

TEXT FOR 1 lb. 1.2 POUND CAN
BLUE TEXT ON WHITE CAN.

FRONT PANEL.

**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.

METH-O-GAS®

COMMODITY FUMIGANT

ACTIVE INGREDIENTS:
Methyl bromide

100%

DANGER

PELIGRO

POISON

KEEP OUT OF REACH OF CHILDREN

Type sizes will be
18 pt. for DANGER &
PELIGRO; 8.5 pt. for
Child Hazard Statement
& Poison.

NEESELINES,
SIGNAL WORDS
& CHILD HAZARD
STATEMENT IN RED.

1 lb.
Insert Spanish
Warnings & Statements.

EPA Reg. No. 5785-11

SEE BACK PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS

Add the

Practical Treatment
Statements.

GREAT LAKES CHEMICAL CORPORATION
West Lafayette, IN 47906

ACCEPTED
MAY 20 1987
5785-11
UNDER THE FEDERAL INSECTICIDE
ACT AND FEDERAL FOOD, DRUG,
AND COSMETIC ACTS, THIS PRODUCT
IS REGISTERED UNDER THE FEDERAL
TOXIC SUBSTANCE CONTROL ACT
SUBJECT TO ATTACHED CONDITIONS

Move to front panel.

Use

PRECAUTION AL USUARIO: Si usted no lee Ingles, no este producto hasta que la etiqueta le haya sido explicada ampliamente.

Add the headings: "Precautionary Statements", "Hazards to Humans" and "Dangere".

Extremely hazardous liquid and vapor under pressure. Do not breathe vapor. Inhalation may be fatal or cause serious acute illness or delayed lung or nervous system injury. Liquid or excessive vapor may cause serious skin or eye injury which may have a delayed onset. Do not get liquid on skin, in eyes or on clothing.

Methyl bromide vapor is odorless and nonirritating to skin and eyes during exposure. Exposure to toxic levels may occur without warning or detection by the user.

Add "Note to Physician".

SPILL AND LEAK PROCEDURES. Evacuate immediate area of spill or leak. Use a NIOSH/MSHA approved self-contained breathing apparatus (SCBA) or combination air-supplied/SCBA respirator for entry into affected area to correct problem. Allow spill to evaporate. Do not permit entry into spill area by persons without appropriate respiratory protection, until concentration of methyl bromide is determined to be less than 5 ppm. Remove leaked containers to an isolated area and cover with a polyethylene sheeting of 4 mil or greater thickness. Seal by placing the outside edges of tarpaulin in a trench and cover with soil. Tamp soil down so edges will not pull loose. Discharge the contents under the tarpaulin.

Meth-O-Gas may be used only for Commodity Fumigation. This fumigant is a highly hazardous material and should be used only by individuals trained in its proper use. You must observe all safety and precautionary statements as set forth in GLK 159C. All fumigation directions, including dosage rates, exposure time and aeration periods are given in GLK 159C. IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN A MANNER INCONSISTENT WITH ITS LABELING.

EPA EST. NO. 5735-AR-01

CEXTON® PAT. DES. 246030

1/13/87
lvm

CONTENTS UNDER PRESSURE. FOR SIDE PUNCTURE APPLICATION, USE ONLY WITH SPECIAL APPLICATOR MARKED, "USE WITH 2 5/8" DIAMETER CAN ONLY".

See pages 2, 3 and 5

**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.

DIRECTIONS FOR USE OF THE PRODUCTS

METH-O-GAS® 100 AND METH-O-GAS

EPA REGISTRATION NUMBERS

5785-11

5785-41

PRECAUTION AL USUARIO: Si usted no lee Ingles, no use este producto hasta que la etiqueta le haya sido explicado ampliamente.

READ THIS BOOKLET AND ENTIRE LABEL CAREFULLY PRIOR TO USE. USE THESE PRODUCTS ACCORDING TO LABEL INSTRUCTIONS.

**GREAT LAKES CHEMICAL CORPORATION
WEST LAFAYETTE, INDIANA 47906**

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GLK 159C

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LVM
1/27/87

STATEMENT OF WARRANTY AND LIABILITY

Seller warrants that this product complies with the specifications expressed in this label. SELLER MAKES NO OTHER WARRANTIES; AND DISCLAIM ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY AND FITNESS FOR THE INTENDED PURPOSE. Seller's liability for default, breach, or failure under this label shall be limited to the amount of the purchase price. Seller shall have no liability for consequential damages.

Many pesticidal chemicals are poisonous and may leave a toxic residue on the plants to which they are applied. The U.S. Environmental Protection Agency has established maximum amounts of such pesticidal chemicals that may remain on raw agricultural products, and it is the user's responsibility to see that there is no residue on such crops in excess of these amounts. The "Directions for Use" are based on the best available information, and if followed carefully should not leave excessive residues. However, Great Lakes Chemical Corporation assumes no responsibility as to their accuracy nor for any loss due to excessive residues.

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS DANGER

Extremely hazardous liquid and vapor under pressure. Do not breathe vapor. Inhalation may be fatal or cause serious acute illness or delayed lung or nervous system injury. Liquid or ~~excessive~~ vapor may cause serious skin or eye injury which may have a delayed onset. Do not get liquid on skin, in eyes or on clothing.

Methyl bromide vapor is odorless and nonirritating to skin and eyes during exposure. Exposure to toxic levels may occur without warning or detection by the user.

Statement of Practical Treatment

In all cases of overexposure, get medical attention immediately. Take person to a doctor or emergency treatment facility.

IF INHALED: Remove exposed person from contaminated area. Keep warm. Make sure person can breathe freely. If breathing has stopped, apply artificial respiration. If not unconscious, rinse mouth out with water.

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.

Add "Do not give anything by mouth to an unconscious person."

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.

PROTECTIVE CLOTHING.

Methyl bromide may be trapped inside clothing and cause skin injury. Wear loose, long sleeved shirts, long trousers and socks that are cleaned after each wearing. Do not wear jewelry, gloves or other gas confining apparel. If full-face respiratory protection is not required, wear full face shield for eye protection when handling liquid. Do not reuse contaminated clothing until thoroughly cleaned and shoes until aerated.

RESPIRATORY PROTECTION.

If the concentration of methyl bromide in the worker area, as measured by a pump and appropriate detector tubes (for example, Draeger, Kitagawa, MSA, and Sensidyne), does not exceed 5 ppm, no respiratory protection is required. If this concentration is exceeded at any time, all persons in the fumigation area must wear a NIOSH/MSHA approved self-contained breathing apparatus (SCBA) or combination air-supplied/SCBA respirator or evacuate the area.

SPILL AND LEAK PROCEDURES.

Evacuate immediate area of spill or leak. Use a NIOSH/MSHA approved self-contained breathing apparatus (SCBA) or combination air-supplied/SCBA respirator for entry into affected area to correct problem. Allow spill to evaporate. Do not permit entry into spill area by persons without appropriate respiratory protection, until concentration of methyl bromide is determined to be less than 5 ppm. Remove leaking containers to an isolated area and cover with a polyethylene sheeting of 4 mil or greater thickness. Seal by placing the outside edges of tarpaulin in a trench and cover with soil. Tamp soil down so edges will not pull loose. Discharge the contents under the tarpaulin.

Contaminated soil, water, and other cleanup debris is a toxic hazardous waste. Report spill to the National Response Center (800-424-8802) if the reportable quantity of 1000 pounds is exceeded.

AERATION AND REENTRY.

After fumigation, treated areas must be aerated until the level of methyl bromide is below 5 ppm. Do not allow entry into the treated area by any person before this time, unless ~~provided with~~ a respiratory protection device (NIOSH/MSHA approved self-contained breathing apparatus (SCBA) or combination air-supplied/SCBA respirator) is worn.

Handwritten notes:
"Add: After application immediately remove clothing, shoes and socks." and
"Drenched clothing cannot be adequately decontaminated!"

STORAGE, HANDLING, AND DISPOSAL.

Storage. Store in a locked, dry, cool, well-ventilated area. 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. 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 cylinder can be firmly secured. Do not remove valve protection bonnet and safety cap until immediately before use. Replace safety cap and valve protection bonnet when cylinder is not in use.

When cylinder is empty, close valve, screw safety cap on to valve outlet, and replace protection bonnet before returning to shipper. Only the registrant, or his designee, is authorized to refill cylinders. Do not use cylinders for any other purpose.

Cans. Store 1 and 1 1/2 pound cans in same manner as 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.

Return empty cylinders freight collect to the Great Lakes Chemical Corporation location from which shipment was made. Return partial cylinders only after consulting Great Lakes Chemical Corporation for proper shipping instructions. In either case, use delivering carrier when possible. Dispose of empty cans in a sanitary landfill, or by other procedures approved by state and local authorities.

DIRECTIONS FOR USE

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

This fumigant is a highly hazardous material and must be used only by individuals trained in its proper use. Before using, you must read and obey all label precautions and directions.

All persons working with this fumigant must be knowledgeable about the hazards, and trained in the use of required respiratory protection equipment and detector devices, emergency procedures, and proper use of the fumigant.

I. COMMODITY, FOOD, AND FEED FUMIGATION DIRECTIONS.

THE FOLLOWING PRECAUTIONARY PROCEDURES MUST BE FOLLOWED FOR ALL USES.

When used for fumigation of enclosed spaces (e.g., warehouses, grain bins or elevators, vaults, chambers, trucks, vans, railroad cars, ships, and other transport vehicles, and tarpaulin-covered commodities), two persons trained in the use of this product must be present during ~~the most hazardous phases of the operation and must wear respiratory protection when fumigant concentration exceeds 5 ppm in the worker area.~~

Do not fumigate with this product when the space, commodity, structure (excluding dwellings) to be fumigated is below 40°F. Fumigation at different temperatures may be allowed or required under APHIS quarantine treatment schedules.

When using methyl bromide, placard or post all entrances to the fumigated area with signs bearing, in English and Spanish:

1. The signal word DANGER/PELIGRO and the skull and crossbones symbol.
2. The statement, "Area under fumigation. DO NOT ENTER/NO ENTRE".
3. The date of fumigation.
4. Name of fumigant used.
5. Name, address, and telephone number of the applicator.

Only a certified applicator or someone under his/her supervision, may remove placards, and only when the concentration of methyl bromide in the treated site is below 5 ppm.

Refer to the attached amendment.

Revise to "introduction of the fumigant, initiation of operation, and after operation when testing for reentry. Two persons do not need to be present if monitoring is conducted remotely (outside the area being fumigated)."

BEST AVAILABLE COPY

A. Chamber and Vault Fumigation.

All precautionary procedures as outlined immediately following COMMODITY, FOOD, AND FEED FUMIGATION DIRECTIONS must be followed.

Load the chamber with the material to be fumigated, close exhaust ports, turn on circulating fan and close chamber door. Determine the proper rate of application and exposure time from Tables I and II. Introduce the fumigant into the chamber by releasing it into the air stream in front of a blower or fan, passing it through a vaporizer, or allowing it to evaporate from a shallow pan. All controls should be outside the chamber.

At the end of the exposure period, aerate by opening the exhaust port, turning on the exhaust fan and opening the chamber door slightly or an inlet port to permit fresh air to enter. At the end of the aeration period, check fumigant concentration with a detection device before allowing unprotected persons to enter the chamber.

B. Vacuum Chamber Fumigation.

All precautionary procedures as outlined immediately following COMMODITY, FOOD, AND FEED FUMIGATION DIRECTIONS, must be followed.

1. Place articles to be fumigated in the steel chamber and draw the vacuum (25-27 inches Hg).
2. Release fumigant into the chamber (usually through a heating unit to insure complete vaporization).
3. See Tables I and II for specific articles, rates of application and exposure times.
4. At the end of the exposure time, release the vacuum and change the air in the chamber at least two times. A vacuum of 15 in. Hg should be drawn for this purpose. After purging chamber, check fumigant concentration with a detection device before allowing unprotected person(s) to enter.

C. Railroad Car, Truck, Van or Trailer Fumigation.

All precautionary procedures as outlined immediately following COMMODITY, FOOD, AND FEED FUMIGATION DIRECTIONS, must be followed.

1. Railroad car should be placed on seldom used trackage or siding so that it will not have to be moved while under fumigation. Park trailer or van out of traffic area; if possible on the lee side of a building to protect from winds. Do not fumigate while strong winds are blowing.
2. Seal the off-side door, ventilators and other openings. Seal from the inside, if possible.

3. Secure a perforated tube with the end closed, to the ceiling to distribute fumigant evenly, or use evaporating pan(s). Always apply fumigant from outside the vehicle.

4. Seal the door and placard vehicle.

5. Consult Tables I and II for specific articles, rates of application and exposure times.

6. After the appropriate exposure period, open the unit and aerate 1 to 1 1/2 hours. The vehicle must be aerated to below 5 ppm before movement is allowed. The vehicle may then be resealed for shipment
DO NOT MOVE VEHICLES DURING FUMIGATION.

D. Tarpaulin Fumigation.

All precautionary procedures as outlined immediately following COMMODITY, FOOD, AND FEED FUMIGATION DIRECTIONS, must be followed.

The article or stacked articles should be placed on a concrete floor or other air-tight surface. If the floor is not air-tight, it may be made so by covering it with sisal kraft paper, tar paper or additional tarpaulin or polyethylene sheeting. Provide a space on top of the stack for a gas expansion dome to facilitate distribution. Evaporating pans are essential for the volatilization and uniform dispersion of fumigant except where a vaporizer is used. Shallow pans or basins made of plastic or metal (except aluminum) are satisfactory for this purpose. Use one evaporator pan for each 1000 cubic feet contained under the tarp. For delivery of Meth-O-Gas from outside the tarpaulin, polyethylene tubing is required. Anchor one end of each polyethylene tube into an evaporating pan with tape or a suitable weight. This ensures that the liquid will be directed into the evaporating pan. Place evaporating pan(s) with anchored applicator tubing in the center of the expansion dome. Extend the free ends of the polyethylene tubes outside the area to be covered. Cover and seal the stack with a gas tight tarpaulin or polyethylene sheeting of 4 mil or greater thickness. Allow a margin of at least two feet at the base of the stack for sealing. Sweep around the stack to provide a clean surface for sealing the tarpaulin. Seal tarpaulin to floor by sand and/or water snakes, by taping or by means of moist soil or sand. Attach each polyethylene tube to a can applicator or cylinder valve outlet and release fumigant. Use a cylinder dispenser or scale to meter small amounts from cylinders. Special units are available for use of 1 and 1 1/2 pound cans that combine opener and evaporating pan functions, and are designed to be used with all parts under the tarpaulin. Use rates and exposure times shown in Tables I and II. At the end of the exposure period, unseal opposite ends of the tarpaulin and allow to aerate for at least 30 minutes before completely removing the tarp. Check fumigant concentration with a detection device before allowing unprotected persons to enter the area.

E. Warehouse, Grain Elevator, Food Processing Plant, Restaurant, And Other Structures Containing Raw or Processed Commodities.

All precautionary procedures as outlined immediately following COMMODITY, FOOD, AND FEED FUMIGATION DIRECTIONS, must be followed.

Check with appropriate municipal and county authorities before fumigating to be completely familiar with local regulations. Ordinances may require watchmen or locks, during fumigation and/or notification of the nearest fire station.

1. Preparation for Fumigation. Remove the following items from the structure to be fumigated: 1) all food and feed commodities not included in Tables I and II; 2) medicinals not sealed in metal or glass; 3) seeds, bulbs, and live plants; 4) pets (including fish and birds); 5) furs; 6) horsehair articles; 7) rubber goods (natural latex); 8) carbonless carbon forms and blueprints; 9) automobiles; 10) cinder blocks; 11) articles containing sulfur.

Extinguish all open flames including pilot lights. Turn off electric heating elements. Open all interior doors, openings into attics and crawl spaces. Open cabinet doors and drawers. Windows should be open when tarpaulins are used.

2. Sealing the Building. The most important part of the fumigation is the preparation and sealing of the structure. A thorough sealing job is necessary. Avoid fumigating under windy conditions.

Sealing of the building begins with the closing of all external openings to the building. Wrap roof ventilators, chimneys and other large openings with a tarpaulin or plastic sheet and seal with duct or other appropriate tape. Screened openings may also be sealed with a wide, commercial duct or masking tape. Cleaning of the surfaces to be taped and the use of commercial spray-on adhesives will improve sealing.

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 can not be readily sealed may be completely enveloped with an impervious tarpaulin. Seal securely all seams between tarps and seal the lower edges of the tarp to the ground with moist soil or with sand or water snakes. To prevent escape of gas through the ground and 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 tarp.

Exterior doors and windows should be wedged tight, locked, and sealed. Large exterior doors may require additional efforts to seal properly. Broken window panes should be replaced. Check for cracks around the eaves, in the floor and roof, and seal them.

Special care should be taken to seal off adjacent storage or work areas in a building that are not to be fumigated. Adjoining buildings sharing a common wall should be cleared of occupants before fumigation. If this is not feasible, spread a glossy-type building paper along the adjoining wall to prevent spread of the fumigant into undesired areas. Sisal kraft paper, asphalt-laminated paper, heavily oiled kraft or wrapping paper and plastic film are appropriate. In all such cases where the adjoining building is occupied, it should be checked frequently with a suitable gas detector during fumigation to ensure the safety of the occupants. Check local regulations for specific requirements.

Doors or hatches on milling machinery should be opened prior to fumigation. These include elevator boots, conveyor lids, settling chamber doors, dust trunks, and any other openings that will allow fumigant into the equipment. Inside doors, cabinets, lockers, and drawers should also be opened to facilitate treatment and aeration. "Dead" spouts are particularly difficult to penetrate and should be opened before the fumigation.

See Table III for rate of application.

3. Fumigating the Structure. Inside Release. Cylinders should be placed by a team of two people and the location of each cylinder in the building should be mapped. The cylinders should be arranged so that the fumigators can walk away from the released gas as they open each subsequent cylinder.

Because Meth-O-Gas is heavier than air, it is advisable to increase slightly the amount of fumigant released on the top floor. Cylinders should be placed within a room for best distribution into all areas. Cylinders should be placed in an upright position and the shipping caps removed. Because Meth-O-Gas is heavier than air, it is sometimes advisable to attach standpipes (or curved pipes directed slightly upward) to the cylinder valves in order to reduce stratification at lower levels. If standpipes are used, they should be equipped with "T" fittings to direct the gas laterally and to prevent direct contact with the ceiling.

Fans are recommended to distribute the fumigant more quickly and to aid in aeration of the structure after the exposure period. The choice of fan for a given situation may depend upon experience or research data. Generally, one 16 inch fan for every 50,000 cubic feet of space will be sufficient. It is often possible to use heating system fans or other installations already in the building for improved circulation or distribution of the fumigant.

All fans should be running while the gas is being released, and left running until uniform distribution has been accomplished. They may be turned off from outside the building or by using timers.

Prior to fumigation, extinguish all open flames and turn off all high temperature electrical equipment including laboratory ovens, pilot lights, gas refrigerators, oil burners, etc. Meth-O-Gas in the presence of intense heat from such sources may generate some hydrobromic acid which may be injurious to commodities and equipment.

Place warning signs or placards on all entrances to the building. Signs and placards should conform to all local, state, and federal regulations. It is best to inform police, fire and health officials that a fumigation process is about to begin. Observe the location of the nearest outside telephone for use in case of an emergency.

Practice or review the shooting procedure so that the operation will be done efficiently and safely. Respiratory protection equipment should be checked for leaks and other problems before the "practice session". While wearing respiratory protection, quickly open and close the cylinder valves to make certain they are in working order and thus avoid delay during the actual release.

Operators should not be in the building longer than 30 minutes while releasing the gas. If it is impossible for one crew to do it within this time period, additional experienced crews should be used. Two people should work together while the gas is being released and when clearing the structure.

Fumigators should always remain in sight of each other from the time they open the first cylinder until the time they leave the building together. While the fumigant is being released, it is advisable to have additional people, with respiratory protection equipment ready, waiting outside to assist if necessary. One member of the team should record the release of the fumigant from each cylinder so that none are missed. Lock and seal the last exit. If guards are used, they should remain on duty during release, exposure, and aeration periods to prevent unauthorized entry.

4. Fumigating the Structure. Outside Release. Releasing the fumigant from outside the space to be fumigated is possible in some situations and will probably minimize applicator exposure to the fumigant. Prepare the building as outlined previously.

Secure the ends of each "shooting" line or hose to each point where the fumigant is to be released, using evaporating pans or plastic sheeting to prevent possible damage to some surfaces. Run each line to the cylinder(s) located outside the area to be treated. Connect each line to the cylinder(s) or manifold.

Lock and seal the last exit. If guards are used, they should remain on duty during release, exposure, and aeration periods to prevent unauthorized entry.

Open the valves to release the fumigant. Respiratory equipment must be available in the event of a major leak or equipment failure.

5. Aerating the Building. When the exposure period is complete, aeration generally should be started by opening previously sealed doors and windows on the ground floor. Ventilators accessible from the outside should be opened at this time.

After partial aeration, a team of at least two trained people with appropriate respiratory protection, should begin opening windows, starting at the lower floors and working upward. Fans should be on to assist aeration. Aeration is usually complete in four hours depending upon weather conditions and cross ventilation. No one should be allowed inside the building without respiratory protection until the methyl bromide concentration is below 5 ppm in the worker area.

Contact the police, fire and health officials previously notified of the fumigation and inform them that it has been completed.

F. Shipboard, In Transit Ship or Shiphold Fumigation.

IMPORTANT. Shipboard, in transit ship or shiphold fumigation is also governed by the U.S. Coast Guard Regulations. Refer to and comply with those regulations prior to fumigation.

Prefumigation Procedures.

1. Prior to fumigating a vessel for in transit cargo fumigation, the master of the vessel or his representative, and the fumigator must determine whether the vessel is suitably designed and configured so as to allow for safe occupancy by the ship's crew throughout the duration of the fumigation. If it is determined that the design and configuration of the vessel does not allow for safe occupancy by the ship's crew throughout the duration of the fumigation, then the vessel must not be fumigated unless all crew members are removed from the vessel. The crew members must not be allowed to reoccupy the vessel until the vessel has been properly aerated and a determination has been made by the master of the vessel and the fumigator that the vessel is safe for occupancy (5 ppm or below).

2. The person responsible for the fumigation must notify the master of the vessel, or his representative of the requirements: 1) relating to the use of respiratory protection equipment; 2) relating to the use of detection equipment; and 3) that a person qualified in the use of this equipment must accompany the vessel with cargo under fumigation. Emergency procedures, cargo ventilation, periodic monitoring and inspections, and first aid measures must be discussed with and understood by the master of the vessel or his representative.

3. During fumigation, or until a manned vessel leaves port or the cargo is aerated, the person in charge of the fumigation shall ensure that a qualified person using gas detection equipment tests spaces for fumigant leakage. If leakage of the fumigant is detected, the person in charge of the fumigation shall take action to correct the leakage, or inform the master of the vessel, or his representative, of the leakage so that corrective action can be taken.

Using appropriate gas detection equipment, monitor spaces adjacent to areas containing fumigated cargo and all regularly occupied areas for fumigant leakage. If leakage above 5 ppm is detected, the area should be evacuated of all personnel, ventilated, and action taken to correct

the leakage, before allowing the area to be reoccupied. Do not enter fumigated areas except under emergency conditions. If necessary to enter a fumigated area, wear a NIOSH/MSHA approved self-contained breathing apparatus (SCBA) or combination air-supplied/SCBA respirator (personal protection equipment). Never enter fumigated area alone.

At least one other person, wearing personal protection equipment, should be available to assist in case of an emergency.

If necessary to enter holds prior to discharge, test spaces directly above cargo surface for fumigant concentration, using an appropriate gas detector and while wearing personal protection equipment. Do not enter without respiratory protection, unless fumigation concentrations are at or below 5 ppm, as indicated by a suitable detector.

4. If the fumigation is not completed and the vessel aerated before the manned vessel leaves port, the person in charge of the vessel shall ensure that there be on board the vessel during the voyage: 1) at least two NIOSH/MSHA approved self-contained breathing apparatus (SCBA) or combination air-supplied/SCBA respirators; 2) one gas detection device; and 3) a person qualified in their operation.

5. See Tables I and II for specific commodities, rates of application and exposure times.

TABLE 1
APPLICATION SUMMARY⁽¹⁾
METH-O-GAS
FOR STORED PRODUCTS PESTS INFESTING RAW AGRICULTURAL COMMODITIES
(NOT PROCESSED FOOD)

Commodity	Insects Controlled	Tolerance (ppm)	Dosage (lbs./1000 cu. ft.)	Exposure Time (hrs.)
Almonds	confused flour beetle, saw toothed	200	3.5	24
Brazil Nuts	grain beetle, dermestids, Indian	200	3.5	24
Bushnuts	meal moth, rice weevil, khapra	200	3.5	24
Butternuts	beetle, drugstore beetle, cigarette	.00	3.5	24
Cashews	beetle, warehouse moth, rusty grain	200	3.5	24
Chestnuts	beetle, cadelle, groundnut bruchid,	200	6	6
Chestnuts	pecan weevil	200	3.5	24
Filberts		200	3.5	24
Hickory Nuts		200	3.5	24
Peanuts		200	3.5	24
Pecans		200	3.5	24
Pistachios		200	3.5	24
Walnuts		200	3.5	24
Apples	oriental fruit moth, coddling moth,	5	5	2
Apricots	apple maggot, apple curculio, twig	20	5	2
Blueberries	borer, melon fruit fly, Mediter-	20	1-2	3-4
Cherries	ranean fruit fly, Oriental fruit	20	5	2
Nectarines	fly, cherry fruit fly, brown mite,	20	5	2
Peaches	green peach aphid, scales, thrips	20	5	2
Pears		5	5	2
Plums		20	5	2
Quinces		5	5	2
Strawberries		60(e)	2-3	3-4
Prunes	coffee bean weevil, Australian spider beetle, saw toothed and merchant grain beetles, dried fruit beetles, Indian meal moth confused flour beetle, drugstore beetle, warehouse moth, common grain mite	20	5	2
Barley	granary weevil, lesser grain borer,	50	5	12
Corn	rusty grain beetle, angoumois grain	50	2	24
Oats	moth, Indian meal moth, confused	50	3	24
Popcorn	flour beetle, rice weevil, saw	240	1.5	2(a)
Rice	toothed grain beetle, lesser grain	50	6	12(b)
Rice	borer, cadelle, khapra beetle, drug-	50	3	24
Rye	store beetle, Australian spider	50	3	24
Rye	beetle, cigarette beetle, warehouse	50	6	12(b)
Sorghum (grain)	moth, common grain mite, fiat grain beetle, Mediterranean flour moth,	50	4	24
Dried Peas	red flour beetle, common bean weevil,	125	4	24
Wheat	copra beetle	50	3	24
Copra		100	2.5	24

TABLE 1 (Continued)

Commodity	Insects Controlled	Tolerance (ppm)	Dosage (lbs./1000 cu.ft.)	Exposure Time (hrs.)
Beans (all)	armyworms, cabbage looper, European	50	3.5	24
Beets (roots)	corn borer, Japanese beetle, pod	30	3	4
Cabbage	borers, Oriental fruit fly, Mediter-	50	4	4(d)
Cantaloupe	ranean fruit fly, corn earworm, green	20	2	2
Carrots	stink bug, sawbugs, spider mites,	30	4	4
Citron	cabbage maggots, lygus bug, melon	30	3	2
	aphid, pickleworm, carrot rust			
Cucumbers	fly, stink bug, bean leaf beetle,	30	2.5	4
Eggplant	Mexican bean beetle, diabrotica	20	3	4
Honeydew	beetle, cucumber beetle, squash bug,			
Melons	false chinch bug, loopers, symphylans	20	2.5	2
Jerusalem	blister beetles, onion maggot, onion			
Artichokes	thrips, mealybugs, pepper maggot,	30	3.5	4
Muskmelons	Colorado potato beetle, potato psyllid,	20	2.5	2
Okra	squash bug, squash vine borer, earwigs,	30	3.5	2(c)
Onions	darkling beetle	20	3	6
Parsnips (roots)		30	3	4
Peas (with pods)		50	3	2
Sweet Corn		50	3	4
Peppers		30	4	2
Pimentos		30	2.5	3
Pineapples		20	2	4
Potatoes		75	3	6
Pumpkins		20	2.5	2
Radishes		30	3	4
Rutabagas		30	3	6
Squash (summer)		30	4	2
Squash (winter)		20	4	2
Squash (zucchini)		20	2.5	3
Sugar Beets (roots)		30	3	4
Sweet Potatoes		75	3.5	4
Tomatoes		20	3	4
Turnips (roots)		30	3	4
Watermelons		20	2.5	2
Yams		30	3.5	4
Cipolini Bulbs	<i>Exosoma lusitanica</i>	50	4	4
Cocoa Beans	cocoa moth, cigarette beetle, confused flour beetle, warehouse moth, flat grain beetle, coffee bean weevil	50	1.5	12(a)

TABLE 1 (Continued)

Commodity	Insects Controlled	Tolerance (ppm)	Dosage (lbs./1000 cu.ft.)	Exposure Time (hrs.)
Cotton Seed	<u>Pectinophora</u> spp., khapra beetle, boll weevil, saw toothed grain beetle	200	8	24(b)(c)
Garlic	<u>Brachycera</u> spp., <u>dyspessa ulula</u> , brown wheat mite, onion maggot, onion thrips	50	3	4
Horseradish (roots)	<u>baris lepidi</u>	30	3	4
Salsify Roots	armyworm, flea beetle, leafhoppers, stink bugs, tarnished plant bug	30	3	3
Hay (alfalfa)	alfalfa weevil, cereal leaf beetle	50	3	24
Grapefruit ⁽²⁾	<u>Anastrepha</u> spp., <u>Proeulia</u> spp.,	30	3	2
Grapes	<u>Leptoglossus</u> spp., <u>Megalometis</u> spp.,	20	4	2
Kumquat	<u>Naupactus</u> spp., <u>Listroderes</u> spp.,	30	3	2
Lemons ⁽²⁾	<u>Conoderus</u> spp., <u>Brevipalpus</u> spp.,	30	3	2
Lime ⁽²⁾	ants, aphids, citrus scale, citrus	30	3	2
Oranges ⁽²⁾	mites, leaf rollers, white flies,	30	3	2
Tangelos ⁽²⁾	thrips, California orangedog, mealy-	30	3	2
Tangerines ⁽²⁾	bugs, orange tortrix	30	3	2
Baled Tobacco	drugstore beetle, cigarette beetle,		2-3	48-72
Processed Tobacco (i.e. cigars)	tobacco beetle, tobacco moth		4(a)	4
Baled Cotton	pink bollworm, boll weevil		3 4(a)	24 2

¹ Consult APHIS Treatment Manual for additional rates and commodities.

² Tolerance of fruit to methyl bromide may vary with different varieties. Check with local authorities or Great Lakes Chemical Corporation for additional information.

(a) Vacuum chamber fumigation.

(b) Khapra beetle quarantine.

(c) Pink bollworm quarantine.

(d) Must be used in accordance with the plant quarantine program of the USDA.

(e) Pre- and post-harvest.

TABLE II
APPLICATION SUMMARY FOR PROCESSED FOOD
METH-O-GAS

Commodity	Insects Controlled	Tolerance (ppm)	Dosage (lbs./1000 cu. ft.)	Exposure Time (hrs.)
Apples (dried)	saw toothed beetle, merchant beetle,	125	1	24
Apricots (dried)	dried fruit beetle, Indian meal	125	1	24
Cheerries (dried)	moth, confused flour beetle, Aus-	125	1	24
Dates	tralian spider beetle, cigarette	125	1	24
Figs (dried)	beetle, warehouse moth, common grain	250	1	24
Peaches (dried)	mite, coffee bean weevil, carob moth	125	1	24
Prunes (dried)		125	1	24
Raisins (dried)		125	1	24
Cheese (parmesan and roquefort)	cheese mites, cheese skipper, cheese maggot	325	1-2	12-24
Eggs (dried)	larder beetle	400	1-2	12-24
Ham Houses	cheese skipper, larder beetle, red legged ham beetle, mites	325	1-2	12-24
Processed Foods	saw toothed beetle, flat grain beetle, flour beetle, cigarette beetle, Indian meal moth	125	1-2	12-24
Processed Grain(a)	confused flour beetle, rice weevil, granary weevil, saw toothed grain beetle, rusty grain beetle, lesser grain borer, cadelle, khapra beetle, drugstore beetle, Australian spider beetle, cigarette beetle.	125	1.5	24
Processed Grain(b)	flour beetle, saw toothed grain beetle, Mediterranean flour moth	125	1-2	12-24
Processed Grain(c)	flour beetle, grain beetle, mealworms cigarette beetle, Indian meal moth	125	1.5	24
Spices and Herbs (dried)	saw toothed beetle, flat grain beetle, cigarette beetle, trogoderma spp., Indian meal moth, dried fruit beetle, Australian spider beetle, warehouse moth, confused flour beetle, rusty grain beetle, lesser grain borer, drugstore beetle.	400	3	12
Animal Feed (i.e. pet food)	cigarette beetle, saw-tooth grain beetle, flour beetle, Indian meal moth	400	1-2	12-24

(a) Corn grits and cracked rice

(b) Processed grain from equipment fumigation

(c) Processed grain used in production of fermented beverages

TABLE III
METH-O-GAS
APPLICATION SUMMARY FOR STRUCTURES CONTAINING
RAW OR PROCESSED COMMODITIES¹

Treatment Site	Pests	Volume	Rate (lbs/1000 cu.ft.)	Exposure Time (hrs.)
Warehouse	cockroaches, confused flour beetle, rice weevil, granary weevil, saw toothed grain beetle, rusty grain beetle,	Less than 100,000 cu. ft.	1-3	24
Grain Elevator	lesser grain borer, cadelle, khapra beetle, drugstore beetle, larder beetle, carpet beetle, copra beetle, coffee bean weevil, groundnut bruchid, common bean weevil, dried fruit beetle, golden spider beetle,	100,000-500,000 cu. ft.	1-1.5	24
Food Processing Plant	Australian spider beetle, cigarette beetle, angoumois grain moth, Mediterranean flour moth, warehouse moth, Indian meal moth, common grain mite	500,000-1,000,000 cu. ft.	1-1.25	24
Restaurant		Over 1,000,000 cu. ft.	1	24
Feed Room				
Grain Bin				
<u>rats and mice</u>			<u>4-5 oz.</u>	<u>12-18</u>

¹At temperatures below 60°F., increase the dosage by 1/2 pound per 1,000 cu. ft. for every 10°F. drop in temperature or use an approved procedure to heat the fumigant. Do not fumigate when temperature is below 40°F.

NOTE: Remove food and feed commodities not listed in Tables I and II before fumigating structures.

RESTRICTED USE PESTICIDE DUE TO ACUTE TOXICITY

METH-O-GAS® 100

COMMODITY FUMIGANT

ACTIVE INGREDIENTS
MethyI bromide 100%

KEEP OUT OF REACH OF CHILDREN
POISON

⚠ DANGER ⚠
⚠ PELIGRO ⚠

24 x 1.5 lb.

EPA Reg No 5785-11

PRECAUCIONAL USUARIO: Si usted no lee inglés, no use este producto hasta que la etiqueta le haya sido explicada ampliamente.

STATEMENT OF PRACTICAL TREATMENT

In all cases of overexposure, get medical attention immediately. Take person to nearest emergency treatment facility.

IF INHALED: Remove exposed person from contaminated area. Keep warm. Mouth-to-mouth respiration if breathing has stopped. Give artificial respiration. Do not give mouth-to-mouth respiration to an unconscious person. If not unconscious, rinse mouth out with water.

ON SKIN: Immediately remove contaminated clothing, shoes, and any other items worn. 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.

SEE BACK PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS



Great Lakes

Chemical Corporation

West Lafayette, IN 47906

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS

⚠ DANGER ⚠

Extremely hazardous liquid and vapor under pressure may be fatal or cause serious acute illness or delay. Liquid or vapor can cause serious skin or eye injury. Do not get liquid on skin, in eyes or on clothing.

MethyI bromide is a colorless, odorless, non-flammable gas. It is heavier than air and will settle in low areas. It is highly toxic to humans and animals. It is also highly toxic to fish and aquatic life. It is a strong irritant to the eyes, nose, and throat. It causes dizziness, headache, and weakness. It causes a rapid increase in heart rate and a decrease in blood pressure. It causes a rapid increase in breathing rate. These effects are the usual cause of death. Death usually occurs within 15 to 30 minutes after exposure. Recovery is usually complete within 24 to 48 hours. Symptoms include: dizziness, headache, weakness, rapid increase in heart rate, decrease in blood pressure, rapid increase in breathing rate.

SPILL AND LEAK PROCEDURES: Evacuate immediately and provide first aid to exposed persons. Apply water to spill. Do not enter affected area to solve a problem. Allow vapors to dissipate. Do not enter area by persons with respiratory distress. Do not determine if leak is still open. Remove exposed persons properly and seek medical attention. Do not enter area until a trained and equipped person has inspected area and made it safe to enter.

MethyI bromide may be used only by trained and authorized personnel and should be used only by individuals trained in its safe and proper use. Statement on label must be read and dosage label explained before using. Do not use in a manner inconsistent with the label.

In Accordance with EPA Regulations
EPA EST NO 5785 AR 01 Based on Dr

CONTENTS UNDER PRESSURE FOR PUNCTURE APPLICATION
USE WITH 1/4" DIAMETER

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