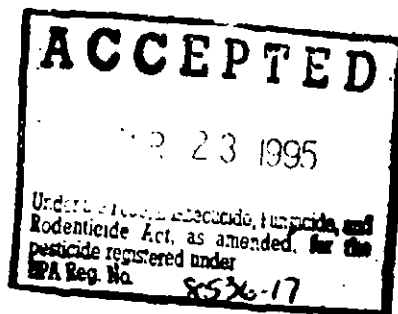


PM-32

Reg # 8536-17

19 19



**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.

# METHYL BROMIDE 99.75%

A FUMIGANT  
FOR USE ONLY BY PROFESSIONAL FUMIGATORS

SPECIMEN

ACTIVE INGREDIENT:	
METHYL BROMIDE	99.75%
INERT INGREDIENT:	
CHLOROPICRIN, ODORIZING AGENT	0.25%
TOTAL	100.00%

This product weighs 14.4 pounds per gallon.

KEEP OUT OF REACH OF CHILDREN

DANGER



PELIGRO

POISON

PELIGRO: Si Usted no entiende la etiqueta, busque a alguien para que se la explique a Usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

**IN ALL CASES OF OVEREXPOSURE  
GET MEDICAL ATTENTION IMMEDIATELY.  
TAKE PERSON TO A DOCTOR OR TO AN  
EMERGENCY TREATMENT FACILITY**

**STATEMENT OF PRACTICAL TREATMENT**

**IF INHALED:** Set exposed person to fresh air. Keep warm. Make sure person can breathe freely. If breathing has stopped, give artificial respiration. Give oxygen if needed. Do not give anything by mouth to any unconscious person. Seek medical attention.

**IF ON SKIN:** Immediately remove contaminated clothing, shoes, and other items covering the skin. Wash contaminated skin area thoroughly with soap and water.

**IF IN EYES:** Hold eyelids open and flush with a steady, gentle stream of water for at least 15 minutes.

**NOTE TO PHYSICIAN:** Early symptoms of overexposure are dizziness, headache, nausea and vomiting, weakness, and collapse. Lung edema may develop in 2 to 48 hours after exposure, accompanied by cardiac irregularities; these effects are the usual cause of death. Repeated overexposure can result in chronic bronchitis, emphysema, and respiratory irritation with

27 19

**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.

**METHYL BROMIDE 99.75%**

**A FUMIGANT  
FOR USE ONLY BY PROFESSIONAL FUMIGATORS**

SPECIMEN

ACTIVE INGREDIENT:	
METHYL BROMIDE	99.75%
INERT INGREDIENT:	
CHLOROPICRIN, ODORIZING AGENT	0.25%
TOTAL	100.00%

This product weighs 14.4 pounds per gallon.

KEEP OUT OF REACH OF CHILDREN

DANGER



PELIGRO

POISON

PELIGRO: Si Usted no entiende la etiqueta, busque a alguien para que se la explique a Usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

**IN ALL CASES OF OVEREXPOSURE  
GET MEDICAL ATTENTION IMMEDIATELY.  
TAKE PERSON TO A DOCTOR OR TO AN  
EMERGENCY TREATMENT FACILITY**

**STATEMENT OF PRACTICAL TREATMENT**

**IF INHALED:** Get exposed person to fresh air. Keep warm. Make sure person can breathe freely. If breathing has stopped, give artificial respiration. Give oxygen if needed. Do not give anything by mouth to any unconscious person. Seek medical attention.

**IF ON SKIN:** Immediately remove contaminated clothing, shoes, and other items covering the skin. Wash contaminated skin area thoroughly with soap and water.

**IF IN EYES:** Hold eyelids open and flush with a steady, gentle stream of water for at least 15 minutes.

**NOTE TO PHYSICIAN:** Early symptoms of overexposure are dizziness, headache, nausea and vomiting, weakness, and collapse. Lung edema may develop in 2 to 48 hours after exposure, accompanied by cardiac irregularities; these effects are the usual cause of death. Repeated overexposure 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.

See Side Panel For Additional Precautionary Statements.



Soil  
Chemicals  
Corporation  
PRODUCTS

P.O. BOX 782 - HOLLISTER, CA 95024

E.P.A. EST. 8536-CA-1, 2, 3, 4; FL-1  
E.P.A. REG. NO. 8536-17

NET CONTENTS

100

# BEST COPY AVAILABLE

Methyl Bromide 99.75% Columns 2,3

**PRECAUTIONARY STATEMENTS  
HAZARD TO HUMANS  
AND DOMESTIC ANIMALS:  
DANGER  
EXTREMELY HAZARDOUS LIQUID AND  
VAPOR UNDER PRESSURE.  
INHALATION MAY BE FATAL OR CAUSE  
SERIOUS ACUTE ILLNESS OR DELAYED  
LUNG OR NERVOUS SYSTEM INJURY.  
DO NOT BREATHE VAPORS.  
LIQUID OR EXCESSIVE VAPOR CAN CAUSE  
SERIOUS SKIN OR EYE INJURY WHICH MAY  
HAVE A DELAYED ONSET.  
DO NOT GET LIQUID ON SKIN, IN EYES,  
OR ON CLOTHING.**

**THIS PRODUCT CONTAINS CHLOROPICRIN AS A WARNING  
ODORANT. CHLOROPICRIN MAY BE IRRITATING TO THE  
UPPER RESPIRATORY TRACT, AND EVEN AT LOW LEVELS  
CAN CAUSE PAINFUL IRRITATION TO THE EYES,  
PRODUCING TEARING. IF THESE SYMPTOMS OCCUR,  
LEAVE THE FUMIGATION AREA IMMEDIATELY.**

**AIR CONCENTRATION LEVEL**

The acceptable air concentration level for persons exposed to methyl bromide is 5 ppm (20 mg/m<sup>3</sup>), except that for entry into residential and commercial structures the acceptable air concentration level is 3 ppm. The air concentration level is measured by a direct reading detection device, such as a Matheson-Scott gas analyzer.

**PERSONAL PROTECTIVE EQUIPMENT**

Applicators and other handlers must wear:  
Loose-fitting or well-ventilated long-sleeved shirt and long pants  
Shoes and socks  
Full-face shield or safety glasses with brow and temple shields (DO NOT wear goggles).  
When the acceptable air concentration level is above 5 ppm and a respirator is required, protect the eyes by wearing a full-face respirator.  
No respirator is required if the air concentration level of methyl bromide in the working area is measured to be less than 5 ppm.  
A respirator is required if the acceptable air concentration level of 5 ppm for methyl bromide is exceeded at any time. The respirator must be one of the following types: (a) a supplied air respirator (MSHA/NIOSH approval number prefix TC-19C OR (b) a self-contained breathing apparatus (SCBA) (MSHA/NIOSH approval number TC-13F).

**WORK SAFETY REQUIREMENTS**

- Do not wear jewelry, gloves, goggles, tight clothing, rubber protective clothing, or rubber boots when handling. Methyl bromide is heavier than air and can be trapped inside clothing and cause skin injury.
- If liquid fumigant splashes or spills on clothing, remove them all once, as fumes will be an intolerable source of irritation.
- Immediately after contamination, remove outer clothing, shoes, and socks and do not reuse until thoroughly cleaned or vented. Keep such clothing and shoes outdoors until thoroughly aerated. Then follow the PPE manufacturer's instructions for cleaning/maintaining PPE. If there are no such instructions for washables, use detergent and hot water. Keep and wash PPE and work clothing separately from other laundry.
- Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product. Do not reuse them.
- Follow PPE manufacturer's instructions for cleaning/maintaining protective eyewear and respirators.

**USER SAFETY RECOMMENDATIONS**

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.

**OBSERVE THE FOLLOWING PRECAUTIONS  
GENERAL PRECAUTIONS**

- Do not get in eyes, on skin, or on clothing.
- Do not spill or discharge contents outside of areas confined for treatment.
- Comply with all local regulations and ordinances.
- It is advisable to supply your physician with information on Methyl Bromide. Literature is available from your dealer or distributor.
- Obtain medical assistance at once in case of illness after exposure, and do not allow conditions which would exacerbate or cause further exposure until recovery is complete. (See Note to Physician)

**PRECAUTIONS FOR STRUCTURAL,  
TRANSPORTATION, OR SPACE FUMIGATION USE**

**GENERAL PRECAUTIONS:**

**Precautions, Continued:**

**SPILL AND LEAK PROCEDURES FOR ENCLOSED SPACE FUMIGATION:** Evacuate everyone from the immediate area of the spill or leak. For entry into affected area to correct problem, wear the personal protective equipment (including prescribed respirators) specified in the Hazard to Humans section of the labeling. Move leaking or damaged containers outdoors or to an isolated location. Observe strict safety precautions. Work upward, if possible. Allow spilled fumigant to evaporate. Only correctly trained and PPE-equipped handlers are permitted to perform such cleanup. Do not permit entry into the spill or leak area by any other person until the air concentration level of methyl bromide is measured to be less than 5 ppm. 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 lbs. is exceeded.

**ENVIRONMENTAL HAZARD**

This pesticide is toxic to wildlife. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or public waters unless the product is specifically identified and addressed in an NPDES permit. Do not discharge effluent containing this product to sewer systems without previously notifying the sewerage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

For space fumigation use, monitor area immediately surrounding the fumigation site with a Halide Detector during exposure and aeration periods to establish that dangerous levels of the fumigant are not present (see Aeration Statement for Halide Detector use). The high volatility of the fumigant permits it to be vented from space being fumigated and to disperse rapidly with no hazard to surrounding areas with correct monitoring.

**CHEMICAL HAZARD**

Methyl bromide is practically nonflammable. There is no danger from fire or explosion in use concentrations. However, fumes can change the chemical to produce some corrosive fumes to some in the space being fumigated. PAM lights and glowing wire heaters should be turned off.

Do not apply gas directly to metal surfaces because of possible corrosive effect on certain metals. Do not use containers or application equipment made of magnesium, aluminum, or their alloys.

The following materials can develop an undesirable odor when encountered in structural fumigation and should be removed from the space being fumigated:

- Furniture: (a) Indured sat. (b) Full-fall sofa. (c) Any type of materials that contain reactive sulfur compounds, such as some soap powders, some baking soaps and some soft blocks used in auto lifts.
- Certain rubber goods: (a) sponge rubber; (b) foam rubber, as in rug padding, pillows, cushions, and mattresses; (c) Rubber stamps and other similar forms of vulcanized rubber.
- Furs, lambskin, and gloves (especially leather gloves).
- Leather goods (particularly wide lid or any other leather goods treated with sulfur preservatives).
- Woolens (extreme caution should be used in the fumigation of woolen suits, coats, blankets, hand-knit woolen socks, sweaters, etc., and women yarn).
- Vacuum cleaners (these require processing or must be packed by a process in which carbon dioxide is used).
- Paper: (a) Silver-plate photographic film; (b) Certain writing papers coated by sulfide processes; (c) Carbonless paper or blue-prints.
- Photographic chemicals as used in photo processing darkrooms (see label for details concerning film).
- Color blocks, or mixed concrete which occasionally picks up odors.
- Any materials that may contain reactive sulfur compounds. THESE PRODUCTS MAY REDUCE EFFECTIVENESS OF THE FUMIGANT: Charcoal, moisture, and odors absorb the methyl bromide, reducing the effective concentration and compromising the fumigation. If there is a question whether a material may develop an odor, a test fumigation may be run with a small quantity of the material.

**STORAGE AND DISPOSAL**

**STORAGE AND HANDLING:** Store in a secure manner either full or under ambient conditions or indoors in a well-ventilated area. Pool as a pesticide storage area. Do not contaminate water, food, or feed by storage. Persons moving, handling, or opening containers must wear the personal protective equipment (including the prescribed respirator when necessary) specified in the Hazard to Humans section of the labeling. Open containers only in a well-ventilated area. Store cylinders upright, on a rack or well to prevent tipping. Cylinders should not be subjected to rough handling or mechanical shock such as dropping, bumping, dragging, or sliding. Do not use rope slings, hooks, lugs, or similar devices to unseat cylinders. Transport cylinders using hand truck, fork truck or other device to which the cylinder can be firmly secured. Do not remove valve protection band and safety cap until immediately before use. Replace safety cap and valve protection band when cylinder is not in use. When cylinder is empty, close valve, screw safety cap and valve nut, and replace protection band before returning to storage. Only the registered handler is authorized to refill cylinders. Do not use cylinders for any other purpose. Follow registered handler's instructions for return of empty or partially empty cylinder.

**RETURN OF CYLINDERS:** Cylinders are the property of  
Sulf Chemical Corporation      Sulf Chemical Corporation  
8770 Highway 25                      7060 East 270th Street  
Mankato, CA 95623                      Long Beach, CA 90810

and should be returned promptly by collect auto freight. Do not ship cylinders without safety caps or valve protection bands. When a cylinder is partially full and there is no further requirement for the product, contact the company for return instructions.

**SHIPPING:** This fumigant is classified in the U.S. Department of Transportation Hazardous Materials Regulations as Methyl Bromide, 2.3, UN 1062, Poison Inhalation Hazard, Hazard Zone C and no exemptions apply specifications, packaging marking, or labeling are affected. Describe empty cylinders as having not contained Methyl Bromide (inhalation hazard). Do not ship with loads, foods, or clothing.

**DISPOSAL:** Do not contaminate water, food, or feed by storage or disposal. Pesticide waste are toxic. Improper disposal of excess pesticide, spray mixture, or empty container is a violation of Federal Law. If these wastes cannot be disposed of by one recycling to

4919

**PRECAUTIONARY STATEMENTS  
HAZARD TO HUMANS  
AND DOMESTIC ANIMALS:**

**DANGER**  
EXTREMELY HAZARDOUS LIQUID AND  
VAPOR UNDER PRESSURE.  
INHALATION MAY BE FATAL OR CAUSE  
SERIOUS ACUTE ILLNESS OR DELAYED  
LUNG OR NERVOUS SYSTEM INJURY.  
DO NOT BREATHE VAPORS.  
LIQUID OR EXCESSIVE VAPOR CAN CAUSE  
SERIOUS SKIN OR EYE INJURY WHICH MAY  
HAVE A DELAYED ONSET.  
DO NOT GET LIQUID ON SKIN, IN EYES,  
OR ON CLOTHING.

THIS PRODUCT CONTAINS CHLOROPICRIN AS A WARNING  
ODORANT. CHLOROPICRIN MAY BE IRRITATING TO THE  
UPPER RESPIRATORY TRACT, AND EVEN AT LOW LEVELS  
CAN CAUSE PAINFUL IRRITATION TO THE EYES,  
PRODUCING TEARING. IF THESE SYMPTOMS OCCUR,  
LEAVE THE FUMIGATION AREA IMMEDIATELY.

**AIR CONCENTRATION LEVEL**

The acceptable air concentration level for persons exposed to methyl bromide is 5 ppm (20 mg/m<sup>3</sup>), except that for entry into residential and commercial structures the acceptable air concentration level is 3 ppm. The air concentration level is measured by a direct reading detection device, such as a Matheson-Klein gas.

**PERSONAL PROTECTIVE EQUIPMENT**

Applicators and other handlers must wear:  
Loose-fitting or well-ventilated long-sleeved shirt and long pants  
Shoes and socks  
Full-face shield or safety glasses with brow and temple shields (DO NOT wear goggles).  
When the acceptable air concentration level is above 5 ppm and a respirator is required, protect the eyes by wearing a full-face respirator.  
No respirator is required if the air concentration level of methyl bromide in the working area is measured to be less than 5 ppm.  
A respirator is required if the acceptable air concentration level of 5 ppm for methyl bromide is exceeded at any time. The respirator must be one of the following types: (a) a supplied air respirator (MSHA/NIOSH approval number prefix TC-15C OR (b) a self-contained breathing apparatus (SCBA) (MSHA/NIOSH approval number TC-13F).

**WORK SAFETY REQUIREMENTS**

- Do not wear jewelry, gloves, goggles, tight clothing, rubber protective clothing, or rubber boots when handling. Methyl bromide is heavier than air and can be trapped inside clothing and cause asphyxiation.
- If liquid fumigant splashes or spills on clothing, remove them at once, as fumes will be an inhalable source of irritation.
- Immediately after contamination, remove outer clothing, shoes, and socks and do not reuse until thoroughly cleaned or vented. Keep such clothing and shoes outdoors until thoroughly cleaned. Then follow the PPE manufacturer's instructions for cleaning/maintaining PPE. If there are no such instructions for washables, use detergent and hot water. Keep and wash PPE and work clothing separately from other laundry.
- Decant clothing and other absorbent materials that have been drenched or heavily contaminated with the product. Do not reuse them.
- Follow PPE manufacturer's instructions for cleaning/maintaining protective eyewear and respirator.

**USER SAFETY RECOMMENDATIONS**

- Users should:
- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
  - Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
  - Remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.

**OBSERVE THE FOLLOWING PRECAUTIONS  
GENERAL PRECAUTIONS**

- Do not get in eyes, on skin, or on clothing.
- Do not spill or discharge contents outside of areas confined for treatment.
- Comply with all local regulations and ordinances.
- If it is advisable to supply your physician with information on Methyl Bromide, literature is available from your dealer or distributor.
- Obtain medical assistance at once in case of illness after exposure, and do not allow conditions which could accidentally cause further exposure until recovery is complete. (See Note to Physician)

**PRECAUTIONS FOR STRUCTURAL,  
TRANSPORTATION, OR SPACE FUMIGATION USE  
GENERAL PRECAUTIONS:**

- When used for fumigation of enclosed spaces (houses and other structures, warehouses, vaults, chambers, greenhouses, trucks, vans, barges, ships, and other transport vehicles, and tarpaulin-covered areas), two persons trained in the use of the product must be present during introduction of the fumigant, initiation of aeration, and after aeration when testing for reentry. Two persons do not need to be present if monitoring is conducted remotely (outside the area being fumigated).
- Do not fumigate with this product when the temperature is below 40 degrees F.
- Whenever possible, apply methyl bromide from outside of structure or car being fumigated. Make sure the fumigated area is properly sealed and vented. Do not move trucks, trailers, or vans during fumigation. They must be completely sealed before movement is started.

**AERATION AND REENTRY:**

- After fumigation, fumigated area must be airtight until the air concentration level of methyl bromide is measured to be less than 5 ppm (3 ppm for residential and commercial structures).
- Until the acceptable air concentration level is reached do not allow any person to enter into the fumigated area unless he/she is wearing the personal protective equipment (including prescribed respirator) specified in the Hazards to Humans section of the label.
- For residential and commercial structural fumigations, specific U.S. EPA instructions as detailed elsewhere in the product label and supplemental manuals must be strictly followed.

See Precautions Continued in Third Column

**Precautions, Continued:**

**SPILL AND LEAK PROCEDURES FOR ENCLOSED SPACE FUMIGATION:** Evacuate everyone from the immediate area of the spill or leak. For entry into affected area to correct problem, wear the personal protective equipment (including prescribed respirator) specified in the Hazards to Humans section of the label. Move leaking or damaged containers outdoors or to an isolated location. Observe strict safety precautions. Work upwind, if possible. Allow spilled fumigant to evaporate. Only correctly trained and PPE-equipped handlers are permitted to perform such cleanup. Do not permit entry into the spill or leak area by any other person until the air concentration level of methyl bromide is measured to be less than 5 ppm. Contaminated soil, water, and other cleanup debris is a toxic hazardous waste. Report spill to the National Response Center (800-474-8807) if the reportable quantity of 1000 lbs. is exceeded.

**ENVIRONMENTAL HAZARD**

This pesticide is toxic to wildlife. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or public waters unless the product is specifically modified and approved in an NPDES permit. Do not discharge effluent containing this product to sewer systems without previously notifying the sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.  
For space fumigation use, monitor areas immediately surrounding the fumigation site with a Halide Detector during exposure and aeration periods to establish that dangerous levels of the fumigant are not present (see Aeration Statement for Halide Detector use). The high volatility of the fumigant permits it to be vented from spaces being fumigated and to disperse rapidly with no hazard to surrounding areas with correct monitoring.

**CHEMICAL HAZARD**

Methyl bromide is practically nonflammable. There is no danger from fire or explosion in use concentrations. However, fumes can change the chemical to produce some corrosive damage to some in the space being fumigated. Pilot lights and glow-in-the-dark heaters should be turned off.  
Do not apply gas directly to metal surfaces because of possible corrosive effect on certain metals. Do not use containers or application equipment made of magnesium, aluminum, or their alloys.  
The following materials can develop an undesirable odor when fumigated in structural fumigation and should be removed from the space being fumigated:  
1. Fossils: (a) heated soil, (b) full-fat soy flour; (c) Any kind of materials that contain reactive sulfur compounds, such as some soap powders, some baking sodas, and some soil blocks used for cattle licks.  
2. Certain rubber goods: (a) sponge 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 shawls (especially leather pelts).  
4. Leather goods (particularly white lid or any other leather goods treated with sulfur processes).  
5. Woolens (extreme caution should be used in the fumigation of any engorged woolens, and some adverse effect has been noted on the fumigation of woolen suits, coats, blankets, hand-knit woolen socks, sweaters, shirts, and woolen yarn).  
6. Various toys (these toys processed or man factured by a process in which carbon bisulfide is used).  
7. Paper, (a) Silver-painting paper (b) Certain writing papers cured by sulfide processes; (c) Carbonless paper or blue-prints.  
8. Photographic chemicals as used in photo processing darkrooms (does not include camera film).  
9. Cinder blocks, or masonry concrete which occasionally picks up odors.  
10. Any materials that may contain reactive sulfur compounds. **THESE PRODUCTS MAY REDUCE EFFECTIVENESS OF THE FUMIGANT:** Charcoal made in a 10 m. x 10 ft. absorbs the methyl bromide, reducing the effective concentration and consuming the charcoal. If there is a question whether a material may develop an odor, a test fumigation may be run with a small quantity of the material.

**STORAGE AND DISPOSAL**

**STORAGE AND HANDLING:** Store in a secure manner other outdoors under ambient conditions or indoors in a well-ventilated area. Pool as a pesticide storage area. Do not contaminate water, food, or feed by storage. Persons moving, handling, or opening containers must wear the personal protective equipment (including prescribed respirator when necessary) specified in the Hazards to Humans section of the label. Open containers only in a well-ventilated area. Store cylinders upright, so as to be free from shock or fall to prevent toppling. Cylinders should not be subjected to rough handling or mechanical shock such as dropping, bumping, dragging, or striking. Do not use impurities, hooks, lugs, or other 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 band and safety cap until immediately before use. Replace safety cap and valve protection band when cylinder is not in use. When cylinder is empty, close valve, remove safety cap and valve outlet, and replace protection band before returning to storage. Only the registered is authorized to refill cylinders. Do not use cylinders for any other purpose. Follow registrant's instructions for return of empty or partially empty cylinder.

**RETURN OF CYLINDERS:** Cylinders are the property of:  
Sol Chemical Corporation      Sol Chemical Corporation  
8770 Highway 25                      2060 East 270th Street  
Haber, CA 95023                      Long Beach, CA 90810

and should be returned promptly by collect auto freight. Do not ship cylinders without safety caps or valve protection bands. When a cylinder is partially full and there is no return requirement for the product, contact the company for return instructions.  
**SHIPPING:** This fumigant is classified in the U.S. Department of Transportation Hazardous Materials Regulations as Methyl Bromide, 2.3, UN 1062, Poison-Inhalation Hazard, Hazard Zone C and no exceptions from specifications, packaging, marking, or labeling are allowed. Describe empty cylinders as having had contained Methyl Bromide (inhalation hazard). Do not ship with loads, loads, or clothing.  
**DISPOSAL:** Do not contaminate water, food, or feed by storage or disposal. Pesticide waste air-locks. Improper disposal of excess pesticide, spray mixture, or waste is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instruction, contact your State Pesticide or Environmental Control Agency, or the hazardous waste representative at the nearest EPA Regional Office for guidance.

**DIRECTIONS FOR USE**

It is a violation of Federal Law to use this product in any manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or title, consult the agency responsible for pesticide regulation.

**PLACARDING OF FUMIGATED AREAS**

The applicator (or supervisor of the application) must placard of entrance to the fumigated area with signs bearing:  

- A red and white symbol
- "DANGER PESTICIDE USE"
- "Area under fumigation, DO NOT ENTER AND ENTRY"
- "Methyl Bromide Fumigant in use."
- The date and time of fumigation, and
- Name, address, and telephone number of the applicator.

 Placards must be placarded with D.O.F. specified warning signs.  
 Do not allow entry by unprotected persons into the fumigated area until the signs are removed. Such signs must only be removed when the air concentration level of methyl bromide is measured to be less than 5 ppm (3 ppm for residential and commercial structures). Signs must remain in place during the entire aeration period. Warning signs are available from your dealer or distributor.

5919  
7

## GENERAL INSTRUCTIONS

THIS FUMIGANT IS A HIGHLY HAZARDOUS MATERIAL AND SHOULD BE USED ONLY BY INDIVIDUALS TRAINED IN ITS PROPER USE. BEFORE USING, READ AND FOLLOW ALL LABEL PRECAUTIONS AND DIRECTIONS, INCLUDING THE ATTACHED SUPPLEMENT. ALL PERSONS WORKING WITH THIS FUMIGANT MUST BE KNOWLEDGEABLE ABOUT THE HAZARDS, AND TRAINED IN THE USE OF REQUIRED RESPIRATOR EQUIPMENT AND DETECTOR DEVICES, EMERGENCY PROCEDURES, AND PROPER USE OF THE FUMIGANT.

## STRUCTURAL FUMIGATION

**AREAS TO BE FUMIGATED:** Dwellings, garages, barns and storage buildings.

**INSECTS AND PESTS CONTROLLED:** Lyctus or powder post beetle, old house borer, death watch beetle, roaches, earwigs, spiders, ants, millipedes, carpet beetles, clothes moths, silverfish, booklice, bedbugs, fleas, mice and rats, drywood termites.

### PREPARATION FOR FUMIGATION:

Remove from the structure to be fumigated all persons, domestic animals, pets, fish, and growing plants. Remove mattresses (except waterbeds) and pillows that are completely enveloped in water proof covers, or remove covers. Food, feed, drugs and medicinals (including those items in refrigerators and freezers) must be removed from fumigation site or sealed in highly resistant containers such as glass, metal, or double-bagged in "Fumebags®" or equivalent Methyl Bromide resistant nylon polymer bags. Place one "Fumebag®" inside of another. Fill inner bag with food and medicinals, and as much air as possible. Twist neck of inner bag lightly to approximately 3/8" diameter. Fold twisted neck back upon itself lightly and wrap with tape, twist-tie, or equal. Press bag to check for leaks. No air should be able to escape. Repeat procedure with outer bag. Open all operable doors and accesses to crawl spaces, attics and subfloors. Extinguish all flames including pilot lights. For fabric pest control, open storage chests, drawers and closets. Provide for forced air circulation of fumigant during the gassing period. For masonry or metal structures, caulk or tape all cracks and other air leaks, around doors, windows, vents. Wood structures and others that cannot be sealed effectively may be enveloped in a gas cover tarpaulin or polyethylene plastic sheet at least 4 mils. thick. Seal all edges of the envelope with moist soil or sand snakes. Soak soil with water 1 foot from the edge of the envelope as necessary to protect nearby plants.

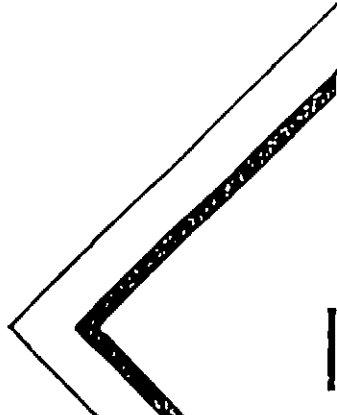
### FUMIGATION FOR RESIDENTIAL OR COMMERCIAL STRUCTURES

**AERATION AND REENTRY:** At the end of the exposure period, after all tarpaulins or seals are removed from the structure, open all interior and exterior doors, windows, and vents that are operational. No person shall be allowed to reenter the structure unless wearing protective clothing and a NIOSH/MSHA approved self-contained breathing apparatus (SCBA) or combination air-supplied/SCBA respirator until the following criteria are met:

1. (A). If non-mechanical or natural ventilation is used, the structure must be aerated for a minimum of 7 days from the time the tarpaulins are removed. (B). After aeration is completed, the level of Methyl Bromide in the structure must be measured using a gas detector device with a minimum detection limit of 3 ppm for Methyl Bromide. Measurements must be taken from an interior electrical outlet by inserting the detection device in the ground receptacle, or from other enclosed space within the wall or an interior and a perimeter wall; and (C)(i). The level of Methyl Bromide is less than 3 ppm from each area measured; or (ii). If the level of Methyl Bromide is 3 ppm or greater, the structure must be aerated for an additional 24 hours. At the end of the 24 hour period, the level of Methyl Bromide must be measured from the areas previously sampled. These procedures must be repeated until the level of Methyl Bromide is below 3 ppm.
2. If mechanical aeration is used: (A) For structures without attics, an aeration fan(s) must be inserted in a window or other exterior opening and sealed so that the air inside the structure is exhausted out of the structure. The aeration fan(s) must be capable of displacing 5,000 cubic feet of air per minute. To facilitate aeration, exterior openings, such as windows, vents, or an access door to the subarea, should be utilized. The structure must be aerated with the fan(s) operating for a minimum of 72 hours. (B). After aeration is completed, the level of Methyl Bromide in the structure must be measured using a gas detector device with a minimum detection limit of 3 ppm for Methyl Bromide. Measurements must be taken from an interior electrical outlet by inserting the detection device in the ground receptacle, or from other enclosed space within the wall or an interior and a perimeter wall; and (C)(i). The level of Methyl Bromide is less than 3 ppm from each area measured, or (ii). If the level of Methyl Bromide is 3 ppm or greater, the structure shall be aerated for an additional 12 hours. At the end of the 12 hour period, the level of Methyl Bromide must be measured from the areas previously sampled. These procedures must be repeated until the level of Methyl Bromide is below 3 ppm.

Space and Structural Fumigation, Continued:

**BEST COPY AVAILABLE**



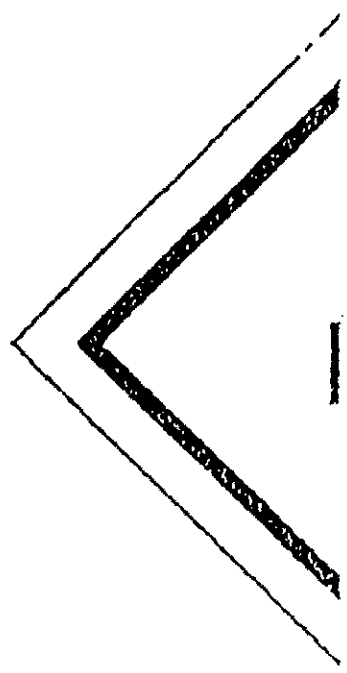
Structure to be fumigated all persons, domestic animals, pets, fish, and growing plants. Remove mattresses (except waterbeds) and pillows that are completely enveloped in water proof covers, or remove covers. Food, feed, drugs and medicinals (including those items in refrigerators and freezers) must be removed from fumigation site or sealed in highly resistant containers such as glass, metal, or double-bagged in "Fumebags" or equivalent Methyl Bromide resistant nylon polymer bags. Place one "Fumebag" inside of another. Fill inner bag with food and medicinals, and as much air as possible. Twist neck of inner bag lightly to approximately 3/8" diameter. Fold twisted neck back upon itself tightly and wrap with tape, twist-tie, or equal. Press bag to check for leaks. No air should be able to escape. Repeat procedure with outer bag. Open all operable doors and accesses to crawl spaces, attics and subfloors. Extinguish all flames including pilot lights. For fabric pest control, open storage chests, drawers and closets. Provide for forced air circulation of fumigant during the gassing period. For masonry or metal structures, caulk or tape all cracks and other air leaks, around doors, windows, vents. Wood structures and others that cannot be sealed effectively may be enveloped in a gas cover tarpaulin or polyethylene plastic sheet at least 4 mils. thick. Seal all edges of the envelope with moist soil or sand snakes. Soak soil with water 1 foot from the edge of the envelope as necessary to protect nearby plants.

**FUMIGATION FOR RESIDENTIAL OR COMMERCIAL STRUCTURES**

**AERATION AND REENTRY:** At the end of the exposure period, after all tarpaulins or seals are removed from the structure, open all interior and exterior doors, windows, and vents that are operational. No person shall be allowed to reenter the structure unless wearing protective clothing and a NIOSH/MSHA approved self-contained breathing apparatus (SCBA) or combination air-supplied/SCBA respirator until the following criteria are met:

1. (A). If non-mechanical or natural ventilation is used, the structure must be aerated for a minimum of 7 days from the time the tarpaulins are removed. (B). After aeration is completed, the level of Methyl Bromide in the structure must be measured using a gas detector device with a minimum detection limit of 3 ppm for Methyl Bromide. Measurements must be taken from an interior electrical outlet by inserting the detection device in the ground receptacle, or from other enclosed space within the wall or an interior and a perimeter wall; and (C)(i). The level of Methyl Bromide is less than 3 ppm from each area measured; or (ii). If the level of Methyl Bromide is 3 ppm or greater, the structure must be aerated for an additional 24 hours. At the end of the 24 hour period, the level of Methyl Bromide must be measured from the areas previously sampled. These procedures must be repeated until the level of Methyl Bromide is below 3 ppm.
2. If mechanical aeration is used: (A) For structures without attics, an aeration fan(s) must be inserted in a window or other exterior opening and sealed so that the air inside the structure is exhausted out of the structure. The aeration fan(s) must be capable of displacing 5,000 cubic feet of air per minute. To facilitate aeration, exterior openings, such as windows, vents, or an access door to a subarea, should be utilized. The structure must be aerated with the fan(s) operating for a minimum of 72 hours; (B). After aeration is completed, the level of Methyl Bromide in the structure must be measured using a gas detector device with a minimum detection limit of 3 ppm for Methyl Bromide. Measurements must be taken from an interior electrical outlet by inserting the detection device in the ground receptacle, or from other enclosed space within the wall or an interior and a perimeter wall; and (C)(i). The level of Methyl Bromide is less than 3 ppm from each area measured; or (ii). If the level of Methyl Bromide is 3 ppm or greater, the structure shall be aerated for an additional 12 hours. At the end of the 12 hour period, the level of Methyl Bromide must be measured from the areas previously sampled. These procedures must be repeated until the level of Methyl Bromide is below 3 ppm.

Space and Structural Fumigation, Continued:



**BEST COPY AVAILABLE**

**WARRANTY**

NOTICE: Seller warrants that the product conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with directions under normal conditions of use, but neither the 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 instruction, or under abnormal conditions, or under conditions not reasonably foreseeable to seller, and buyer assumes the risk of any such use.

7919

Space and Structural Fumigation, Continued:

3. (A) For structures with attics, an aeration fan must be inserted in the attic access door and a window or other exterior opening, and both sealed so that air inside the structure is exhausted outside the structure. The aeration fans must be capable of displacing a minimum of 5,000 cubic feet of air per minute. To facilitate aeration, exterior openings, such as windows, vents, or an access door to the subarea should be utilized. The structure must be aerated with the fans operating for a minimum of 72 hours; (B) After aeration is completed, the level of Methyl Bromide in the structure must be measured using a gas detector device with a minimum detection limit of 3 ppm for Methyl Bromide residues. Measurements must be taken from within an interior electrical outlet by inserting the detection device in the ground receptacle, or other enclosed space within an interior and a perimeter wall; and (C)(i). The level of Methyl Bromide is less than 3 ppm from each area measured; or (ii), if the level of Methyl Bromide is 3 ppm or greater, aeration must continue for an additional 12 hours. At the end of the 12 hour period, the level of Methyl Bromide must be measured from the areas previously sampled. These procedures must be repeated until the level of Methyl Bromide is below 3 ppm.

4. For structures with basements, in addition to the requirements of paragraphs 1, 2, and 3 above, the windows, vents, and interior doors of the basement must be open, and (A). After aeration is completed, the level of Methyl Bromide in the basement must be measured using a gas detector device with a minimum detection limit of 3 ppm for Methyl Bromide residues. A measurement must be taken from an interior electrical outlet by inserting the detection device in the ground receptacle, or from other enclosed space within the wall or an interior wall. In the absence of an interior wall, a measurement must be taken of the ambient air in the basement; and (B)(i). The level of Methyl Bromide is less than 3 ppm; or (ii) if the level of Methyl Bromide is 3 ppm or greater, the structure must be aerated for an additional 24 hours for natural ventilation or an additional 12 hours for mechanical aeration. At the end of the additional ventilation period, the level of Methyl Bromide must be measured from the area in the basement previously sampled. These procedures must be repeated until the level of Methyl Bromide is below 3 ppm.

STRUCTURAL FUMIGATION FACT SHEET

(See Supplemental Manual #MB-1 for Example of Fact Sheet)

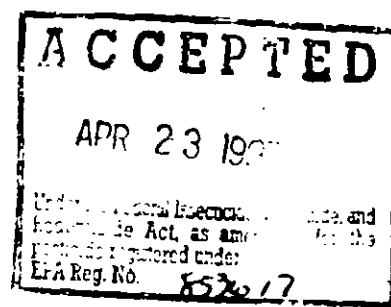
A. The applicator must obtain a Structural Fumigation Fact Sheet which has been signed by, and provided to, the following persons: (1) an adult occupant of a single family dwelling prior to the parties entering into a fumigation agreement; (2)(a) The owner, manager, or designated agent of the building for multiple-family dwellings, provided he or she acknowledges in writing to the applicator that a copy of the Structural Fumigation Fact Sheet has been provided to an adult occupant of each unit prior to the parties entering into a fumigation agreement, or (b), An adult occupant of each unit in a multiple family dwelling prior to the parties entering into a fumigation agreement; or (3), the owner, manager, or designated agent for all structures or businesses other than family dwellings.

B. The Structural Fumigation Fact Sheet shall state: The purpose of this handout is to inform the consumer of possible health hazards associated with the use of the structural fumigant, Methyl Bromide. To make sure you have been given an opportunity to read this, applicators are required to obtain the signature of the owners and occupants of property to be fumigated with Methyl Bromide. You will also be given a copy of this fact sheet to keep.

DRAGLER GAS DETECTOR/BENLIX GAS TECH DETECTOR: (Hand Pump and Detector Tube) Methyl bromide may be detected at the Threshold Limit Value (T.L.V.) of 5 ppm. Detectors are available from your dealer or distributor.

RATES OF APPLICATION: For general fumigation under ideal conditions at temperatures of 70 degrees F and above use 1 to 3 pounds of Methyl Bromide 99.75% per 1000 cu. ft. for 16 - 24 hours exposure time. Under adverse conditions, increase dosage to 3 1/2 to 3 3/4 pounds per 1000 cu. ft.

FUMIGATION: Release Methyl Bromide 99.75% from outside the structure through a heat exchanger to convert from liquid to gaseous state, or introduce through a suitable leak proof tube (such as polyethylene) attached to an evaporating pan to prevent splashing over interior. Operate an electric fan during introduction and for a minimum of 30 minutes thereafter to accelerate distribution of the gas. For an average structure, the entire amount may be released in one place, but for a large or complex structures, release it at two or more locations, so chosen as to ensure even gas distribution.



BEST COPY AVAILABLE

8 9 19

...measured, or (ii) if the level of Methyl Bromide is 3 ppm or greater, aeration must continue for an additional 12 hours. At the end of the 12 hour period, the level of Methyl Bromide must be measured from the areas previously sampled. These procedures must be repeated until the level of Methyl Bromide is below 3 ppm.

4. For structures with basements, in addition to the requirements of paragraphs 1, 2, and 3 above, the windows, vents, and interior doors of the basement must be open, and (A). After aeration is completed, the level of Methyl Bromide in the basement must be measured using a gas detector device with a minimum detection limit of 3 ppm for Methyl Bromide residues. A measurement must be taken from an interior electrical outlet by inserting the detection device in the ground receptacle, or from other enclosed space within the wall or an interior wall. In the absence of an interior wall, a measurement must be taken of the ambient air in the basement and (B)(i). The level of Methyl Bromide is less than 3 ppm; or (ii) if the level of Methyl Bromide is 3 ppm or greater, the structure must be aerated for an additional 24 hours for natural ventilation or an additional 12 hours for mechanical aeration. At the end of the additional ventilation period, the level of Methyl Bromide must be measured from the area in the basement previously sampled. These procedures must be repeated until the level of Methyl Bromide is below 3 ppm.

**STRUCTURAL FUMIGATION FACT SHEET**

(See Supplemental Manual #MB-1 for Example of Fact Sheet)

A. The applicator must obtain a Structural Fumigation Fact Sheet which has been signed by, and provided to, the following persons: (1) an adult occupant of a single family dwelling prior to the parties entering into a fumigation agreement; (2)(a) The owner, manager, or designated agent of the building for multiple-family dwellings, provided he or she acknowledges in writing to the applicator that a copy of the Structural Fumigation Fact Sheet has been provided to an adult occupant of each unit prior to the parties entering into a fumigation agreement, or (b). An adult occupant of each unit in a multiple family dwelling prior to the parties entering into a fumigation agreement; or (3), the owner, manager, or designated agent for all structures or businesses other than family dwellings.

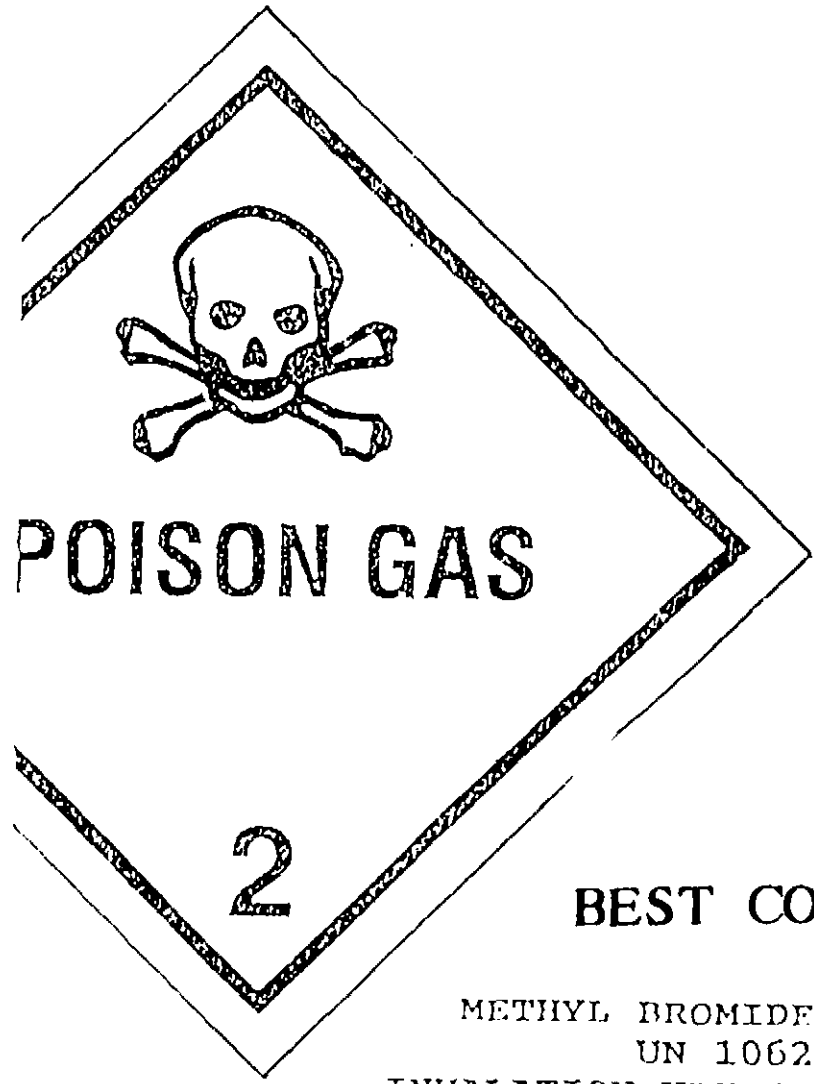
B. The Structural Fumigation Fact Sheet shall state: The purpose of this handout is to inform the consumer of possible health hazards associated with the use of the structural fumigant, Methyl Bromide. To make sure you have been given an opportunity to read this, applicators are required to obtain the signature of the owner and occupants of property to be fumigated with Methyl Bromide. You will also be given a copy of this fact sheet to keep.

**DRAEGER GAS DETECTOR BENDIX GASTECH DETECTOR:** (Hand Pump and Detector Tube) Methyl bromide may be detected at the Threshold Limit Value (T.L.V.) of 5 ppm. Detectors are available from your dealer or distributor.

**RATES OF APPLICATION:** For general fumigation under ideal conditions at temperatures of 70 degrees F and above use 1 to 3 pounds of Methyl Bromide 99.75% per 1000 cu. ft. for 16 - 24 hours exposure time. Under adverse conditions, increase dosage to 3 1/2 to 3 3/4 pounds per 1000 cu. ft.

**FUMIGATION:** Release Methyl Bromide 99.75% from outside the structure through a heat exchanger to convert from liquid to gaseous state, or introduce through a suitable leak proof tube (such as polyethylene) attached to an evaporating pan to prevent splashing over interior. Operate an electric fan during introduction and for a minimum of 30 minutes thereafter to accelerate distribution of the gas. For an average structure, the entire amount may be released in one place, but for a large or complex structures, release it at two or more locations, so chosen as to ensure even gas distribution.

**ACCEPTED**  
APR 23 1995  
Under Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 852617



**BEST COPY AVAILABLE**

METHYL BROMIDE  
UN 1062  
INHALATION HAZARD



9919

SUPPLEMENTAL MANUAL  
MB-1

METHYL BROMIDE

SAFETY  
INFORMATION

**ACCEPTED**  
APR 23 1995  
Under the Federal Insecticide, Fungicide, and  
Rodenticide Act, as amended, for the  
pesticide registered under  
EPA Reg. No. 63017



Soil  
Chemicals  
Corporation  
PRODUCTS

P.O. BOX 782 • HOLLISTER, CA 95024

June, 1992

**BEST COPY AVAILABLE**

PHYSICAL PROPERTIES

Methyl Bromide at ambient temperature is a colorless and odorless gas. It is a water white liquid below its boiling point. Commercially, Methyl Bromide is handled in liquified form under pressure.

PROPERTY	VALUE
Molecular Weight . . . . .	94.94
Pounds per gallon, Liquid . . . . .	14.4 @ 0°C
Specific Gravity, Liquid . . . . .	1.732 @ 32°F/0°C (H <sub>2</sub> O = 1)
Percent Volatile . . . . .	100% (by volume)
Boiling Point . . . . .	38.4°F/3°C
Critical Temperature . . . . .	194.00 °C
Refractive Index, n. . . . .	1.4432 @ -20°C
Vapor Pressure . . . . .	1400 mmHg @ 68°F/20°C
Viscosity, cP. . . . .	0.397 @ 0°C
Flash Point . . . . .	None
Flammable Limits (At S.T.P.). . . . .	Lel 10%, Uel 15% with high energy ignition source
Freezing Point . . . . .	-94.1 °C
Autoignition Temperature . . . . .	537 °C
Odor . . . . .	None
Solubility in Water . . . . .	1.34 gms/100 ml @ 77°F/25°C

BEST COPY AVAILABLE

11 7 19

HANDLING PRECAUTIONS TO AVOID SKIN CONTACT WITH  
METHYL BROMIDE

If carelessly handled, methyl bromide may be spilled on the skin surface. Since methyl bromide has a very low boiling point, very rapid evaporation takes place and within a few seconds the methyl bromide will entirely disappear from the surface of exposed skin. From such casual contacts, little or no difficulty need be anticipated. However if methyl bromide is spilled on clothing, gloves, or other materials covering the skin, such coverings may keep the methyl bromide in close and continuous contact with the skin. Since there is no particular sensation produced by such contact, methyl bromide may be maintained in contact with the skin for extended periods of time without an awareness that this has occurred.

Where methyl bromide has remained in contact with the skin for some time, a blister commonly forms which is not unlike the blisters resulting from thermal burns or severe chilling. Where blister formation has resulted from contact with methyl bromide, experience has shown that these seem to respond best to treatment when left intact. The blistered area is covered with a sterile petrolatum dressing which should be changed as required.

No one should be permitted to handle methyl bromide while wearing gloves, bandages, or occlusive dressing. Finger rings should be removed before handling the liquid product. Since methyl bromide will penetrate ordinary rubber gloves, these also should not be used. Where methyl bromide has been spilled on the clothing, such clothing should be removed immediately and thoroughly cleaned and aerated before being re-worn.

The results of brief skin contact by methyl bromide are mild, very simply treated, and accompanied by no serious after effects.

FOOD COMMODITIES

Methyl bromide has been used successfully for many years for the fumigations of a wide variety of commodities. The tolerances of various commodities for methyl bromide, however, vary considerably. Therefore, unless the tolerance of a given commodity for methyl bromide is known, consult Federal or State Experiment Station authorities or your dealer before fumigation is performed.

**BEST COPY AVAILABLE**

Precautions for the use of methyl bromide for fumigation of processed food and feedstuffs:

Overdosing and/or overexposure of any food or feedstuff commodity should be avoided. When the prior history is not known, or in those instances where a repeated fumigation is necessary, the commodity should be analyzed for bromide residues before fumigation to make certain the proposed treatment will not result in residues that will exceed the tolerances established by the E.P.A. Special care must be exercised to determine whether methyl bromide fumigation of edible commodities will not result in above-tolerance bromide residues.

DETECTION EQUIPMENT

Detection equipment is a valuable aide to the fumigator. It can be used to help determine the success of a fumigation as well as protect the fumigator from over-exposure. There are several types of detection equipment available. Of the equipment described here, only the detector tubes can be used to clear an area for re-entry.

THERMAL CONDUCTIVITY GAS DETECTORS

This instrumentation is excellent for periodic determination of interior gas concentrations from outside the building. They are not, however, sensitive enough to determine the health hazards presented by low concentrations of methyl bromide. For more complete information, consult the U.S.D.A., the instrument manufacturers, or your Pesticide dealer. Units are available from Gow-Mac Instrument Company, 100 Kings Road, Madison, New Jersey 07940, and the Robert K. Hassler Company, Box 177, Altadena, California 91001.

THE HALIDE GAS DETECTOR

The Halide Gas Detector consists of a torch which heats a copper plate and an air tube through which the air to be tested is passed over the red-hot copper plate. If the air contains methyl bromide, the flame color changes to blue or green, depending on the concentration of the fumigant. This detector is best used outside of the fumigated structure during the exposure period to detect fumigant leakage. The instrument is not sensitive enough to be relied upon for use in clearing a fumigated area by a person not wearing a SCBA.

DETECTOR TUBES

This method uses a small hand held pump and methyl bromide detector tubes. Methyl bromide is drawn through small chemical reagent tubes in which the methyl bromide is decomposed by an oxidizing agent to liberate bromine. The bromine concentration is then indicated by intensity of color formed in reaction with o-tolidine. The detector tubes are capable of measuring methyl bromide concentrations of 2.5-500 ppm. Methyl bromide detector tubes and pumps listed below are available from safety supply distributors.

1. Gastex pump, part number F-2417534, detector tube #136.
2. Draeger pump, part number CH 304, detector tube #67-28211.
3. Matheson-Kitagawa pump, part number 8014K, detector tube #157Sb.

CONDITIONS OF EXPOSURE TO METHYL BROMIDE

Methyl bromide should be handled and applied only by individuals who are thoroughly trained in its proper use. The use of concentrations which vary from those recommended can result in injury to the user and/or damage to the commodities being fumigated.

Exposure of individuals to hazardous concentrations of methyl bromide can be avoided when using proper fumigation procedures. Under accidental conditions, however, such exposure may occur. Following are possible symptoms of methyl bromide exposure:

- Nausea and vomiting
- Dizziness or headache
- Profound weakness
- Slurred speech
- Blurring vision
- Staggering gait
- Difficult breathing
- Convulsions

At the first sign of any of the above symptoms, immediately get out of fumigation area and into the fresh air. It is advisable for the entire crew of men on a fumigation job, working under the same conditions, to stop immediately if one of their members becomes sick. This is advise based on the possibility that if one man is being over-exposed, they all are.

Take the affected operator to a physician, or call a physician immediately. Under no conditions should this operator re-enter a methyl bromide atmosphere until he has received the approval of a physician. Since there is a possibility that the other members of the crew have also been unnecessarily exposed to the gas, they too should refrain from re-entering the building. Another experienced crew should be called to complete the fumigation.

## SUGGESTIONS FOR ATTENDING PHYSICIAN

Overexposure to methyl bromide may produce serious effects on the central nervous system and it will also cause lung irritation. The resulting symptoms will be proportionate to the concentration of the material and the duration of the exposure.

1. Nausea and vomiting may require an antiemetic and it may be necessary to give it parenterally if vomiting is severe.
2. Cardiac embarrassment may result in hypotension and it may be necessary to use a vasopressor.
3. Respiratory embarrassment should be treated with oxygen and it may be necessary to use oxygen under pressure. Ethyl alcohol vapor added to the oxygen may be considered if there is pulmonary edema, and the use of bronchodilators may be necessary if there is broncho-constriction.
4. If respiration fails, artificial respiration should be immediately instituted, preferably by mouth-to-mouth method.
5. Quick acting barbiturates should be used to control excitement or convulsions.
6. Patient should be hospitalized for at least 48 hours and observed for late respiratory and central nervous system effects.

There is some evidence that severe pneumonia may react dramatically to the employment of corticosteroid medication. Experience to date seems to indicate that if the individual survives the more serious effects of acute exposure, his recovery in all probability will be complete but may require a considerable period of time, depending on the severity of the exposure. In case of chronic intoxication resulting from prolonged or repeated exposure, where lung involvement is not a factor, the primary effect of methyl bromide is on the nervous system.

Recovery from such effects can be expected to be slow but, in all probability, will be complete. Thus, the importance of early diagnosis and the cessation of exposure is emphasized.

**BEST COPY AVAILABLE**

STRUCTURAL FUMIGATION FACT SHEET

A. The applicator must obtain a structural fumigation fact sheet which has been signed by, and provided to, the following persons: (1) an adult occupant of a single family dwelling prior to the parties entering into a fumigation agreement, (2) (a) The owner, manager, or designated agent of the building for multiple-family dwellings, provided he or she acknowledges in writing to the applicator that a copy of the Structural Fumigant Fact Sheet has been provided to an adult occupant of each unit prior to the parties entering into a fumigation agreement; or (b) An adult occupant of each unit in a multiple family dwelling prior to the parties entering into a fumigation agreement, or (3) the owner, manager, or designated agent for all structures or businesses other than family dwellings,

B. The Structural Fumigation Fact Sheet shall state: The purpose of this handout is to inform the consumer of possible health hazards associated with the use of the structural fumigant, methyl bromide. To make sure you have been given an opportunity to read this, applicators are required to obtain the signature of the owners and occupants of property to be fumigated with methyl bromide. You will also be given a copy of this fact sheet to keep.

STRUCTURAL FUMIGANTS: METHYL BROMIDE

ATTENTION

READ THIS FACT SHEET COMPLETELY BEFORE SIGNING

Fumigation involves the introduction of poisonous gases into every part of the structure, including inside the walls. Because overexposure to these gases can be harmful to people, your building will be ventilated before you will be allowed to return.

This fact sheet provides basic information about the structural fumigant, methyl bromide, as well as information about why and how buildings are fumigated, methyl bromide health risks, how to know if you are exposed, ways to minimize your exposure, and several phone numbers to call for more information.

New rules for structural fumigation have substantially increased the time between fumigant use and the time an occupant is allowed back into the building. Post-fumigation ventilation has also been improved significantly. These changes should be adequately protective, but you should know some basic facts about structural fumigants.

Why Buildings Are Fumigated - Houses and other structures are fumigated to kill insect pests living in walls or wood. There are sometimes other ways to deal with these pests, and building owners should investigate them. However, fumigation is sometimes the only method for handling extensive infestations of wood-destroying insects. You can discuss the possibility of alternatives with your pest control company (or, California residents: call the county office of the University of California Cooperative Extension).

BEST COPY AVAILABLE

**How Buildings Are Fumigated** - There are two pesticides used for structural fumigations: methyl bromide and sulfuryl fluoride (known by the trade name, Vikane.) Each has advantages and disadvantages in terms of their effectiveness in killing pests which professional fumigators can discuss with you. Your fumigator should also provide you with a list of items you need to remove from your home before the fumigation starts.

Methyl bromide is a gas. Before fumigation starts, the building to be fumigated is completely sealed and covered with a tarp to keep the gas in the building so it can penetrate wood to kill the pests. The tarp is left on for one to two days. Warning signs are posted around the building notifying people to keep out because the levels of the pesticide in the building during fumigation can kill a person.

After the tarp is removed, a professional fumigator will go into the building wearing a compressed air tank and mask and open the doors and windows. Powerful fans may also be set up to pull fresh air into the building.

It is now required that buildings fumigated with methyl bromide be aired out for a minimum of 72 hours after the tarp is removed. Then, the fumigators are required to measure the levels of methyl bromide inside the walls of buildings to make sure they are below three parts per million before you are allowed to go back in.

The ventilation procedures make it unlikely that any remaining fumigant in the living space will be a health hazard after the house is cleared for reoccupancy. However, you should be aware of the symptoms of overexposure to methyl bromide, since it is sensible to be cautious when dealing with a potentially hazardous chemical.

Small pockets of fumigant can remain in dead air space between walls and inside cabinets, and in porous material such as furniture, and may enter into the living space for a few days after fumigation. That's why a mandatory aeration period is required after the tarp is removed. Your building should not be cleared for reoccupancy until it is safe for you to reenter. The pest control company will post a notice on your building indicating the day and time your building is considered safe to enter.

**How Do You Know Whether You Are Exposed** - Methyl bromide is a colorless, odorless gas, so a warning agent is added which causes watery eyes and a scratchy throat. If you experience these symptoms in a building that has been recently fumigated, you should leave immediately and call the pest control company to have your building retested. You should also consult with your physician.

**Methyl Bromide Health Risks** - Methyl Bromide enters your body as a gas when you breathe it. Exposure which may occur from touching treated surfaces is insignificant.

Nervous system, eyes, and respiratory irritations: Overexposure to methyl bromide can cause blurred vision, headache, and nausea. At higher concentrations, it can cause tremors, sleepiness, convulsions, pneumonia, and excess fluid in the lungs. These symptoms may not appear for 12 to 24 hours. If you experience these symptoms in a recently fumigated building, you should leave immediately and call the pest control company to have the building retested. You should also call your personal physician. Physicians are encouraged to report suspected pesticide-related illnesses to EPA.



Birth defects: In recent animal studies, methyl bromide caused birth defects when pregnant animals were exposed under experimental conditions. There is no evidence that methyl bromide affects human reproduction, although some chemicals which cause birth defects in animals may also cause birth defects in humans. Any person, including pregnant women, should avoid unnecessary exposure.

Other effects: It is not known whether long-term exposure to methyl bromide causes cancer. Experiments in animals are underway to study this, although tests so far are negative. However, even if methyl bromide were shown to cause cancer over a lifetime of exposure in animals, it is unlikely that your exposure from the one-time fumigation of your building would be high enough to cause a significant risk of cancer.

**Ways To Reduce Your Exposure If You Are Having Your Building Fumigated -**

- Carefully evaluate all your pest control alternatives.
- Talk over your treatment program in advance with the pest control company, so you fully understand what will be done, and what you need to do.
- Carefully follow the instructions you are given about items you are to remove from your building.
- Stay out of the treated building for at least three days after the tarp is removed. If you have additional concerns, you may choose to be away for an extra period of time after the building is cleared for reoccupation.
- If you are interested or concerned, you can ask your pest control company to show you the records of the air monitoring it did before your building was cleared for reoccupation.
- You may wish to increase ventilation by opening doors and windows.
- If you have symptoms of exposure, or you believe that the aeration was not done properly, you should leave the building and contact the pest control company and your physician. You may also wish to call one of the phone numbers listed below.

For information about pesticides, the U.S. Environmental Protection Agency has a toll-free information service, the National Pesticide Telecommunications Network Hotline, which can be reached at 1 (800) 858-7378.

In a medical emergency, call 911, or contact the nearest Poison Control center. See "Crisis Hotlines" listed near the front of the white pages in your phone book.

Resources for California residents: For information about the health effects of pesticides, you can call the Worker Health and Safety Branch of the State Department of Pesticide Regulation in Sacramento, at 1-916-654-0455, Monday through Friday from 9 a.m. to 4 p.m.. For information about alternative pest control methods, you can call the consumer information office of the State Structural Pest Control Board, at 1-916-920-6323, and/or your county office of the University of California Cooperative Extension.

SIGNATURE FORM

If you feel uncomfortable entering the structure, or if you do not fully understand the potential hazards, you should call the company that performed the fumigation (or, California residents: you can call your County Agricultural Commissioner. The commissioner enforces state and federal pesticide laws in your county. You can find the phone number in the County Government Section near the front of your local phone book).

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_

Telephone: \_\_\_\_\_

I acknowledge receiving a copy of the methyl bromide fact sheet.

(You will sign one copy for the company doing the fumigation, and get a second copy to keep for later reference.)

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Please print your name here: \_\_\_\_\_

Your address: \_\_\_\_\_

\_\_\_\_\_

FOR FUMIGATION OF RESIDENTIAL AND COMMERCIAL STRUCTURES, THESE DIRECTIONS SUPERSEDE ANY OTHER DIRECTIONS ON THE LABEL CONCERNING AERATION AND REENTRY

19 3 19  
7



Soil  
Chemicals  
Corporation  
PRODUCTS

P.O. BOX 782 • HOLLISTER, CA 95024

**BEST COPY AVAILABLE**