PM 32 8536-12

1020

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

JUL 10 1992

Soil Chemicals Corporation
P.O. Box 782
Hollister, CA 95024

Attn: Tom Duafala, Ph.D.

Subject: Revised Labeling for Aeration and Reentry Statements
Methyl Bromide 99.5%
EPA Registration No. 8536-12

Your labeling package revised in accordance with your company's May 18, 1992 letter of commitment has been reviewed and the following comments apply.

Product Labeling

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable subject to the comments listed below. A stamped copy is enclosed for your records. Two copies of the finished printed labeling must be submitted to EPA before you distibute or sell the product. All products distributed or sold after August 1, 1992 must contain the revisions detailed in this letter.

1. On page one of the draft label, in the middle column under the heading "General Precautions":

- Expand the first sentence under the "Aeration and Reentry" statement to read: "... below 5ppm (20 mg/cu.m)and below 3ppm (12 mg/cu.m) for residential and commercial structures.".

- And add an item #3: "For residential and commercial structural fumigations, specific USEPA instructions as detailed elsewhere in this product label and supplemental manual must be strictly followed.".

2. On page two of the submitted draft label, in the left hand column, under the heading "General Instructions":

- Revise the heading "Space Fumigation" to read: "Space And Structural Fumigation".

CONCURRENCES

SYMBOL								
SURNAME								
DATE	JUL 10 1992							

- Reverse the order of the words in the heading "Aeration and Reenrty: Fumigation for Residential or Commercial Structures" to: "Fumigation for Residential or Commercial Structures: Aeration and Reentry".

3. All products distributed or sold by the registrant after August 1, 1992, and distributed or sold by any other person after September 1, 1992 must bear the approved labeling revised in accordance with EPA's comments. Distribution or sale methyl bromide pesticide products for commercial or structural fumigation after these dates without the revised labeling will be a violation of FIFRA §12(a)(1)(E).

Additionally, the following conditions, as set forth in your May 18, 1992 letter of commitment, have been added to the above referenced registration:

1. Soil Chemicals Corporation will notify all its customers by certified mail that distribution or sale of methyl bromide pesticide product bearing EPA Registration No. 8536-12, for residential or commercial structural fumigation will be prohibited after September 1, 1992 unless the product's labeling includes the July 1992 revised use directions. Such notification will include a copy of the approved revised labeling. Soil Chemicals Corporation will keep a copy of each notification and return receipt for two (2) years.

2. Soil Chemicals Corporation will offer to relabel methyl bromide pesticide products for its distributors, and if the distributors agree, Soil Chemicals Corporation will relabel such products.

3. All products bearing EPA Registration No. 8536-12 distributed or sold by registrant after August 1, 1992 will bear the July 1992 revisions concerning aeration and reentry and the fact sheet for commercial and structural fumigation.

If You should have any questions concerning this letter, you may call Robert Travaglini on (703) 305-6909.

Sincerely,

Ruth G. Douglas
Product Manager (32)
Antimicrobial Program Branch
Registration Division (H7504C)

PM32 8536-2 3 of 20

ACCEPTED
with COMMENTS
in EPA Letter Dated:

[illegible] 1 8 1992

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended for the pesticide registered under EPA Reg. No. 8536-12

BEST AVAILABLE COPY

PRECAUTIONARY STATEMENTS
HAZARD TO HUMANS AND DOMESTIC ANIMALS:

D A N G E R

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 BREATH 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.

OBSERVE THE FOLLOWING PRECAUTIONS:

GENERAL PRECAUTIONS

1. Do not get in eyes, on skin, or on clothing.
2. Do not spill or discharge contents outside of areas confined for treatment.
3. Comply with all local regulations and ordinances.
4. It is advisable to supply your physician with information on Methyl Bromide. Literature is available from your dealer or distributor.
5. 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 Phys. Sign.)

RESPIRATORY PROTECTION:

If the concentration of methyl bromide in the working area, as measured by a direct-reading detector device (such as a Draeger gas detector) does not exceed 5 ppm (20 mg/cu.m), no respiratory protection is required. If this concentration is exceeded at any time, all persons in the fumigation area must wear protective clothing and a NIOSH/MSHA approved self-contained breathing apparatus (SCBA) or combination air-supplied/SCBA respirator (such as a U.S. Divers' Survivair or comparable device).

Under normal soil fumigation conditions, the concentration of methyl bromide in the working area will not generally exceed 5 ppm as a time-weighted average and no respiratory protection is required. However, there is the possibility of a spill or leak during soil fumigation. Therefore, a SCBA or combination air-supplied SCBA respirator must be available and will be required for entry into an affected area in the event of a leak or spill.

CLOTHING PRECAUTIONS:

1. Wear loose clothing and socks that are cleaned after each wearing. Do not wear jewelry, gloves, or tight clothing when handling. Methyl Bromide is heavier than air and may be trapped inside clothing and cause skin injury. If full-face respiratory protection is not required, wear goggles or full face shield for eye protection when handling liquid.
2. Following exposure, immediately remove clothing, shoes, and socks. Do not reuse contaminated clothing or shoes until thoroughly cleaned and aerated. Drenched clothing cannot be adequately decontaminated.
3. Do not wear gloves of any type, or rubber protective clothing, or rubber boots.
4. If liquid fumigant splashes or spills on clothing, remove them at once, as fumes will be an intolerable source of irritation.

WARNING SIGNS: Structural, Transportation, Space Fumigation

1. The applicator must placard or post all entrances to the fumigated area with signs bearing in English and Spanish:
   1. A signal word DANGER/PELIGRO and the skull and crossbones [illegible]
   2. [illegible] statement, "Area under fumigation, DO NOT ENTER NO [illegible]"
   3. The date of fumigation
   4. Name of fumigant used.
   5. Name, address, and telephone number of the applicator.
2. Do not remove a placard until the treated space is completely aerated. To determine whether aeration is complete, each fumigated site must be monitored and shown to contain less than 5 ppm of methyl bromide. If less than 5 ppm methyl bromide is detected, the placard may be removed.
3. Rail cars must be placarded with D.O.T. specified warning signs. Warning signs are available from your dealer or distributor.

SPILL OR LEAK PROCEDURE:

1. Evacuate the immediate area of the spill or leak. Use SCBA or combination air-supplied/SCBA respirator for entry into the affected area to correct problem. Move leaking or damaged cylinders or containers outdoors or to an isolated location. Observing strict safety precautions, work upwind if possible. Allow spill to evaporate. Do not permit entry into spill area by unprotected persons until the concentration of methyl bromide is determined to be less than 5 ppm (20 mg/cu.m).
2. Contaminated soil, water, and other cleanup debris is a toxic hazardous waste. Report spill to the National Response Center (800-424-8802) if reportable quantity of 1000 lbs is exceeded.

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 99.5%

FOR USE ONLY BY PROFESSIONAL FUMIGATORS

ACTIVE INGREDIENTS:	
METHYL BROMIDE	99.5%
INERT INGREDIENTS:	
CHLOROPICRIN, ODORIZING AGENT	0.5%
TOTAL	100.00%

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. 8536-12

NET CONTENTS . . . . . LBS.

KEEP OUT OF REACH OF CHILDREN

DANGER **PELIGRO**

POISON

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

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.

5 of 30

PRECAUTIONS
STRUCTURAL, TRANSPORTATION, OR SPACE FUMIGATION USE

GENERAL PRECAUTIONS:

1. Keep animals, children and unauthorized people away from area under treatment until [illegible] is certified free of methyl bromide [illegible] Aeration Phase.
2. When used for fumigation of enclosed spaces (houses and other structures, warehouses, vaults, chambers, greenhouses, trucks, vans, trailers, ships and other transport vehicles and [illegible]) at least two persons trained in the use of this 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).
3. Do not fumigate with this product when the temperature is below 40 degrees F.
4. Whenever possible, apply methyl bromide from outside of structure or car being fumigated. Make sure the fumigated area is properly sealed and posted. Do not move trucks, trailers, or vans during fumigation. They must be completely aerated before movement is allowed.

AERATION AND REENTRY:

1. After fumigation, treated areas must be aerated until the level of methyl bromide is below 5 ppm (20 mg/cu.m).
2. Do not allow entry into the treated area by any person before this time unless loose clothing and a respiratory protection device (SCBA or combination air-supplied/SCBA) is worn.

PRECAUTIONS
SOIL FUMIGATION USE

PRIOR TO FUMIGATION:

1. Comply with all local regulations and ordinances. Obtain an application permit from Agriculture, Regulatory Agencies as required.
2. Never fumigate alone. It is imperative always to have an assistant and proper protective equipment in case of accidents.
3. Drivers of application equipment must advise other workers of all precautions and procedures. In addition, drivers must instruct their helpers in the mechanical operation of the tractor and how to safely work with the tractor and driver while fumigating.
4. Handle this fumigant in the open, with the operator "up wind" from the container where there is good ventilation.
5. Check fumigant pressure system for leaks before beginning operation.
6. Two trained persons must be present during introduction of the fumigant.
7. When fumigating soil from a tractor, 5 gallons of water must be carried on the tractor and placed where it is readily accessible. In addition to water available on the tractor, at least 5 gallons of additional water must be available from the service truck. This water must be potable and in containers marked "decontamination water not to be used for drinking."
8. Field should be reasonably free of trash before starting the fumigation.

DURING FUMIGATION:

1. This fumigant should not be applied when there is an atmospheric inversion. Since uncomfortable concentrations of chloropicrin may drift to nearby areas, immediately cover treated area with plastic tarpaulin for a minimum of 48 hours when the injection depth is less than 10".
2. Do not lift injection shanks to turn at the end of a pass until fumigant has drained from system following closure of shutoff valve.
3. If trash is inadvertently pulled by the shanks to the ends of the field when fumigating, it must be covered by lifting the shanks, then covering the trash with polyethylene film before making the turn for the next pass.
4. When charging the tractors, be certain they are turned off and fumigant system is not under pressure. Do not open the system when there are people or structures downwind where exposures above the permissible exposure levels could occur.

FOLLOWING FUMIGATION:

1. Post all treated areas with warning signs, available from your dealer or representative.
2. No children, unauthorized people, or animals should be in the fumigation area for 48 hours.
3. When tarpaulin is used, two trained persons must be present during removal of the tarpaulin.

SPILL AND LEAK PROCEDURE:

1. In case of a rupture of hose or fitting while applying under pressure, immediately stop tractor and motor. Evacuate immediate area of spill or leak. Use SCBA or combination air-supplied/[illegible] respirator for entry into affected area to correct the [illegible] upwind to make necessary repairs. [illegible] respiratory protection until spill [illegible] is stopped and the [illegible] is fixed.

NOTE CAREFULLY

Fumigation may temporarily raise the level of ammonia nitrogen and soluble salts in the soil. This is most likely to occur when heavy rates of fertilizer and fumigant are applied to soils that are either cold, wet, acid, or high in organic matter. To avoid injury to plant roots, fertilize as indicated by soil tests made after fumigation. To avoid ammonia injury and/or nitrate starvation to crops, avoid using fertilizers containing ammonium salts and use only fertilizers containing nitrates until after the crop is well established and the soil temperature is above 65 degrees F. Liming highly acid soils before fumigation stimulates nitrification and reduces the possibility of ammonia toxicity.

DIRECTIONS FOR USE

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

STORAGE AND DISPOSAL

STORAGE AND HANDLING:

Store in dry, cool, well-ventilated area under lock and key. Post as a pesticide storage area. Do not contaminate water, food, or feed by storage. Persons moving or handling containers should wear protective clothing. Open container only in a well-ventilated area wearing protective clothing, and respiratory protection if necessary. Store cylinders upright, secured to a rack or wall 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, 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 onto valve outlet, and replace protection bonnet before returning to shipper. Only the registrant 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:

Soil Chemicals Corporation
8770 HIGHWAY 25
Hollister, CA 95023

Soil Chemicals Corporation
2060 East 220th Street
Long Beach, CA 90810

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

SHIPPING:

This fumigant is classified in the U.S. Department of Transportation Hazardous Materials Regulations as Methyl Bromide Liquid or Methyl Bromide and Nonflammable Non-liquified compressed gas mixture, Liquid, class "B" poison (inhalation hazard), and no exemptions from specifications, packaging, marking or labeling are allowed. Describe empty cylinders as having last contained Methyl Bromide Liquid or Methyl Bromide and Nonflammable, Non-liquified compressed gas mixture, Liquid (inhalation hazard). Do not ship with foods, feeds, or clothing.

DISPOSAL:

Do not contaminate water, food, or feed by storage or disposal. Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate 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.

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 this product is specifically identified and addressed, in an NPDES permit. Do not discharge effluent containing this product to sewer systems without prior notification of the sewage 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 dissipate 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, flame can change the chemical to produce some corrosive damage to items in the space being fumigated. Pilot lights and growing fire heaters should be turned off.

Do not apply gas directly to metal surfaces because of possible corrosive effect or certain metals. [illegible] containers or application equipment made of magnesium [illegible] or their alloys.

The following materials can develop an [illegible] when encountered in structures, fumigation and a mild [illegible] the space being fumigated.

1. Furnishings: [illegible] Any kinds of materials that contain residue [illegible] such as some soap powders, some baking [illegible] salt blocks used for cattle licks.
2. Certain rubber goods: (a) Sponge rubber [illegible] rug padding, pillows, cushions and mattresses. (b) Rubber [illegible] and other similar forms of reclaimed rubber.
3. [illegible]
4. [illegible] dyes tanned with sulfur [illegible]
5. [illegible] any engine [illegible] and some [illegible] the fumigation of [illegible] woolen [illegible]
6. Viscose [illegible] a process in which carbon disulfide is [illegible]
7. [illegible] used in [illegible] fibers.
8. Photographic chemicals as used in [illegible] does not include camera film.
9. Cinder blocks or mixed concrete which [illegible] where.
10. Any materials that may contain reactive sulfur [illegible] THESE PRODUCTS MAY HINDER EFFECTIVENESS OF [illegible] Charcoal materials (charcoal [illegible] reducing the effective concentration and consequently [illegible] the charcoal).
11. 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.

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.

SPACE FUMIGATION

DIRECTIONS FOR USE:

METHYL BROMIDE 99.5% is intended for professional use in empty mills, warehouses, borders, fumigation vaults, under sealed tarpaulins, flat or upright bulk grain storages for the control of all stored product insects including grain beetles, granary weevil, rice weevil, cadelles, mites, and meal worms.

METHYL BROMIDE 99.5% may also be used for the control of structural insect pests such as dry wood termites, lyctus or powder post beetle, old house borer, death watch beetle, and such household pests as roaches, bedbugs, spiders, ants, millipedes, carpet beetles, clothes moths, mice and rats, in dwellings, garages, barns, storage buildings, and other structures infested with these pests.

RATES OF APPLICATION:

For general fumigation at temperatures above 70°F, use 1-3 pounds Methyl Bromide 99.5% per 1,000 cu.ft. for 16-24 hours exposure time. Under adverse conditions, increase the dosage from 3 1/2 to 3 3/4 pounds per 1,000 cu.ft. fumigation rate.

DANGER:

Thoroughly aerate building after application. Do not fumigate food products other than those specified in directions and do not use dosages higher than recommended as this can, in some cases, result in residues in excess of those permitted. Do not use Methyl Bromide 99.5% in dairy, cheese, or meat plants, or on fresh fruits or vegetables. Do not fumigate if (1) grain moisture is high; (2) grain temperature is low (below 60°F); or (3), there is excessive dockage.

PREPARATION FOR FUMIGATION:

Remove from the structure to be fumigated all persons, domestic animals, pets, fish, and growing plants. Remove from the premises or place in polyethylene bags (thickness not less than 4 mils.), all foods and medicants. Polyethylene bags must be sealed with masking tape or clamps. Extinguish all flames including pilot lights. Open all doors and accesses to crawl spaces, attics, and sub-floors. 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:

Release Methyl Bromide from outside of structure through a heat exchanger or suitable leak proof tube (such as polyethylene) attached to an evaporating pan to prevent splashing over interior. If it is necessary to release fumigant from inside of structure, a S.C.B.A. must be worn as described in Precautionary Statements. Operate electric fan(s) for a minimum of 30 minutes after release to accelerate distribution of gas. Relative to the complexity of the structure to be fumigated more than one release location may have to be set up.

AERATION AND REENTRY:

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/MSHS 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 seven 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 on an interior and a perimeter wall; (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 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 [illegible] cubic feet of air per minute. To facilitate aeration, exterior openings such as windows, vents, or an access door to the [illegible] should be utilized. The structure must be aerated with the fans [illegible] a minimum of [illegible] hours. (B) After aeration is completed, the level of methyl bromide in the structure must be measured using a gas detector 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 on 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 [illegible] hours. At the end of the [illegible] 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.

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 [illegible] should be utilized. The structure must be aerated with the fans operating from 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 on 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 hour 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.

DRAEGER GAS DETECTOR, BENDIX GASTECH DETECTOR: (Hand Pump and Detector Tube) Methyl bromide may be detected at the Reentry Level of 3 ppm. Detectors are available from your dealer or distributor.

PREPLANT SOIL FUMIGATION

METHYL BROMIDE 99.5% may be used as a preplant soil fumigant for land in which plants may be grown for nonfood crop uses. These uses are for seed and plant beds, nurseries and permanent planting sites for tobacco, lawns, and other ornamental and recreational turf areas, forest and shade trees, ornamental flowers, vines and shrubs and other similar plants. Methyl Bromide 99.5% may be used in vegetable seed beds for production of plants that are later transplanted in untreated soil or soil treated to label directions for registered products, and in orchard and vineyard planting sites and soils where tomatoes, strawberries, pineapple, peppers, muskmelons, cauliflower, broccoli, lettuce, onions, asparagus, and eggplants are to be grown for food.

APPLICATION

SEED AND PLANT BEDS: (Plants Grown For Transplanting)

Prior to planting, apply Methyl Bromide at the rate that appears in the dosage table by means of tractor mounted chisels spaced 12 inches apart and at a depth of 5 - 8 inches below the soil surface. To seal fumigant after application, cover immediately with a gas-tight tarpaulin by means of a mechanical tarp layer. Do not remove tarpaulin until after the proper exposure period indicated on the dosage table has passed. Prior to fumigation, the soil should be in seed bed condition with adequate moisture to support seed germination. The soil should be worked to the depth it is desirable for the fumigant to penetrate. Plant refuse should be worked into the soil and time allowed for refuse to decompose before treatment.

TURF, NURSERIES, AND FLORAL CROPS:

Follow directions for seed and plant beds. If fumigating old turf, the soil should be worked up before fumigating. It is desirable that the old turf be incorporated into the soil by rototilling, discing, or plowing. Rate and exposure time is indicated in the dosage table

TOMATOES, STRAWBERRIES, BROCCOLI, LETTUCE, MUSKMELONS, EGGPLANTS, ASPARAGUS, PEPPERS, ONIONS, CAULIFLOWER:

Follow directions for seed and plant beds. Rate and exposure time is indicated in the dosage table. Row or bed applications may be made at the broadcast rates but the amount used will be proportionately less per acre depending on the row spacing and width of treatment in the row or bed.

PINEAPPLE:

Prior to planting pineapple, apply methyl bromide at a rate specified in the dosage table by means of tractor mounted chisels set not more than 5 1/2 feet apart and at a depth of 12-18 inches. To seal fumigant, cover immediately with pineapple bed mulch film dispensed by a sled mounted on the same tractor. Pineapple propagules may be planted through the bed mulch film 7 or 14 days after fumigation.

GRAPES:

Prior to planting, apply Methyl Bromide at the rate that appears in the dosage table by means of tractor mounted chisels spaced not more than 5 1/2 feet apart. Inject the Methyl Bromide at a depth of not less than 12 inches. To seal fumigant after application for disease control, cover immediately with a gas-tight tarpaulin by means of a mechanical tarp layer. Do not remove tarpaulin until after the proper exposure period indicated in the dosage table has passed. For nematode control, seal soil immediately after application of the fumigant by discing or similar operation. Prior to application, the soil should be ripped to not less than 30 inches and the subsurface should be as dry as possible. Excess moisture will block deep penetration of the Methyl Bromide. Peat soils and soils very high in organic content [illegible] to fumigated to control Armillaria mellea with Methyl Bromide. Dry soils and soils that drain poorly may be dried out by planting sudan grass and withholding water from it during the [illegible] months. Increase penetration of Methyl Bromide. Back [illegible] and sampling are alternative methods of applying Methyl Bromide [illegible] time site. Attach a Methyl Bromide dispenser to the [illegible] tractor [illegible] and to it attach a polyethylene [illegible] the current 4 stage [illegible] the area to with the dispenser [illegible] injected through the tube.

DECIDUOUS FRUITS, NUTS, CITRUS, VINEYARDS, AND OTHER PERENNIAL CROPS:

Do not harvest crop for 24 months after fumigation. [illegible] planting, apply Methyl Bromide at a rate and exposure time [illegible] indicated in the dosage table. To seal fumigant after [illegible] for disease control, cover immediately with a gas-tight [illegible] by means of a mechanical tarp layer. For nematode [illegible] soil immediately after application of the fumigant by [illegible] similar operation. The soil should be ripped to not less than [illegible] inches and the subsurface should be as dry as possible. Excess moisture will block deep penetration of the Methyl Bromide. Peat soils and soils very high in organic content [illegible] fumigated to control Armillaria mellea with Methyl Bromide. Dry soils and soils that drain poorly may be dried out by planting sudan grass and withholding water from it during the [illegible] months. Increase penetration of Methyl Bromide. Back [illegible] and sampling are alternative methods of applying Methyl Bromide [illegible] time site. Attach a Methyl Bromide dispenser to the [illegible] tractor [illegible] and to it attach a polyethylene [illegible] the current 4 stage [illegible] the area to with the dispenser [illegible] injected through the tube.

BACK HOEING: Field tests have demonstrated that this is an effective method for preparing the replant site for fumigation, especially in areas where a hardpan has developed through compaction of the soil. The size of the prepared site is dependent upon the degree of soil compaction. Deeply compacted soil requires preparation of a site the size of the "planter box" in which the tree is to be grown. For stratified soils, a single cut the width of the back hoe, 5 feet deep and 6 feet long is satisfactory. Back fill site with 2 feet of soil, place applicator tube at this level, complete back fill, and release entire dose of fumigant for 100 square feet tree site. When fumigant has been released, remove tube and tamp soil lightly over opening to seal fumigant in the site.

AUGERING: This method is suitable in nonwompacted soils or soils that are lightly stratified. Dig hole 5 feet deep with auger, back fill hole two feet, insert applicator tube, fill hole and release entire dose of fumigant for 100 square feet tree site. When fumigant has been released, remove applicator and tamp or compact hole with soil to prevent too rapid escape of fumigant.

DOSAGE AND EXPOSURE TABLE FOR SOIL FUMIGATION WITH METHYL BROMIDE

PEST CONTROL DESIRED	TYPE OF SOIL AND/OR CROP	DOSAGE*	MIN EXP	AERATION TIME BEFORE PLANTING
Nematodes Weed Seeds Insects	TURF RENOVATION. Lawns And Other Recreational Turf Areas.	400-500 lb/A	48 hrs	3 days
	NONFOOD AND NONFEED CROP AREAS Food and Plant Beds for Tubers, Flowers, Shade and Forest Trees, Ornamental Shrubs and Vines. Vegetables for production of transplants only. Floral and Nursery Crops	400-500 lb/A	48 hrs	3 days
Damping off diseases such as Pythium Rhizoctonia Fusarium	TURF RENOVATION: Same sites as listed above	800 lb/A	48 hrs	14 days if planted to transplants 3 days if seeded
	NONFOOD AND NONFEED CROP AREAS Same plants as listed above Vegetables for production of transplants only Flora. and Nursery Crops	800 lb/A	48 hrs	14 days if planted to transplants 3 days if seeded
Nematodes Weed Seeds Insects	Permanent Planting For Tomatoes, Strawberries Pineapples, Mushrooms Eggplants, Peppers, Broccoli, Cauliflower	200-400 lb/A	48 hrs	3 days if seeded 7-14 days if vegetable growth set in treated soil
Crown rot fungus Armillaria root rot Phytophthora root rot Nematodes (root knot-citrus, lesion, pin, ring, and dagger)	GRAPES: For control of Nematodes in light sandy soils and fine textured clay soil	400-800 lb/A	5-7 days	14 days
	Control Phytophthora in light sandy soil and fine textured clay soils	800 lb/A	5-7 days	14 days
	Control of Armillaria in light sandy soils.	400 lb/A	5-7 days	14 days
	Control of Armillaria in fine textured clay soil:	800 lb/A	5-7 days	14 days
Armillaria root rot Phytophthora root rot Crown rot fungus Citrus Nematodes Burrowing Nematodes	DECIDUOUS FRUITS OTHER CITRUS, AND OTHER PERENNIAL WOODY CROPS Control of Phytophthora root rot	400-650 lb/A	5-7 days	14 days
	Control of Armillaria root rot in sandy light soil and fine textured clay soil	400-650 lb/A	5-7 days	14 days
Root knot Nematodes	CITRUS: For control of burrowing and root knot Nematodes	400-650 lb/A	5-7 days	In colder climates treat in fall and plant following spring
	TREE SITES: For control of Phytophthora root rot:	1-1½ lb/ 100 sq ft.	5-7 days	In warmer climates do not plant until 30 days after application
	Control of Armillaria root rot in light sandy soils	1-1½ lb/ 100 sq.ft	5-7 days	
	Control of Armillaria in fine textured clay soil	1-1½ lb/ 100 sq ft	5-7 days	

* Do not treat when temperature is below 50°F

FOR USE WEST OF ROCKY MOUNTAINS ONIONS, DIRECT SEEDED

APPLICATION	Treatment can be made whenever soil conditions are suitable. In northern states, late summer or early fall treatments are best for land to be planted to early spring crops. Follow application directions as described for SEED AND PLANT BEDS.
USE	For control of White Rot weeds (grasses and nematodes
DOSAGE	300 lbs Acre
EXPOSURE	Seals tarpaulin after 48 hrs
AERATION	Aerate 7-14 days before plant
LIMITATION	Use restricted to west of the Rocky Mountains. Do not treat any field more than once every twelve months

FOR USE IN CALIFORNIA ONLY
ASPARAGUS AND LETTUCE

APPLICATION: Follow application directions as described for SEED AND PLANT BEDS.

DOSAGE AND USE TABLE

CROP	USE	RATE	AERATION*
Asparagus	Fungus diseases (damping off, Phythium spp) Weeds (grasses). Nematodes	300-400 lbs/A	Remove tarpaulin after 48 hrs.
Lettuce	Weeds (including oxalis) Nematodes	300-400 lbs/A	Remove tarpaulin after 48 hrs.
	Rip Vein	200-300 lbs/A	Remove tarpaulin after 48 hrs

* Aerate 14 days before planting.

LIMITATIONS: For use in California only. Do not harvest asparagus during year of treatment. Use on lettuce fields only once in 2 to 3 years.

FOR USE IN FLORIDA
CITRUS CONTROL OF PHYTOPHTHORA IN SANDY SOILS

This is preplant or replant treatment. Trees which are planted in this treated soil will not bear harvestable fruit for a period of at least 24 months. Use a minimum of 1 to 1 1/4 pounds per 100 square feet. Expose to fumigation for 48 hours, covering treated area with a 4 mil. tarpaulin. Will control disease to a depth of 4 feet. Aerate 2 weeks before setting transplants in treated area.

GREENHOUSE FUMIGATION

This fumigant may be used in field or in greenhouse. When used in greenhouse, the following safety precautions must be strictly observed:

PRIOR TO FUMIGATION: The use of methyl bromide in confined spaces presents a potential hazard to humans and plant life. Special precautions must be made in order that these potential hazards be minimized. It is the responsibility of the individual supervising the fumigation operation to see that all safety precautions are strictly observed. Before the fumigation operation commences, the supervisor of the fumigation job shall have conducted proper training of all personnel involved in the fumigation (including use of safety equipment), removed all persons from the area not directly involved in the fumigation, and inspected the equipment to insure a proper aeration.

DURING FUMIGATION: If a wind is blowing, all injections should be made upwind from a previous injection site. Immediately after injection of the fumigant and tarping, a qualified person wearing protective equipment should monitor the area with a halide leak detector. If excessive leaks are found, the source of the leak should be resealed immediately. During this operation, all windows and doors should be open and fans operating to maximize ventilation.

PLACARDING OF AREA: The fumigated area must be placarded or all entrances with signs containing at least the signal word DANGER and the "Skull and Crossbones" and the words, "Area under fumigation, do not enter until completely aerated."; the date of fumigation; name of the fumigant used; emergency telephone number for contact; and the name and address of the fumigator. Do not remove warning signs until the fumigated area is completely aerated and safe for entry as indicated by a suitable detector. Exposure time should be 24 - 48 hours

PROTECTIVE EQUIPMENT: Although fumigant contains chloropicrin, the absence of chloropicrin does not always indicate the absence of methyl bromide. Under no circumstances shall any person be allowed to enter the fumigated structure without the appropriate protective equipment from the time of injection of the fumigant until acceptable readings are obtained using an approved detector. To maintain adequate safety standards, the following equipment must be present on the site during the entire fumigation operation: (1) One or more self-contained breathing apparatus; (2) One of more replacement air bottles per breathing apparatus; (3) One or more halide leak detectors.

A 5 a maximum exposure level for Methyl Bromide has been established. This level has been defined as the concentration below which personal protective devices are not required. Persons not wearing protective equipment should not enter the fumigated area until monitoring devices show Methyl Bromide concentrations of 5 ppm or less

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. To the extent this warranty nor any other warranty of MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, express or implied, extends to the use of this product contrary to label instructions or under abnormal conditions, or under conditions not reasonably foreseeable to seller and buyer assumes the risk of any such use.

Supplemental Manual

MB-1

ACCEPTED
with COMMENTS
in EPA Letter Dated:

JUL 10 1992

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 8536-12

METHYL BROMIDE

SAFETY INFORMATION

6/92

12 of 20

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_2O = 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

13 of 20

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.

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, which operates with a gas flame, is the easiest and most useful means of determining the presence or absence of harmful concentrations of methyl bromide gas. The 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 hot copper plate. If air contains methyl bromide, a green or blue flame will be seen in the torch, depending on the concentration.

If used properly, it will help to eliminate some of the practical hazards to the fumigator, and detect excessive leaks in a building. Halide detectors are available from refrigeration supply houses and some hardware stores.

Please note that the Halide Gas Detector operates with an open flame and, therefore, can be a hazard where dust or other flammable materials are present. However, this type of detector can be used to determine whether areas in or around a mill are free from hazardous concentrations of the gas by simply drawing the air and gas from the building through 1/4" (.635cm) plastic or copper tubing to suitable outside areas where the use of this instrument is safe. For instance, areas in and around the top of a building can be checked from atop the roof, or gas from areas around the bottom of the building can be checked on the ground out-of-doors.

15 of 20

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 #13b.
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.

16020

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.

17 of 20

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.

Why 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.

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.

<u>Nervous system, eyes, and respiratory irritations</u>: 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 - 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.

19 of 20

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.

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:

20 of 20

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

LABELING FOR END-USE PRODUCTS:
The label language for Fumigation of Residential and Commercial structures: Aeration and Reentry would be the same as for manufacturing-use products except the introductory paragraph concerning formulation into end-use products would be omitted.