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 distribute 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".
Reverse the order of the words in the heading "Aeration and Reentry: 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)
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.

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

OBSERVE THE FOLLOWING PRECAUTIONS:

GENERAL PRECAUTIONS:
1. Do not eat 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. Do not allow conditions which could accidentally cause further exposure until recovery is complete. See HAZARDS TO HUMANS AND DOMESTIC ANIMALS:

RESPIRATORY PROTECTION:
If a concentration of vapor exudes in the working area, as indicated by a direct-reading detector device (such as a passive gas detector), use an approved respirator. If not, no respiratory protection is required. If the concentration is excessive at any time, all personnel in the fumigation area must wear respiratory protection and clothing and a NIOSH/OSHA approved self-contained breathing apparatus (SCBA) or equivalent air-supplied/SCBA respirator (such as a U.S. Divers' Survivair or equivalent), as necessary.

CLOTHING PRECAUTIONS:
1. Use clothing and shoes that are cleaned after each user.
2. Do not wear jewelry, gloves, or tight clothing when handling hazardous materials.
3. Use shoes that have not been exposed to hazardous materials.

WARNING SIGNS:
Structural, Transporation. These precautions are for notifying the public of an emergency.
1. All exits are to be clearly signed to assure the public of their safety.
2. Do not enter a building until the gas has been completely removed.
3. Do not allow any person to enter unless they are authorized.
4. Do not open the door to a building until a gas detector has been used.

SPILL OR LEAK PROCEDURE:
1. Contain the immediate area of the spill or leak by using a self-contained air-supplied/SCBA respirator for each person involved. If the site cannot be protected to prevent contact, the spill or leak should be contained with highly absorbent materials. Notify the appropriate authorities immediately. If the spill or leak is less than 50 cubic feet (1.4 m³) in size, wash with water. If the spill or leak is greater than 50 cubic feet (1.4 m³) in size, notify the appropriate authorities immediately.
METHYL BROMIDE 99.5%
FOR USE ONLY BY PROFESSIONAL FUMIGATORS

ACTIVE INGREDIENTS:
METHYL BROMIDE 99.5%

INERT INGREDIENTS:
CHLOROPICILLIN, ODORIZING AGENT 0.5%

TOTAL 100.00%

SOIL CHEMICALS CORPORATION
P.O. BOX 783 HOLLISTER, CA 95023
E.P.A. EST. 8536-CA-1,2,3,4;FL-1
E.P.A. REG. NO. 8536-12

KEEP OUT OF REACH OF CHILDREN
DANGER PELIGRO
POISON

WARNING: It is a violation of Federal law to use this pesticide in a manner inconsistent with its labeling. Usage inconsistent with proper labeling may lead to health problems and may constitute an illegal violation of Federal law.

PRECAUTIONARY STATEMENTS: If used properly, this product will function as intended and is not considered to be hazardous. For best results use as directed.

SAFE HANDLING INSTRUCTIONS: Read and follow all directions and warnings on this product's label. Keep out of reach of children. Do not eat, drink, or smoke when using this product. This product contains a pesticide that may be hazardous if inhaled, swallowed, or absorbed through the skin. Use this product with caution. Use only as directed on the label. Read and follow the instructions and warnings on the product label.

IN CASE OF OVEREXPOSURE, GET MEDICAL ATTENTION IMMEDIATELY. TAKE PERSON TO A DOCTOR OR TO AN EMERGENCY TREATMENT FACILITY.

STATEMENT OF PRACTICAL TREATMENT

INHALATION: 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.

IN CASE OF SKIN CONTACT: Immediately, rinse contaminated clothing and other items. Rinse skin area thoroughly with soap and water.

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

IN CASE OF SHOPPING: Early symptoms of overexposure are dizziness, headache, nausea, 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 irritability, with probable recovery after a period of no exposure. Blood bromide levels suggest the occurrence, but not the degree, of exposure. Treatment is symptomatic.

For additional Precautionary Statements,
See Back Panel
PRECAUTIONS
STRUCTURAL, TRANSPORTATION, OR SPACE FUMIGATION USE

GENERAL PRECAUTIONS:
1. Keep all A. tritici and unauthorized people away from the area being fumigated. This is the general rule for the entire area.
2. Never cook food in metal kettles or any other object in the area before the fumigation is complete. Once the fumigation is complete, it is safe to cook food in metal kettles or any other object in the area.
3. Use water on all fumigation areas to prevent any fires or accidents from occurring. Use water on all fumigation areas to prevent any fires or accidents from occurring.
4. Be sure to vent the area before the fumigation is complete. This is important to prevent any fires or accidents from occurring.

AERATION AND REENTRY:
1. After fumigation, treated areas must be aerated until the level of methyl bromide is below 0.05 ppm (20 ug/ml). The fumigated area is now considered clean and can be used for any purpose.
2. The treated area is considered clean and can be used for any purpose.

SOIL FUMIGATION USE

PRIOR TO FUMIGATION:
1. Make sure the soil is dry before fumigating. This is important to prevent any fires or accidents from occurring.
2. Make sure the soil is dry before fumigating. This is important to prevent any fires or accidents from occurring.
3. Make sure the soil is dry before fumigating. This is important to prevent any fires or accidents from occurring.

FOLLOWING FUMIGATION:
1. After fumigation, the treated area must be aerated until the level of methyl bromide is below 0.05 ppm (20 ug/ml). The fumigated area is now considered clean and can be used for any purpose.

DIRECTIONS FOR USE
It is a violation of federal law to use this product in any manner inconsistent with the labeling.
STORAGE AND DISPOSAL

STORAGE AND HANDLING:
Store in dry, well-ventilated area under lock and key. Pest proof storage area. Do not concentrate water, food, or feed by storage. Persons handling or managing containers should wear suitable protective clothing. Do not store containers within 5 feet of storage area. Store cylinders upright, except during loading or unloading. Keep cylinders out of reach of children. If necessary for transport, raise cylinder with at least a 3-foot high barrier between cylinder and vehicle. Always keep cylinders in their original container. Do not use pens, pens, pencils, or any other devices to unload cylinders. Transport cylinders using TPE-2. Ensure truck or other device to which the cylinder can be firmly secured. Do not store cylinders near flammable liquids or other hazardous materials. Always check safety caps and safety valves before use. Replace safety caps and valves if protection is not intact. When cylinder is empty, close valves, screw safety cap onto valve outlet, and replace protection 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 owned by Bell Chemical Corporation. Return cylinders in good condition and in original container. Cylinders should be returned promptly by carrier or freight. Do not return cylinders without safety caps or valve protection. When a cylinder is partially full and there is no further requirement for the product, contact Bell Chemical Corporation or the nearest EPA regional office for instructions.

SHIPPING:
This material is classified in the U.S. Department of Transportation Hazardous Materials Regulations as nonhazardous. Liquid, class A, nonhazardous. Nonhazardous compressed gas, liquid, class B, nonhazardous. Liquid, class C, nonhazardous. No exemptions from specifications, packaging, marking, or labeling are allowed. Describe empty cylinders as having last contained methyl bromide liquid or methyl bromide and phosphine. Nonhazardous compressed gas mixture. Liquid, nonhazardous. Do not use for food, feed, or clothing.

DISPOSAL:
Do not contaminate water, food, or feed by storage or disposal. Pesticide waste is toxic, improper disposal of excess pesticide, its byproducts, or rinse water is a violation of federal law. If these wastes cannot be disposed of by use as indicated above, contact your state or local waste management authority for disposal instructions.

ENVIRONMENTAL HAZARD
This pesticide is toxic to wildlife. For directed animal control, use methods that will minimize exposure of nontarget species. Use the proper equipment to protect yourself from exposure to the pesticide. Follow the instructions for the proper use of the equipment. This material is classified as a pesticide. Contact your state or local environmental agency for disposal instructions.

CHEMICAL HAZARD
Gas, bromo methane. Manually inhaled. Inhaled gas exposure or ingestion of this material is hazardous to health. Ingestion of this material is hazardous to health. Use appropriate personal protective equipment when handling this material. This material is classified as a pesticide. Contact your state or local environmental agency for disposal instructions.
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 precautionary instructions and directions. Failure to follow precautions and directions included on this label may result in injury to personnel. All persons working with this fumigant must be knowledgeable about the hazards and trained in the use of personal protective equipment and detection devices. Emergency procedures and proper use of the fumigant.

SPACE FUMIGATION

DIRECTIONS FOR USE:

METHYL BRONDE 99.8% is intended for professional use in empty silo, warehous, bins, fumigation vaults, under sealed tarps, etc. or upright bulk grain storages for the control of all stored-product insects including grain beetles, granary weevil, rice weevil, endles, mites, and dead pests.

METHYL BRONDE 99.8% may also be used for the control of structural insect pests such as wood termites, lice of poultry, ants, roaches, bed bugs, and other household pests. For use with, or in connection with, the normal and standard venting systems of commercial, domestic, or portable structures, such as houses, apartments, hotels, garages, and similar. Threshold levels of 2.7 to 4.5 g/m³ of the fumigant in air as vapor or mist is effective for the control of household pests, including: cockroaches, ants, roaches, bed bugs, and other household pests. This fumigant is also suitable for use in the control of pests in buildings, garages, barns, storage buildings, and other structures infested with these pests.

RATES OF APPLICATION:

For general fumigation at temperatures above 70°F, use 2-3 pounds of methyl bromide 99.8% per 1,000 cu. ft. for 7-24 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 exhaust building after application. Do not fumigate food products, smoke, or other than those specified in directions and do not use doses higher than recommended in this fum. In some cases, results in reduced to minor. Do not use methylene bromide in dairy, cheese, or meat plants, or on fresh fruits or vegetables. Do not use if (1) grain moisture is high, (2) grain temperature is low (below 60°F), or (3) there is excessive moisture.

PREPARATION FOR FUMIGATION:

Secure the structure to be fumigated and secure all personnel, domestic animals, pets, and surrounding plants away from the premises or place the fumigant in a suitable place. Make all necessary preparations so that the structure is ready for fumigation. Do not fumigate when the temperature is below 60°F. The fumigant should be released at a rate not exceeding 400 cubic feet per minute per 1,000 cubic feet of structure. The structure should be isolated from all other buildings, vehicles, and other sources of the fumigant. The structure should be isolated from all other buildings, vehicles, and other sources of the fumigant.

FUMIGATION:

Release methyl bromide from outside of structure through a heat exchanger or deodorant, leak proof, tube (such as polyethylene or metal). The gas will be released at an even temperature, not exceeding 50°F. The structure will be isolated from all other buildings, vehicles, and other sources of the fumigant. The structure will be isolated from all other buildings, vehicles, and other sources of the fumigant. The structure will be isolated from all other buildings, vehicles, and other sources of the fumigant. The structure will be isolated from all other buildings, vehicles, and other sources of the fumigant.

APPLICATION AND REENTRY:

FUMIGATION FOR RESIDENTIAL OR COMMERCIAL STRUCTURES

Aeration and Reentry: At the end of the exposure period, after all tarps are removed or sealed, the structure must be aired out for a minimum of seven days before the tarps are removed. After aeration is complete, the structure must be vacated and all necessary precautions must be taken to prevent future fumigations.
PREPLANT SOIL FUMIGATION

METHYL BROMIDE 99.9% may be used as a preplant soil fumigant for land in which plants may be grown for semelflowering crops. These uses are for seed and plant beds, nurseries, and permanent planting sites for tobacco, onion, and other ornamental and recreational turf areas, forest and shade trees, ornamental flowers, vines and shrubs, and other similar plantings. Methy1 bromide 99.9% may also be used in vegetable crops, flowers, coffee, fruit trees, and evergreens planted in untreated soil or soil treated to label directions for use of products, and in orchard and vineyard planting sites and soils where tomatoes, strawberries, pineapple, pepper, melons, cantaloupe, broccoli, lettuce, onion, asparagus, and eggplant 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 sprayers 12 inches apart and at a depth of 0.5 to 1.0 inches below soil surface. In seed fumigation, use immediately after application or immediately the day after application in the cases where application is made with a gentle-airway system or by means of a mechanical fumigant. Do not apply until after harvest, or after the proper exposure period, which is indicated on the dosage table has passed. Prior to fumigation the soil should be in good condition and adequate moisture to support seed germination. The soil should be worked to the depth to allow the fumigant to penetrate. Plant refuse should be worked into the soil and time allowed for the fumigant to disappear before treatment.

TURF, NURSERIES, AND FLORAL CROPS: Follow directions for seed and plant beds, if fumigating old turf, the soil should be worked before fumigation. It is desirable that the soil be incorporated into the soil 4 to 6 inches before planting. After planting, time 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 on the broadcast rates but the amount of spray 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 the rate that appears in the dosage table by means of tractor mounted sprayers 12 inches apart and at a depth of 0.5 to 1.0 inches below soil surface. In seed fumigation, use immediately after application or immediately the day after application in the cases where application is made with a gentle-airway system or by means of a mechanical fumigant. Do not apply until after harvest, or after the proper exposure period, which is indicated on the dosage table has passed. Prior to fumigation the soil should be worked into the soil 4 to 6 inches before planting.

CRAPES: Prior to planting, apply methyl bromide at the rate that appears in the dosage table by means of tractor mounted sprayers 12 inches apart and at a depth of 0.5 to 1.0 inches below soil surface. In seed fumigation, use immediately after application or immediately the day after application in the cases where application is made with a gentle-airway system or by means of a mechanical fumigant. Do not apply until after harvest, or after the proper exposure period, which is indicated on the dosage table has passed. Prior to fumigation the soil should be worked into the soil 4 to 6 inches before planting.

DECIDUOUS FRUITS, NUTS, CITRUS, VINEYARDS, AND OTHER PERENNIAL CROPS: Prior to harvest, spray for 14 days after harvest.

PLANTING: Prior to planting, apply methyl bromide at the rate that appears in the dosage table by means of tractor mounted sprayers 12 inches apart and at a depth of 0.5 to 1.0 inches below soil surface. In seed fumigation, use immediately after application or immediately the day after application in the cases where application is made with a gentle-airway system or by means of a mechanical fumigant. Do not apply until after harvest, or after the proper exposure period, which is indicated on the dosage table has passed. Prior to fumigation the soil should be worked into the soil 4 to 6 inches before planting.

For the best available copy of this document, please refer to your dealer or distributor.
**DOSAGE AND EXPOSURE TABLE**

**FOR SOIL FUMIGATION WITH METHYL BROMIDE**

<table>
<thead>
<tr>
<th>POST-TREATMENT</th>
<th>TYPE OF SOIL</th>
<th>DOSAGE</th>
<th>MIN GAP</th>
<th>RECOMMENDED DIRECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seedlings</td>
<td>Seedbeds</td>
<td>200-300 lb/a</td>
<td>60 lb/a</td>
<td>No mobility of vapor</td>
</tr>
<tr>
<td>Seedlings</td>
<td>Nursery Site</td>
<td>200-300 lb/a</td>
<td>60 lb/a</td>
<td>No mobility of vapor</td>
</tr>
<tr>
<td>Seedlings</td>
<td>Field Sites</td>
<td>200-300 lb/a</td>
<td>60 lb/a</td>
<td>No mobility of vapor</td>
</tr>
<tr>
<td>Seedlings</td>
<td>Direct Seeded</td>
<td>200-300 lb/a</td>
<td>60 lb/a</td>
<td>No mobility of vapor</td>
</tr>
</tbody>
</table>

**APPLICATION:** Treatments can be made whenever soil conditions are suitable. In northern states, late fall or early spring treatments are best for land that will be planted in early spring crops. Follow application directions as specified for DCP and PLANT XTC.

**USE:**
- **SOILS:** 301-600 lb/a
- **TERRAIN:** 10% slope
- **APPLICATION:** Site specific application

**BEST AVAILABLE COPY**
FOR USE IN CALIFORNIA ONLY
APRICOT AND LETTUCE

APPLICATION: Follow application directions as described for BEET AND PLANT BEET.

<table>
<thead>
<tr>
<th>FOOD</th>
<th>USE</th>
<th>DOSAGE AND USE TABLE</th>
<th>AUTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Raspberries</td>
<td>Fungus Disease</td>
<td>250-500 lbs/a</td>
<td>Remove teratoma after 48 hrs. Used (greenhouse). Uses (greenhouse).</td>
</tr>
<tr>
<td>Lettuce</td>
<td>(including salad)</td>
<td>200-500 lbs/a</td>
<td>Remove teratoma after 48 hrs. Big bunch 200-500 lbs/a</td>
</tr>
</tbody>
</table>

* Leave 14 days before planting.

LIMITATIONS: For use in California only. Do not harvest apricots 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 a preplant or replant treatment. Trees which are planted in this treated soil will not bear harvestable fruit for a period of at least 12 months. Use a minimum of 1 to 1.56 pounds per 100 square feet. Expose to fumigation for 24 hours, covering treated area with a tarp. Teratoma. Will control diseases in a depth of 6 feet. Leave 2 weeks before setting transplants in treated area.

GREENHOUSE FUMIGATION

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

PRIOR TO FUMIGATION: The use of methyl bromide in confined spaces presents a potential hazard to human and plant life. Special precautions must be taken in order that these potential hazards may be avoided. It is the responsibility of the individual supervising the fumigation operation to see that all safety precautions are strictly observed. Before the fumigation operation commence, the operator of the fumigation job shall be conducted proper training of all personnel involved in the fumigation (including use of safety equipment). Remotely all persons from the area not directly involved in the fumigation and inspected the equipment to ensure a proper operation.

DURING FUMIGATION: If a wind is blowing, all injection should be made outside that 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 sealed immediately.

PLACING OF AREA: The fumigated area must be plotted and all areas within with signs containing at least the signal word "warning" and the "Shall and Greenhouse" 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 expected aerated and safe for entry as indicated by a suitable detector. Exposure time should be 24 - 48 hours.

PROTECTIVE EQUIPMENT: Although fumigant contains chloroform, the sprinkling of chloroform does not always indicate the presence of methyl bromide. Under no circumstances shall any person be allowed to enter the fumigated structure without the appropriate protective equipment. The use of the form of the fumigant until acceptable precautions 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: (I) one or more self-contained respirators with attached air supply; (II) one or more halide leak detectors; (III) one or more halide leak detectors. A 5 - 10 maximum exposure level for Methyl Bromide has been established. This level has been defined as the concentration below which general protective devices are not required. Persons not wearing protective equipment should not enter the fumigated area until monitoring device show Methyl Bromide concentrations of 1 ppm or less.

WARRANTY

The manufacturer warrants that the product conforms to the requirements stated in the label. In the event the product is found to be in any way unsatisfactory, the manufacturer will, at its discretion, either replace the product or pay the purchase price of the product. The manufacturer disclaims all other warranties of merchantability or fitness for a particular purpose. The use of this product contrary to label, instructions, or under adverse conditions, or under conditions not reasonably foreseeable to seller and buyer assumes the risk of any such use.

CA 6/92
Supplemental Manual
MB-1
ACCEPTED with COMMENTS
in EPA Letter Dated
JUL 10 1992
Under the FIFRA registration,
Fumigant and Dehydrating Agent
registered, for the pesticide
registered under EPA Reg. No.
2536-12

METHYL BROMIDE

SAFETY INFORMATION

6/92
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.

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molecular Weight</td>
<td>94.94</td>
</tr>
<tr>
<td>Pounds per gallon, Liquid</td>
<td>14.4 @ 0°C</td>
</tr>
<tr>
<td>Specific Gravity, Liquid</td>
<td>1.732 @ 32°F/0°C (H₂O = 1)</td>
</tr>
<tr>
<td>Percent Volatile</td>
<td>100% (by volume)</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>38.4°F/3°C</td>
</tr>
<tr>
<td>Critical Temperature</td>
<td>194.00 °C</td>
</tr>
<tr>
<td>Refractive Index, n.</td>
<td>1.4432 @ -20°C</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>1400 mmHg @ 68°F/20°C</td>
</tr>
<tr>
<td>Viscosity, cP.</td>
<td>0.397 @ 0°C</td>
</tr>
<tr>
<td>Flash Point</td>
<td>None</td>
</tr>
<tr>
<td>Flammable Limits (At S.T.P.)</td>
<td>Lel 10%, Uel 15% with high energy ignition source</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>-94.1 °C</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>537 °C</td>
</tr>
<tr>
<td>Odor</td>
<td>None</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>1.34 gms/100 ml @ 77°F/25°C</td>
</tr>
</tbody>
</table>
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.
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.
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.
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.

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.

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.
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.