ten days.

Flower sprigs, cuttings may be exposed with aeration in order to delphinium, poppy, mullein, carnation, snapdragon, and other flower crops.

USE PRECAUTIONS

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. In some instances, for example, some difficulty has been experienced with brodiaea, calceolarias, carnations, mullein, and

require a higher dosage or a longer exposure period for effective control

*Soil in which plants are to be set should be aerated for a week to ten days

Growing difficulties may be experienced with carnations, conifers, delphiniums, holly, multiflora rose, salvia, snapdragons, and certain other crops.

USE PRECAUTIONS

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 conifers, salvia, snapdragons, carnations, multiflora 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 fumigant's sometimes slows down the rate of nitrification (the conversion of 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 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.), very wet or dry soils.
- 4. Be sure treated plots are free from gas before planting seed or setting out plants. If there is doubt as to complete aeration, working the soil after treatment will aid, particularly when the soil is cool and/or wet.
- 5. Do not contaminate fumigated areas by walking from unfumigated to fumigated soil. Clean your shoes thoroughly if this is necessary. If the treated bed is in a location where flooding or washing is possible after rains, plow a furrow or make a trench around the treated area for proper drainage. Wooden frames around the beds are also satisfactory for preventing this type of contamination.
- 6. Hay or straw treated directly or harvested from treated soil is not to be fed to any animal.

GAS MASKS: A gas mask should always be worn whenever there is any possibility of exposure to methyl bromide/chloropicrin. Before entering an atmosphere containing methyl bromide/chloropicrin be sure to check the mask for leaks. This may be done by placing the hand over hole in bottom of canister and inhaling. If perfectly tight, the face mask will collapse.

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.

THE HALIDE GAS DETECTOR: This detector is the most useful means for determining the presence or absence of harmful concentrations of methyl bromide gas. The following tabulation gives the approximate methyl bromide concentration associated with color intensity in the flame.

Methyl Bromide Present Parts per Million	Pounds per 1000 cubic feet	Flame Color in Daylight*
0	0	No color
25	0.00625	Faint fringe of green
50	0.0125	Moderate green
125	0.031	Green
250	0.0625	Strong Green
500	0.125	Strong green-blue fringe
800	0.20	Strong blue-green
1000	0.25	Blue

*Note that in using the gas detector at night, the flame has a bluish cast which has to be taken into consideration, otherwise the color changes are the same.

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/ OR HANDLING IS CONTRARY TO LABEL INSTRUCTIONS.

DIRECTIONS FOR USE

PREPARATION FOR FUMIGATION: Remove from the structure to be fumigated all persons, domestic animals, pets, including fish, and growing plants. Also remove all foods and medicinals or place in polyethylene bags of 4 mil or greater thickness and seal with masking tape or clamps. Extinguish all flames, including pilot lights. Open 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. Provide for forced air circulation of the fumigant during the application period. For masonry or metal structures, seal all cracks and other air leaks with caulking material or tape, and seal cracks around doors, windows, vents and other openings. Wooden structures and others that cannot be readily sealed may be completely enveloped with an impervious tarpaulin material such as a 4 mil polyethylene sheeting. To prevent escape of gas through the soil and to avoid injury to nearby plants, wet the soil to a depth of six inches for a distance of one foot outward from the edge of the cover. Seal securely all sheeting seams, and seal the lower edges of the cover to the ground with moist soil or with sand or water "snakes."

DOSAGE AND EXPOSURE TIME: For general fumigation under ideal conditions at temperature of 70° F. and above use 2½ to 3 pounds of Namfume per 1000 cubic feet for 24 hours exposure time. Under adverse conditions increase dosage to 3½ to 3¾ pounds per 1000 cubic feet.

RELEASING THE FUMIGANT: Release the fumigant from outside the structure. Lead it from the shipping cylinder into an open space in the building through a suitable leak proof tube. 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 Namfume from dripping or splashing on furniture, rugs, walls, etc. To accelerate distribution of the gas, run a spark proof electric fan during application and for 30 minutes after application is finished. For an 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 ensure even distribution of the gas. To prevent corrosion, avoid applying gas directly to metal surfaces.

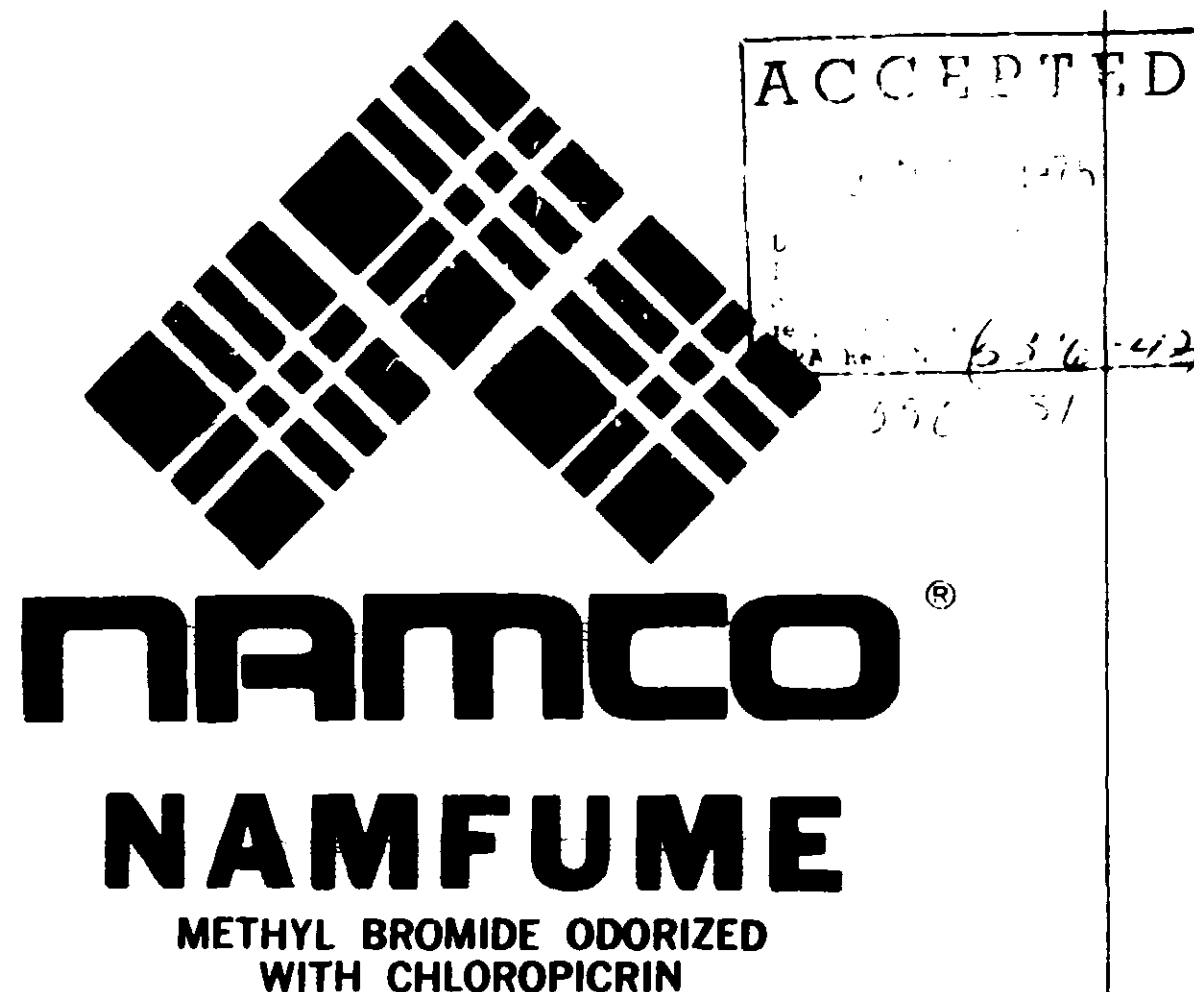
AERATION: At the end of the exposure period, remove all seals and open all doors and windows. Use ventilation fans to remove fumigant from dead air pockets. Allow 4 hours for ventilation, then check for completeness of aeration with a suitable fumigant monitoring apparatus such as a Halide Gas Detector.

GAS MASKS: A gas mask should always be worn whenever there is any possibility of exposure to Namfume. Before entering an atmosphere containing Namfume be sure to check the mask for leaks. This may be done by placing the hand over hole in bottom of canister and inhaling. If perfectly tight, the face mask will collapse.

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

Type of Canister	Concentrations of Methyl Bromide in lb. per 1000 cu. ft.			
	1 lb. or less	1 to 2 lb.	2 to 3 lb.	3 to 4 lb.
Supersize 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	15	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.



FOR USE ONLY BY PROFESSIONAL FUMIGATORS

Active Ingredients: Methyl Bromide 99.75%
Chloropicrin 0.25%

EPA Reg. No. 5316-42-AA

For the control of structural insect pests such as drywood termites, Lyctus or powder post beetles, old house borer, death watch beetles; household pests such as roaches, bedbugs, spiders, ants, millipedes, carpet beetles, clothes moths in garages, barns, storage buildings and other structures infested with these pests.

DANGER

KEEP OUT OF REACH OF CHILDREN
VAPOR EXTREMELY TOXIC
HIGHLY VOLATILE
Do Not Breathe
Do Not Get in Eyes

POISON

SEND FOR DOCTOR IMMEDIATELY IN CASE OF POISONING

FIRST AID: Place patient in fresh air, face downward, with head slightly below level of lungs. Keep warm. Give artificial respiration if breathing has stopped. Oxygen inhalation and stimulants of caffeine at doctor's discretion.

MANUFACTURED BY
NAMCO CHEMICALS

(A Subsidiary of Allied Equities Corp.)

765 Landess Avenue, Milpitas, California

Fresno

Monrovia (L. A. Area)

COMPLY WITH LOCAL ORDINANCES OR REGULATIONS

USE PRECAUTIONS

These instructions apply to both methyl bromide and Namfume fumigant (methyl bromide odorized with chloropicrin). Care should be taken to avoid using Namfume in dairy, cheese, or meat plants or to fumigate living plants, fresh fruits, or vegetables.

The following is a list of materials that should not normally be exposed to Namfume. This list is not necessarily complete but may be used as a guide.

- (1) Foodstuffs: (a) Iodized salt, (b) Full fat soya flour, (c) Any kind of material that may contain reactive sulfur compounds such as some soap powders, some baking sodas and some salt blocks used for cattle licks, (d) Fresh fruits and vegetables.
- (2) Certain rubber goods: (a) Sponged rubber, (b) Foam rubber as in rug padding, pillows, cushions, and mattresses, (c) Rubber stamps and other similar forms of reclaimed rubber.
- (3) Furs, horsehair and pillows (especially feather pillows).
- (4) Leather goods—particularly white kid or any other leather goods tanned with sulfur processes.
- (5) Woolens—extreme caution should be used in the fumigation of any Angora woolens, and some adverse effect has been noted on the fumigation of woolen suits, coats, blankets, hand knitted woolen socks, sweaters, shawls and woolen yarn.
- (6) Viscose rayons—those rayons processed or manufactured by a process in which carbon bisulphide is used.
- (7) Paper: (a) Silver polishing papers, (b) Certain writing paper cured by sulphide processes.
- (8) Photographic chemicals—(This does not mean camera or film but photographic chemicals used in dark rooms).
- (9) Rug padding.
- (10) Cinder blocks or mixed concrete and cinder blocks occasionally pick up odors.
- (11) Any materials that may contain reactive sulfur compounds.
- (12) Charcoal materials—charcoal absorbs the methyl bromide and thereby not only contaminates the charcoal but also reduces the gas concentration to a point where an adequate fumigation job might not be obtained.
- (13) Seeds and bulbs that are to be used for planting.
- (14) Pets, fish and birds.
- (15) Living plants or nursery stock.

THE HALIDE GAS DETECTOR: This detector is the most useful means for determining the presence or absence of harmful concentrations of Methyl Bromide gas. The following tabulation gives the approximate Methyl Bromide concentration associated with color intensity in the flame.

Methyl Bromide Present Parts per Million	Pounds per 1000 cu. ft.	Flame Color in Daylight*
0	0	No color
25	0.00625	Faint fringe of green
50	0.0125	Moderate green
125	0.031	Green
250	0.0625	Strong Green
500	0.125	Strong green blue fringe
800	0.20	Strong blue green
1000	0.25	Blue

*Note that in using the gas detector at night, the flame has a bluish cast which has to be taken into consideration, otherwise the color changes are the same.

NOTICE: Seller warrants that this product conforms to its chemical description and is reasonably fit for the purpose 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, express or implied, extends to the use of this product contrary to label instructions, or under abnormal conditions, or under conditions not reasonable to Seller, and Buyer assumes the risk of any such use.

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Dec 12, 1973

(344 43) Apply only as specified on this label.
550 137

Treated land may be planted to:
Strawberries and tomatoes;
Ornamentals, floral crops and turf;
Fruit trees, vegetables, and field crops which will be transplanted—and grown to maturity—in untreated soil.

TREATMENT PREREQUISITES

SOIL PREPARATION: To facilitate fumigant penetration, plant refuse should be worked into the soil and time allowed to decompose before treating. Soil must be in good workable seed bed condition, warm, preferably 50 to 80 F. at a depth of 5 inches. Do not treat if the soil temperature is below 45° F. at the 5 inch level.

IRRIGATION REQUIREMENT: Land to be fumigated should be well irrigated 5 to 10 days prior to fumigation, and worked to seed bed condition just prior to treatment, to insure uniform moisture from surface to depth which control is desired.

APPLICATION AND DOSAGE

APPLICATION: Apply PATHOFUME 75/25 by means of chisels spaced no more than 12 inches apart and at a depth of 4 to 6 inches below the soil surface. Seal the fumigant into the soil at the time of application with an automatic tarp layer using .001 gauge polyethylene film. If an automatic tarp layer is not available, roll or cultipack immediately behind chisels and then cover with a gas tight tarpaulin within 30 minutes. Remove the tarpaulin after 48 hours. Allow the soil to aerate 10 to 14 days before planting. NOTE: To avoid possible illegal residue allow an aeration period of at least two weeks when transplants of strawberries and tomatoes for crop production are set in fumigated fields. Do not plant if any PATHOFUME 75/25 is indicated in the soil by odor or eye irritation.

Cylinders containing PATHOFUME 75/25 are not pressurized and require pressurization with dry nitrogen during application.

DOSAGE: Use 250-320 pounds PATHOFUME 75/25 per acre depending on soil conditions, weather, and the pest involved. Dosages in the higher ranges should be used in areas with severe disease and nematode infestations, when soil temperatures are low, and in heavy soils.

Planting Area:	Pounds of Fumigant
	Per Acre
Seed or transplant beds and nurseries: Ornamentals in general Forest, shade and fruit trees Strawberries, and vegetables	250 - 320
Field plants of agricultural crops: Tomatoes and strawberries	
Permanent and field plantings: Ornamentals in general and turf	

To avoid reinfestation of treated soil, do not use transplants, tools, or crop remains that could carry soil-borne plant parasitic pests from infested land. Clean applicator carefully before and after use. Be especially careful when applying this fumigant near dwellings or in areas where prized plants are growing. Avoid application in such areas especially when there is little or no air movement.



PATHOFUME® 75/25

A PREPLANT SOIL FUMIGANT

For Control of Diseases, Nematodes, Soil Borne Insects
and Some Weeds and Weed Seeds

ACTIVE INGREDIENTS	100%
Methyl Bromide	75%
Chloropicrin	25%
Weight per gallon	14.3 lb.

This product applied as a preplant soil treatment will aid in the control of the following soil-borne pests: wireworms, nematodes (meadow or lesion, root-knot, citrus, sting, stubby-root, dagger, cyst formers); soil diseases (Verticillium and Fusarium wilts, damping off); some broadleaf and grassy weeds and their seeds.

EPA Reg No. 5316-48-AA

Keep Out of Reach of Children

See antidote statement and other precautions on the back/side panel

CONTENTS POUNDS NET

MANUFACTURED BY
NAMCO CHEMICALS
(A Subsidiary of Allied Equities Corp.)
765 Landess Avenue, Milpitas, California
Fresno Monrovia (L. A. Area)

CAUTION: 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 plant roots, fertilize as indicated by soil tests made after fumigation. To avoid ammonia injury or nitrate starvation, or both, to crops, avoid fertilizers containing ammonium salts and use only fertilizers containing nitrates, until after the crop is well established and the soil temperature is above 65 F. Liming highly acid soils before fumigation stimulates nitrification and reduces the possibility of ammonia toxicity.

USE PRECAUTIONS

Undesirable concentrations of chloropicrin following soil fumigation with this material may drift to nearby areas. If this occurs immediately cover treated area with a plastic tarpaulin. The tarpaulins should remain in place overnight and be removed during the daytime. If the escaping vapors reach an undesirable concentration, as indicated by eye irritation, the treated areas should be recovered. Since air movement assists the dilution of the escaping fumes it is most likely that undesirable concentrations will build up during evening or nights when the air is static. Application of this material should not be made when there is little or no air movement or when there is an inversion.

DANGER POISON

- Highly Volatile • Vapor Extremely Hazardous
- Liquid Very Injurious To the Skin and Eyes
- Penetrates Many Types of Protective Clothing
- Do Not Breathe Vapor • Use Only as Directed
- Do Not Get in Eyes, on Skin, or on Clothing or Shoes
- Store in Cool Place
- Poisonous Liquid—Skin Contact May Cause Burns

SEND FOR A DOCTOR IMMEDIATELY IN CASE OF POISONING

FIRST AID: If inhaled. Get victim into fresh air. Have him lie down and keep warm and quiet. Give artificial respiration if breathing has stopped. Call a physician immediately.

If liquid gets into the eyes, wash immediately with plenty of water for at least 15 minutes and obtain medical attention promptly. If liquid gets on skin, wash the contaminated area promptly with soap and plenty of water. If liquid gets onto clothing or shoes, remove at once and do not re-use until completely free of the fumigant. Wear goggles and protective clothing of polyethylene when handling. Do not wear rubber clothing. Wear a full-face gas mask with black canister suitable for organic vapors, as specified by U. S. Bureau of Mines.

Not for use or storage in or around the home. Do not store near feed or food products.

This product is toxic to fish and wildlife. Keep out of lakes, streams or ponds. Do not contaminate water by cleaning of equipment or disposal of wastes.

NOTICE

Return empty container to manufacturer. Be sure to replace caps and plugs before shipment.

NOTICE: Seller warrants that this product conforms to its chemical description and is reasonably fit for the purpose 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, express or implied, extends to the use of this product contrary to label instructions or under abnormal conditions, or under conditions not reasonable to Seller, and Buyer assumes the risk of any such use.

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