

8536-15

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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Soil Chemicals Corporation
P. O. Box 531
195 San Pedro Avenue
Morgan Hill, CA 95037

Gentlemen:

Subject: Methyl Bromide 160
EPA Registration No. 8536-15
Your Application Dated January 26, 1982

The labeling for the application referred to above, submitted in connection with your application for amended registration under Section 3(c)(7)(A) of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, is acceptable since you have agreed that you will submit and/or cite all data required for registration/reregistration of your product under FIFRA Section 3(c)(5) when the Agency requires all registrants of similar products to submit such data.

If the conditions of this amendment are not complied with, the registration will be subject to cancellation in accordance with Section 6(e) of the Act.

A stamped copy of the label is enclosed for your records.

Sincerely,

William H. Miller
Product Manager (16)
Insecticide-Rodenticide Branch
Registration Division (TS-767)

Enclosure

IRB:Miller:DCR-36633:WANG-0114C:CY:8:WANG:479-2013:2/5/82

SYMBOL ▶								
SURNAME ▶								
DATE ▶								

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

THIS FUMIGANT IS A HIGHLY HAZARDOUS MATERIAL AND MUST BE HANDLED WITH CARE ONLY BY THOSE INDIVIDUALS EXPERIENCED WITH ITS PROPER USE. CONSULT YOUR DEALER REPRESENTATIVE OR SOIL CHEMICALS CORPORATION FOR CORRECT PROCEDURE BEFORE USING. READ AND FOLLOW ALL LABEL DIRECTIONS AND PRODUCT LITERATURE SPECIFIC TO YOUR PARTICULAR REQUIREMENTS.

EXTREMELY HAZARDOUS LIQUID AND VAPOR UNDER PRESSURE

INHALATION MAY BE FATAL OR CAUSE DELAYED LUNG INJURY

LIQUID AND VAPOR CAUSE BURNS WHICH MAY BE DELAYED

OBSERVE THE FOLLOWING PRECAUTIONS:

DO NOT BREATHE VAPORS:

1. Methyl Bromide 100 has no appreciable odor. Use only with adequate ventilation. Do not enter a treated area without respiratory protection unless you have checked the area with a Halide Gas Detector to insure safe dangerous concentrations of gas are not present. If there is any doubt, wear a gas mask.

RESPIRATORY PROTECTION

A full face gas mask with an air supply (tank or canister) is recommended or wear a full face gas mask with black canister meeting specifications jointly approved by the Mining Enforcement and Safety Administration (formerly the U.S. Bureau of Mines) and by the National Institute for Occupational Safety and Health under the provision of 30 CFR, PART 11, where the vapor concentration is known to be under 2% by volume (5 lbs. per 1000 cu. ft.). Read and follow the gas mask manufacturer's recommendations, note carefully those regarding canister use periods. Empty used canisters by crushing. Canisters must never be disposed upon an open identifying agent where a canister gas leak is used.

DO NOT GET IN EYES, ON SKIN OR ON CLOTHING.

2. Should shoes or clothing become contaminated, remove at once and do not wear again until aired outside for several days.
3. DO NOT WEAR GLOVES OF ANY TYPE, ORDINARY RUBBER PROTECTIVE CLOTHING OR BOOTS.
4. DO NOT SPILL or discharge contents outside of areas confined for treatment.
5. WEAR SAFETY GLASSES when carrying Methyl Bromide 100.
6. KEEP CHILDREN AWAY FROM WHEAT SOURCE, with all handling devices.
7. Always have an assistant to aid in case of accident when releasing fumigant from inside of a structure. Wear appropriate eye respiratory protection.
8. Keep animals, children and unauthorized people away from area until treatment unit area is certified free of Methyl Bromide 100. (See caution statement).

WARNING SIGNS

Fumigated areas must be placarded on all entrances with signs containing at least the signal word DANGER and the Skull & Crossbones and the words Area Under Fumigation; do not enter until completely airtight; 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 airtight and safe for entry, as indicated by a reliable detector.

9. Boxes must be placarded with D.O.T. specified warning signs. Warning signs are available from your dealer or Soil Chemicals Corporation.
10. Comply with all local regulations and ordinances.
11. Obtain medical assistance or once in case of illness, either exposure, and do not allow conditions which could, accidentally cause further exposure until recovery is complete.
12. It is advisable to supply your physician with information on Methyl Bromide 100 available from your dealer or Soil Chemicals Corporation.

**WHEN FUMIGATING SOIL
OBSERVE THESE PRECAUTIONS:**

13. Drivers of application equipment must advise other workers of all precautions and procedures. In addition, drivers must wear their helmets as the mechanical operation of the tractor and how to safely work with the tractor and driver while fumigating.
14. Handle this fumigant in the open, with the operator "upwind" from the container when there is good ventilation.
15. Always have adequate clean water available to wash skin and/or flush eyes. 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, water available on the tractor, at least 5 gallons of additional water must be available from the service truck. The water must be drinkable but in containers marked "WATER, NOT FOR DRINKING".
16. Check fumigation system for leaks before beginning operation.
17. Do not fill injection tanks to turn at end of a pass until fumigant has drained from system following closure of shaft valve.
18. Treat pulled by the shocks to the end of the field when fumigating must be covered by lifting the shocks, then covering the track with polyethylene film before making the turn for the next pass.
19. In case of a rupture of hose or fitting while applying fumigant, immediately stop tractor and motor. Get off tractor and get to a place where the problem can be observed without exposure to fumes. Approach from upwind with respiratory protection if required, and make necessary repairs.
20. When changing the cylinders 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.
21. Post all treated areas with warning signs available from Soil Chemicals Corporation.
22. Keep all animals, children and unauthorized people away from areas under fumigation during the exposure period and during removal of fumigant.
23. 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, fertilizer as indicated by soil test made after fumigation. To avoid excessive injury or nitrate starvation, or both, 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 55° F. Limiting highly acid soils before fumigation neutralizes nitrates and reduces the possibility of ammonia toxicity.

RESTRICTED USE PESTICIDE

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 100 FUMIGANT

FOR USE AS AN AID IN THE CONTROL OF STRUCTURAL PESTS, HOUSEHOLD INSECT PESTS, STORED PRODUCT PESTS, AND AS A PRE-PLANT SOIL TREATMENT.

ACTIVE INGREDIENT: METHYL BROMIDE 100%

KEEP OUT OF REACH OF CHILDREN

DANGER POISON

**SEND FOR A DOCTOR IMMEDIATELY
IN CASE OF EXPOSURE**

STATEMENT OF PRACTICAL TREATMENT

IF INHALED — Carry Patient To Fresh Air. Call Physician At Once. Make Sure Patient Can Breathe Freely. Keep Patient Warm. Give Artificial Respiration If Breathing Has Stopped. Oxygen Should Be Administered Only By Qualified Personnel.

IF ON SKIN — Immediately Remove All Contaminated Skin Covering Including Shoes, Clothing And Adhesive Or Other Bandages. Wash Skin Thoroughly With Soap And Water. If Irritation Or Blisters Develop, Get Medical Attention. Do Not Reuse Shoes Or Clothing Until Free Of All Contamination.

IF IN EYES — Flush Immediately With Plenty Of Water For At Least 15 Minutes And Get Medical Attention.

NOTE TO PHYSICIAN — Keep Patient At Rest And Under Observation For 24 To 48 Hours.

SOIL CHEMICALS CORPORATION

P.O. BOX 531 MORGAN HILL, CALIF. 95037

E.P.A. EST. 8536-CA-1, 2, 3, 4, FL-1
E.P.A. REG. NO. 8536-15

NET CONTENTS LBS.

ENVIRONMENTAL HAZARD

The successful use of Methyl Bromide depends upon its containment during the fumigation exposure period.

Monitor the area immediately surrounding the fumigation site with a halide detector (see operation statement for halide detector use) during exposure and aeration periods to establish that dangerous levels of Methyl Bromide 100 are not present.

The high volatility of Methyl Bromide 100 means it is to be vented from spaces being fumigated and to dissipate rapidly with no hazard to surrounding areas with correct monitoring. To avoid injury to fish or other wildlife do not allow Methyl Bromide 100 to contact bodies of water with an improper disposal. (See instructions under handling and shipping for return of excess Methyl Bromide 100.)

CHEMICAL HAZARD

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

Do not apply gas directly to metal surfaces because of possible corrosive effect on certain metals. Do not use containers or application equipment made of magnesium, aluminum or their alloys. The following materials can develop undesirable colors when encountered in a structural fumigation and should be removed from the space being fumigated:

1. Foodstuffs: (a) iodized salt; (b) flour for cake flour; (c) any kinds of materials that contain reactive sulfur compounds, such as some soap powders, some baking sodas and some soft blocks used for corset lids.
 2. Certain rubber goods: (a) sponge rubber; (b) foam rubber, on-line padding, pillows, cushions, and mattresses; (c) rubber stamps and other similar forms of retained rubbers.
 3. Furs, leathers and pillows (especially leather pillows).
 4. Leather goods: particularly white kid or any other leather goods tanned with sulfur processes.
 5. Woolens: Extreme caution should be taken in the fumigation of any woolen wares, and some adverse effect has been noted on the fumigation of woolsen suits, coats, blankets, hand-knit woolsen socks, sweaters, towels and woolsen yarn.
 6. Viscose Rayons: These rayon products or manufactured by a process in which carbon bisulphide is used.
 7. Paper: (a) Silver-plating papers; (b) certain writing papers cured by sulphide processes.
 8. Photographic chemicals as used in plate processing laboratories (does not include camera film).
 9. Ink, printing.
 10. Cider apples.
 11. Mixed concrete, which occasionally picks up odors.
 12. Any materials that may contain reactive sulfur compounds.
- THESE PRODUCTS MAY INCREASE EFFECTIVENESS OF THE FUMIGANT:**
Charcoal materials — charcoal absorbs the Methyl Bromide reducing the effective concentration and softens the odor of the charcoal.
If there is a question whether a material may develop an odor, a test fumigation may be run with a small quantity of the material.

STORAGE AND RETURN OF FUMIGANT CYLINDERS

STORAGE

- Do not store with food, feeds or clothing.
- Storage areas should be:
 - (1) Secured by lock and key.
 - (2) Placed on pallets or skids.
 - (3) Away from dwellings and work areas.
 - (4) Dry and cool.
 - (5) Well-ventilated.

SPILL OR LEAK PROCEDURE

Evacuate affected area, use respiratory protection and correct problem. Move cylinder outdoors or to an isolated location. Allow to evaporate. Do not permit re-entry to area until free of fumes.

RETURN OF CYLINDERS

- (1) Cylinders are the property of:
 - Soil Chemicals Corp. 2610 E. 270th Street Long Beach, CA 90810
 - Soil Chemicals Corp. 8773 Bolso Road Highway 25 Greley, CA 95820
 - Soil Chemicals Corp. 2610 Highway 41 North Palmetto, Florida 33561
- (2) When a cylinder is empty, the valve should be closed, the safety cap screwed on the valve outlet, and the protective bonnet replaced prior to its return to the shipper.
- (3) Do not ship any cylinder without a safety cap or valve protection banner.
- (4) When a cylinder is partially full and there is no further requirement for the product, contact Soil Chemicals Corporation for return instructions.
- (5) Containers should never be refilled by the consumer or used for any other product or purpose.

SHIPPING

This fumigant is classified in the U.S. Department of Transportation Hazardous Materials Regulations as Methyl Bromide Liquid, class "B" poison, and no exemptions from specification packaging, marking and labeling are allowed. Double ended cylinders are having formerly contained Methyl Bromide liquid. Do not ship with food, feeds or clothing.

HANDLING

- (1) The valve protection banner and safety cap should be removed only when fumigant is about to be removed from cylinder.
- (2) Cylinders should never be subjected to rough handling or to abnormal mechanical shock such as dropping, bumping, dragging or sliding.
- (3) Ropes, slings, hooks, lings, and similar handling devices should not be used for unloading cylinders.
- (4) A suitable hand truck, fork truck, or similar device to which the cylinders can be firmly secured, should be used for transporting the heavier cylinders.
- (5) Never insert a tool into the banner as an aid to removal from cylinder. Serious valve damage and possible leakage may occur.

AERATION

At the end of the exposure period remove all seals and open all doors and windows that are operational. Allow for complete ventilation. Use ventilation fans whenever possible to remove fumigant from dead air pockets. To determine the completeness of aeration, use a suitable halide gas detector.

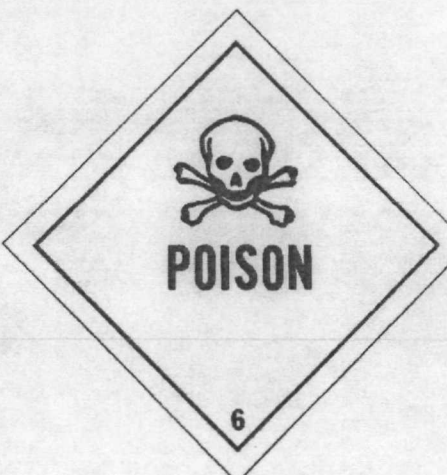
Wear a gas mask during aeration or if there is any doubt as to completeness of aeration. Certain materials absorb Methyl Bromide during fumigation and desorb during aeration may call for extended monitoring and aeration periods.

HALIDE GAS DETECTOR: Color of the flame is an index of the concentration of Methyl Bromide present. The following tabulated information provides an index of flame color and concentration of Methyl Bromide present:

METHYL BROMIDE P.P.M.	LB/1000 CU. FT.	FLAME COLOR IN DAYLIGHT
0	0	—
25	0.00625	—
50	0.0125	Moderate green
125	0.031	Green
250	0.0625	Strong green
500	0.125	Strong blue-green fringe
800	0.20	Strong blue-green
1000	0.25	Blue

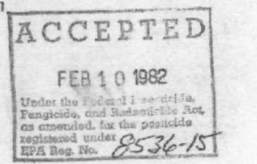
* Nighttime color is identical, but allowance must be made for the bluish cast of the flame itself.

DRAEGER GAS DETECTOR: Hand Pump and Detector Tube, range: 5 to 100 p.p.m. Methyl Bromide may be detected at the Threshold Limit Value (T.L.V.) of 15 p.p.m. DETECTORS AVAILABLE FROM SOIL CHEMICALS CORPORATION.



**NA 1581
METHYL BROMIDE,
LIQUID**

7-14-81



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DIRECTIONS FOR USE

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

SPACE FUMIGATION

AREAS TO BE FUMIGATED: Under sealed tarpaulins, in flour mills, feed mills, spice mills, textile mills, warehouses, taverns, fumigation vaults, hot or upright wash and dryers, tobacco warehouses, and cargo ships, also for use in fumigating furniture, bedding, and clothing.

INSECTS AND PESTS CONTROLLED:

Granary weevil	Dormouse sp.	Pink boll worm
Rice weevil	Domestic Grain Moth	Porto Tobacco Moth
Confused and Red Flour Beetles	Naval Orange Worm	Mealy Bug
Drift Store Beetle	Brochymyia sp.	Vegetable Weevil
Cadelle	Cowpea Weevil	Leaf Miner
Mediterranean Grain Weevil	Rusty Grain Beetle	Plum Moth
Dried Fruit Beetle	Merchant Grain Beetle	Pine Worm
Raisin Moth	European Corn Borer	Khapra Beetle
Almond Moth	Red-legged Horn Beetle	Trogodina sp.
Indian Meal Moth	European Freehorn Moth	Anthrenus sp.
Mediterranean Flour Moth	Tobacco Moth	Cigarette Beetle
Mites	Japanese Beetle	Peach Twig Borer
Sweet Potato Weevil	Red Grain Beetle	Lesser Grain Borer
Chestnut Fruit Moth	Colden Hematodes	Tobacco Beetle
Corn Borer	Hairy Fungus Beetle	White Fringed Beetle
Beet Flies	Fruit Flies of the family Tephritidae (caterpillar species)	Bombus Shrike-like Borer
Carpenter Beetle	Aphids	
Warehouse Beetle	Cloak Scale	

PREPARATION FOR FUMIGATION:

- Remove fresh fruit, seeds, bulbs and living plants from the area to be fumigated as they may be damaged during treatment. Certain food crops require fumigation at times, most of which are specified by certain countries; in such cases, follow quarantine regulations, and fumigate only those products for which a tolerance for residual bromide has been established by the U.S. Food and Drug Administration.
 - Do not fumigate food products other than those for which a residue tolerance is registered with the Environmental Protection Agency (E.P.A.).
 - Do not use dosages higher than those recommended as this may, in some cases result in residues in excess of those permitted. Respected fumigation may also result in excess residue.
 - Do not fumigate grain if: Moisture is high, temperature is low (below 60° F) or there is excessive dockage.
 - Areas to be fumigated should be covered with tarpaulins and sealed, or in the case of boxcars, buildings and cargo ships, all external openings should be closed. Seal building roof ventilators and chimneys by wrapping them with a tarpaulin, or plastic sheet, or by slipping the screened openings with a wide commercial masking tape. Door-vents and interior doors should be closed. Any broken window panes should be replaced, then exterior doors and windows should be welded tight, locked, and caps or caulked or taped. Check for cracks in the floor, roof and around eaves and seal them.
- Special care should be taken to seal partitions to adjacent storage or work areas in buildings and ships. Adjoining buildings sharing a common wall should be cleared before fumigation. If this is not feasible, spread a glossy type building paper, plastic or similar material over the wall. In the heavily sealed hull or wrapping paper to prevent spread of the fumigant into undesired areas. In all such cases where the adjoining building or ship compartment is occupied, it should be checked frequently with a Halide detector during fumigation to insure the safety of the occupants.

FUMIGATION: Release Methyl Bromide through a heat exchanger or suitable leak proof tube (such as polyethylene) from outside of structure. If it is necessary to release fumigant from inside of structure, a gas mask or S.C.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.

PROCEDURES

Ship

IMPORTANT

Shipboard, inboard ship or shiphold fumigation is also governed by U.S. Coast Guard Regulations. Refer to and comply with these regulations prior to fumigation.

Pre-fumigation Procedures

- Prior to fumigating a vessel for insect cargo fumigation, the master of the vessel or his representative, and the fumigator must determine whether the vessel is suitably designed and configured so as to allow for safe occupancy by the ship's crew throughout the duration of the fumigation. If it is determined that the design and configuration of the vessel does not allow for safe occupancy by the ship's crew throughout the duration of the fumigation, then the vessel will not be fumigated unless all crew members are removed from the vessel. The crew members will not be allowed to reoccupy the vessel until the vessel has been properly vented, and a determination has been made by the master of the vessel and the fumigator that the vessel is safe for occupancy.
- The person responsible for the fumigation must notify the master of the vessel, or his representative, of the requirements relating to personal protection equipment, detection equipment and that a person qualified in the use of this equipment must accompany the vessel with cargo under fumigation. Emergency procedures, cargo ventilation, periodic monitoring and inspections, and first aid measures must be discussed with and understood by the master of the vessel or his representative.
- During the fumigation or until a momented vessel leaves port or the cargo is unsealed, the person in charge of the fumigation shall insure that a qualified person using gas or vapor detection equipment tests spaces adjacent to spaces containing fumigated cargo and all regularly occupied spaces for fumigation leakage. If leakage of the fumigant is detected, the person in charge of the fumigation shall take action to correct the leakage, or shall inform the master of the vessel, or his representative, of the leakage so that corrective action can be taken.
- If the fumigation is not completed and the vessel berthed before the unsealed vessel leaves port, the person in charge of the vessel shall assume that at least two units of personal protection equipment and one gas or vapor detection device, and a person qualified in the operation be on board the vessel during the voyage.

Precautions and Procedures During Voyage

If necessary to enter prior to discharge, test spaces directly above grain surface for fumigant concentration, using appropriate gas detection and personal safety equipment. Do not allow entry to fumigated areas without personal safety equipment, unless fumigant concentrations are at safe levels, as indicated by a suitable detector.

* Personal protection equipment means a gas mask or respirator for the fumigator, jointly approved by the Mining Enforcement and Safety Administration and the National Institute of Occupational Safety and Health.

RATE OF APPLICATION METHYL BROMIDE 100

COMMODITY	Examples of Pests Controlled	Dosage in lbs. per 1000 cu. ft.	Exposure Time in hrs.	Minimum Temperature in °F	Estimated Aeration Time in hrs. and comments
Beans & peas, dry for export	Indian meal moth, Almond moth, cowpea weevil	2 3	24 24	60 40	12 12
Carry	Indian meal moth, Sawtoothed grain beetle	1.2	12-24	60	24
Cassia Beans (baga)	Tobacco moth, Sawtoothed grain beetle	1/5	12-24	60	12
Fruits, dried, for example: Apples, apricot, date, fig, peach, pear, grape, raisin	Indian meal moth, Almond moth, Dried fruit beetle, Sawtoothed grain beetle	3/8 1	12-24 60	50-69 60	Use forced re-circulation for bulk bins
Rice and cereal products (bags, packages)	Flour beetles, Sawtoothed grain beetle, Indian meal moth	1-2	12-24	60	24
Grain	Indian meal moth, Angoumois grain moth, Granary weevil	2	24	60	12
Barley, Oats, Rice, Wheat	Flour beetles, Rice weevil, Sawtoothed grain beetle	3	24	60	Use forced re-circulation for bulk bins
Green sorghum (Milo)	Lesser grain borer, Indian meal moth, Granary weevil	4	24	60	
Nuts	Indian storage weevil, Almond moth, Dried fruit beetle	3/5	12-24	60	24
Almond, Brazil, Macadamia, Walnut, chestnut, pecan, hazelnut, ginkgo, cedar, walnut	Fruit beetle				
Processed Foods	Sawtoothed grain beetle, Cigarette beetle, Indian meal moth	1-2	12-24	60	
Tobacco	Tobacco moth, Tobacco beetles	2	48-72	45-70	24
Yucca (chamber)		4	4	70	4
Hop (Africa)	Sawtoothed grain beetle, Angoumois grain moth	1	16-24	70	24
Lumber	Lycite or powder sprig beetles	2	24-36	60	12
Mac. with or without bag; wood shales	Indian meal moth, Lycite or powder sprig beetles	3-4	24	60	
Carbon and Carbon Seal					
Tarpaulin Fumigation	Indian meal moth, Cigarette beetle	3	24	60	12-24
Vacuum chamber		4	4	40	4
Deep Feed	Indian meal moth, Cigarette beetle	1-2	12-24	60	48
MISC. SPACE FUMIGATION					
Buildings, warehouses, flour mills, food processing plants	Indian meal moth, Warehouse beetle, Sawtoothed grain beetle	2-3	16-24	60	12
Less than 100,000 cu. ft.		1-2	16-24	60	12
100,000 to 500,000 cu. ft.		1	16-24	60	12
NOTE: The above dosages are for insect control. For rodent, bird, insect, and other vermin control, use 1/2 lb./1000 cu. ft. with six hours exposure should be sufficient. For temperature below 60° F (15° F) Ciba dosage should be increased by 50% (1227 grains per thousand cubic feet (283 cc. meter) for every 10° F (1.8° C) drop in temperature.					
Box Cars					
Fumigate stock cars only; do NOT fumigate in transit					
Steel	Sawtoothed grain beetle	3-3 1/2	16-24	60	4
Wood	Flour beetle, Indian meal moth	3/4-1 1/2	16-24	60	4
Vault, Trench**	Sawtoothed grain beetle, Flour beetle, Indian meal moth	1-3	16-24	60	4
Vacuum chambers	Sawtoothed grain beetle, Flour beetle, Indian meal moth	1-2	3	60	4
Cargo Ships	Sawtoothed grain beetle, Flour beetle, Indian meal moth	1	10	50 and above	
Do Not Fumigate Underway	Sawtoothed grain beetle, Flour beetle, Indian meal moth	1.5	12	40-49	

* Another note can be shortened if the fumigated area is determined to be free of Methyl Bromide by a suitable Methyl Bromide detector. If no reaction time is given in table, a suitable Methyl Bromide detector must be used to determine when reaction is completed. Aerate products 48 hours before offering to consumer.

** Do not move trucks, vans, or trailers during fumigation. They must be completely sealed before entrance is allowed.

STRUCTURAL FUMIGATION

AREAS TO BE FUMIGATED: Dwellings (including mobile homes), buildings, wood-frame structures, bridges, support and roof structures; construction materials and furnishings (household effects).

INSECTS AND PESTS TO BE CONTROLLED: Lyctid, True Powder Post Beetles; Anobid, Furniture and Death-watch Beetles; Cerambycid Old House Borer Beetles; Bostrichid, False Powder Post Beetles; Termites; Drywood Infesting; Dermestid, Carpet Beetles, Ants, Bats, Bedbugs, Booklice, Clothes Moths, Cockroaches, Fleas, Flies, Millipedes, Roaches, Silverfish and Spiders.

PREPARATION FOR STRUCTURAL 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 mil); all books and medications. Polyethylene bags must be sealed with moose tape or ducts. Open all doors and access to crawl spaces, attics and subfloors. For fabric pest control, open storage chests, drawers and closets. For moisture or metal structures such as large oil tanks and other air tanks, ground 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 mil thick. Seal all edges of the envelope with moist soil or sand stakes. Soak soil with water one foot from the edge of the envelope as necessary to prevent porous plants.

RATES OF APPLICATION: For general fumigation under ideal conditions at temperatures of 70° F. and above use 1 to 3 pounds of Methyl Bromide 100 per 1000 cu. ft. for 16-24 hours exposure time. Under adverse conditions increase dosage to 3 1/2 to 3 3/4 pounds per 1000 cu. ft.

WARNING AGENT USE IN CLEARING STRUCTURES PRIOR TO FUMIGATION: After preparing the structure for fumigation and sealing except for one entrance, place a handful of cotton in a shallow dish and set the dish in the air stream of an electric fan. Pour Chloroform over the cotton. Use 1 ounce per 10,000 to 15,000 cubic feet of space to be fumigated. Seal the last opening to the building and start the fan. Check for leaks. Five to ten minutes later introduce the Methyl Bromide 100.

FUMIGATION: Release Methyl Bromide 100 from outside the structure through a heat exchanger to convert from liquid to gaseous state, or introduce through a suitable leak proof tube (such as polyethylene) attached to an evaporating pan to prevent splashing over interior. Operate an electric fan during introduction for a minimum of 30 minutes thereafter to accelerate distribution of the gas. For an average structure, the entire content may be released in one place, but for large or complex structures, release it at two or more locations, so chosen as to ensure even gas distribution. Whenever possible, release fumigant through a heat exchanger into the attic, or in upper rooms of a structure. Fans may be located beneath attic access hatches and in lower rooms.

AERATION: See operation statement.

PREPLANT SOIL FUMIGATION

METHYL BROMIDE may be used as a preplant soil fumigant for land in which plants may be grown for food and non-food 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 may be used in a vegetable seed beds for production of plants that are later transplanted in untreated soil or soil treated to label directions for regulated products, and in orchard and vineyard planting sites and soils where tomatoes, strawberries, pineapples, cauliflower, broccoli, melons 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 5-6 inches below the soil surface. To seed fumigate after application cover immediately with a gas tight tarpaulin by means of a mechanical tarp layer. Do not remove tarpaulin until after the preplant fumigation period indicated on the dosage table has passed. Prior to fumigation, the soil should be in seed bed condition with adequate residue to support seed germination. The soil should be worked to the depth it is desirable for the fumigant to penetrate. Post release should be worked into the soil and time allowed for residue to decompose before treatment.

TURF, NURSERIES AND FLORAL CROPS

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

TOMATOES, STRAWBERRIES, PINEAPPLES, CAULIFLOWER, BROCCOLI, MELONS, EGGPLANTS AND PEPPERS

Follow directions for seed and plant beds. Use rate and exposure time that is indicated in the dosage table.

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 3 1/2 feet apart. Inject the Methyl Bromide at a depth of not less than 20 inches. To seed fumigate 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 preplant fumigation period indicated on the dosage table has passed. Prior to fumigation, the soil should be in seed bed condition with adequate residue to support seed germination. The soil should be worked to the depth it is desirable for the fumigant to penetrate. Post release should be worked into the soil and time allowed for residue to decompose before treatment.

DECIDUOUS FRUITS, NUTS, CITRUS, VINEYARDS AND OTHER PERENNIAL CROPS (Do not harvest crop for 24 months after fumigation)

Prior to planting apply Methyl Bromide at a rate and exposure time that is indicated in the dosage table. To seed fumigate after application for disease control, cover immediately with a gas tight tarpaulin by means of a mechanical tarp layer. The soil should be worked to not less than 20 inches and the substrate should be as dry as possible. Excess moisture will block deep penetration of the Methyl Bromide. Feet soils and soils very high in organic content should not be fumigated to control Armillaria mellea with Methyl Bromide. Clay soils and soils that drain poorly may be dried out by planting sodon grass and withholding water from it during the summer. This will insure penetration of Methyl Bromide. Do not apply Methyl Bromide to soils where vines will bear within 24 months.

BACK HOEING: Field men have demonstrated that this is an effective method for preparing the rippled site for fumigation, especially in areas where a horizon 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 "ripped bed" in which the tree is to be grown. For stratified soils a single cut the width of the back hoe, 5 feet deep and 4 feet long, is satisfactory. Backfill soil with 2 feet of soil, place applicator tube at this level, complete back fill and release entire dose of fumigant for 100 square foot 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 noncompacted 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 foot tree site. When fumigant has been released, remove applicator tube and tamp soil with soil to prevent too rapid escape of fumigant.

DOSEAGE AND EXPOSURE TABLE FOR SOIL FUMIGATION WITH METHYL BROMIDE

PEST CONTROL DESIRED	TYPE OF SOIL AND/OR CROP	DOSEAGE Do not treat when winds below 50° F	MIN. EXP.	AERATION TIME BEFORE PLANTING
Noninsect Weed seeds and insects	Turf renovation, lawns and other recreational turf areas	400-500/cc. cu. ft.	24 hrs.	3 days
Noninsect Weed seeds and insects	Seedbed and raised crop beds. Lawns and plant beds for tobacco, flowers, shrubs and forest trees, ornamental shade and ground covers. Vegetable production (transplants only, horce and celery crops)	400-500/cc. cu. ft.	24 hrs.	3 days
Damping off disease such as Pythium, Rhizoctonia, Fusarium	TURF RENOVATION: Same sites as listed above. HORCE AND VEGETABLE CROP AREA: Same plants as listed above. Vegetables for production of transplants only, horce and celery crops	800/cc.	24 hrs.	14 days if planted to transplants. 3 days if seeded
Noninsect Weed seeds and insects	Permanent planting for tomatoes, strawberries, pineapples, cauliflower, broccoli, melon and eggplants	2400/cc.	48 hrs.	3 days if residual. 7-14 days if vegetative growth set in treated soil
Crown rot fungus Armillaria root rot	Grapes: for control of nematodes in light sandy soils and fine textured clay soils	400-600/cc. cu. ft.		
Phytophthora root rot	Control phytophthora in light sandy and fine textured clay soils	600/cc.	6-7 days	Treat in summer or fall and again following spring
Nematodes (root lesion, crown, lesion, pin, ring, and dagger)	Control nematodes in light sandy soils	400/cc.		
Armillaria root rot	Control nematodes in fine textured clay soils	600/cc.		
Crown rot fungus Phytophthora root rot	DECIDUOUS FRUITS, NUTS, CITRUS, AND OTHER PERENNIAL WOODED PLANTS	425-650/cc. cu. ft.	5-7 days	
Crown rot fungus Phytophthora root rot	Phytophthora root rot	425-650/cc. cu. ft.	5-7 days	
Root rot nematodes	Armillaria root rot in sandy light soil and fine textured clay soil. Citrus, bearing and root knot nematodes	425-650/cc. cu. ft.	5-7 days	In warmer climates do not start until 30 days after application
TREE SITES				
Phytophthora root rot	1 to 1 1/2 lb./100 sq. ft.			
Armillaria root rot	1 to 1 1/2 lb./100 sq. ft.			
and fine textured clay soil	1 to 1 1/2 lb./100 sq. ft.			

WARRANTY

NOTICE: Seller warrants that the product conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with directions under normal conditions of use, but neither 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.

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AND DOMESTIC ANIMALS:

ANGER

THIS FUMIGANT IS A HIGHLY HAZARDOUS MATERIAL AND MUST BE HANDLED WITH CARE ONLY BY THOSE INDIVIDUALS EXPERIENCED WITH SUCH CHEMICALS. CONSULT YOUR DEALER REPRESENTATIVE OR SOIL CHEMICALS CORPORATION FOR CORRECT PROCEDURE BEFORE USING. READ AND FOLLOW ALL LABEL DIRECTIONS AND PRODUCT LITERATURE SPECIFIC TO YOUR PARTICULAR REQUIREMENTS.

EXTREMELY HAZARDOUS LIQUID AND VAPOR UNDER PRESSURE
INHALATION MAY BE FATAL OR CAUSE DELAYED LUNG INJURY
LIQUID AND VAPOR CAUSE BURNS WHICH MAY BE DELAYED
OBSERVE THE FOLLOWING PRECAUTIONS:

- DO NOT BREATHE VAPORS:
1. Methyl Bromide 100 has no appreciable odor. Use only with adequate ventilation. Do not enter a treated area without respiratory protection unless you have checked the area with a reliable Gas Detector to make sure dangerous concentration of gas are not present, if there is any doubt, wear a gas mask.
 2. **RESPIRATORY PROTECTION**
A full face gas mask with one respiratory tank or cylinder is recommended or wear a full face gas mask with a canister respirator meeting specifications (only approved by the Mining, Metallurgical and Safety Administration (formerly the U.S. Bureau of Mines) and by the National Institute for Occupational Safety and Health under the provisions of 30 CFR PART 115, where the respirator concentration is known to be under the provisions of 30 CFR PART 115, where the respirator gas mask manufacturer's recommendations are followed. Do not use a gas mask unless you have the following listed conditions for wearing. Chlorination most never be depended upon as an identifying agent when a canister gas mask is used.

- DO NOT GET IN EYES, ON SKIN OR ON CLOTHING:
1. Should shoes or clothing become contaminated, wash or clean at once and do not wear again until clean.
 2. DO NOT WEAR COVERED UP ANY TYPE CARBURETOR RUBBER PROTECTIVE CLOTHING OR BOOTS.
 3. DO NOT SPILL OR discharge contents, contents of areas confined for treatment.
 4. WEAR SAFETY GLASSES when dispensing Methyl Bromide 100.
 5. KEEP CHILDREN AWAY FROM TREATED AREAS. Do not work in treated areas.
 6. Always have an assistant to aid in case of accidents when releasing fumigant from inside of a structure. Wear appropriate respiratory protection.
 7. Keep children, infirm and unaccustomed people away from areas under treatment until areas are free of Methyl Bromide 100 Chlorination treatment.

WARNING SIGNS

- Fumigated areas must be placarded on all entrances with signs containing at least the signal word DANGER and the "Skull & Crossbones" and the words "Area Under Fumigation, do not enter unless completely covered", the date of fumigation, name of the fumigant used, emergency warning signs and the fumigant name a completely accurate and safe for utility as indicated by a reliable detector.
1. Signs must be placarded with D.O.T. specified warning signs. Warning signs are available from other dealer or Soil Chemicals Corporation.
 2. Comply with all local regulations and ordinances.
 3. Obtain medical assistance or aid in case of these other exposures, and do not allow conditions which would incidentally cause further exposures and recovery is complete.
 4. It is advisable to carry your physician with information on Methyl Bromide 100 available from your dealer or Soil Chemicals Corporation.

WHEN FUMIGATING SOIL OBSERVE THESE PRECAUTIONS:

1. Drivers of irrigation equipment must activate other workers of all structures and procedures. Have to apply water with the tractor and driver while fumigating.
2. Handle the fumigant or the gases with the "siphon" from the container in here there is a good seal.
3. Always have adequate clean water available to wash skin and/or flush eyes. When fumigating readily available. In addition to water available on the tractor and placed where it is most readily available from the service truck. The water must be drinkable but not contaminated.
4. Check "WATER NOT FOR CONSUMPTION" marking.
5. Check "WATER NOT FOR CONSUMPTION" marking.
6. Do not fill irrigation pressure system for leaks before beginning operation.
7. Follow irrigation system to top of soil or to pipe until fumigant has saturated from system.
8. Do not fill irrigation system to top of soil or to pipe until fumigant has saturated from system.
9. Wash pulled by the tractor by the end of the pipe when fumigant must be covered by filling pipe.
10. If in case of a rupture of hose or fitting while applying fumigant, immediately stop tractor and stop irrigation in furrows. Approach from upwind with respiratory protection if required, and make necessary repairs.
11. When changing the cylinders be certain they are turned off and fumigant system is not under pressure. Do not open the system when any pressure or structure is downwind.
12. Keep off treated areas with warning signs available from Soil Chemicals Corporation.
13. Keep off children, children and unaccustomed people away from areas under fumigation during the fumigation period and during removal of fumigant.
14. Do not feed domestic animals on fumigated areas on E.P.A. tolerance levels for such use.
15. **BE CAREFUL!** Fumigant may penetrate to the level of sensitive nitrogen and phosphorus in the soil. The most likely to occur when heavy rates of fertilizer and fumigant are applied to soils that are either cold, wet, soil, or high nitrogen. To avoid injury to plants, fertilizer or both, or crops avoid using fertilizers containing ammonia or urea on fumigated soil. Using higher acid soils before fumigation stimulates aeration and reduces the availability of ammonia toxicity.

RESTRICTED USE PESTICIDE

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 100 FUMIGANT

FOR USE AS AN AID IN THE CONTROL OF STRUCTURAL PESTS, HOUSEHOLD INSECT PESTS, STORED PRODUCT PESTS, AND AS A PRE-PLANT SOIL TREATMENT.

ACTIVE INGREDIENT: METHYL BROMIDE 100%

KEEP OUT OF REACH OF CHILDREN

DANGER POISON

SEND FOR A DOCTOR IMMEDIATELY IN CASE OF EXPOSURE

STATEMENT OF PRACTICAL TREATMENT

- IF INHALED — Carry Patient To Fresh Air, Call Physician At Once. Make Sure Patient Can Breathe Freely. Keep Patient Warm. Give Artificial Respiration If Breathing Has Stopped. Oxygen Should Be Administered Only By Qualified Personnel.
- IF ON SKIN — Immediately Remove All Contaminated Skin Covering Including Shoes, Clothing And Adhesive Or Other Bandages. Wash Skin Thoroughly With Soap And Water. If Irritation Or Blisters Develop, Get Medical Attention. Do Not Reuse Shoes Or Clothing Until Free Of All Contamination.
- IF IN EYES — Flush immediately With Plenty Of Water For At Least 15 Minutes And Get Medical Attention.
- NOTE TO PHYSICIAN — Keep Patient At Rest And Under Observation For 24 To 48 Hours.

SOIL CHEMICALS CORPORATION

P. O. BOX 531 MORGAN HILL, CALIF. 95037
 E.P.A. EST. 8536-CA-1, 2, 3, 4; FL-1
 E.P.A. REG. NO. 8536-15

ENVIRONMENTAL HAZARD

The successful use of Methyl Bromide depends upon its containment during the fumigation exposure period.

Monitor the areas immediately surrounding the fumigation site with a halide detector (see section on halide detector) and during exposure and monitor closely to establish their dangerous levels of Methyl Bromide 100 are not present.

The high volatility of Methyl Bromide 100 permits it to be vented from spaces being fumigated and to avoid injury to top or other people do not allow Methyl Bromide 100 to contact bottles of water or other containers which are not allowed to be vented from the fumigation site.

See instructions under handling and shipping for return of excess Methyl Bromide 100.

CHEMICAL HAZARD

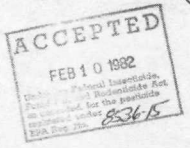
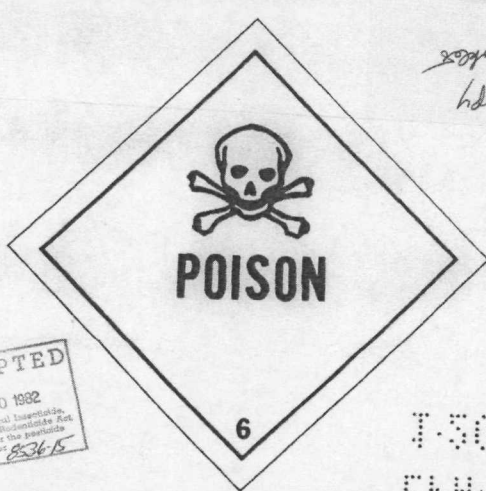
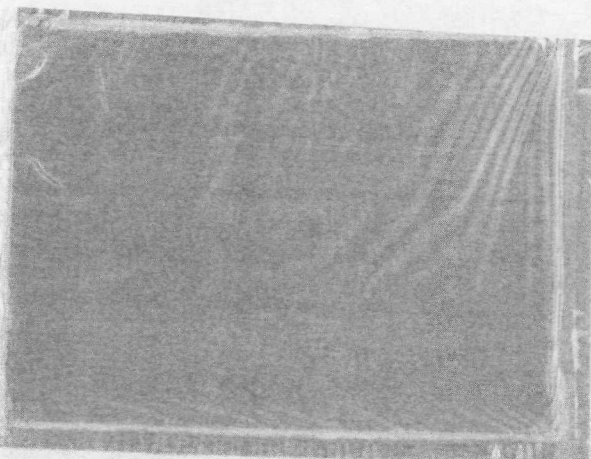
Methyl Bromide is practically nonflammable. There is no danger from fire or explosion in use as fumigant. However, flammable gases are produced in the fumigation process. Do not use fumigant directly to treat surfaces because of possible corrosive effect on certain metals. Do not use fumigant in application equipment made of magnesium, aluminum or steel alloy.

The following materials can develop undesirable action when encountered in the fumigation process and should be removed from the areas being fumigated:

- 1. Fertilizers: (a) liquid; (b) dry.
- 2. Any kind of material that contain metallic sulfur compounds, such as some insecticides, some lathing woods and some soil blocks used for growing plants.
- 3. Certain rubber goods: (a) sponge rubber; (b) foam rubber, as in rug padding, pillows, cushions, and mattresses; (c) rubber stamps and other similar forms of resilient rubber.
- 4. Linoleum: (a) linoleum; (b) linoleum tiles.
- 5. Woolens: Excessive caution should be used in the fumigation of any engine, motor, and some wooden tools, awnings, shovels and similar items.
- 6. Various Papers: These papers processed or manufactured by a process in which carbon bisulfide is used.
- 7. Paper: (a) silver-cladding paper; (b) carbon-waxing papers (used by sublimation processes); (c) photographic emulsion and other photo processing materials; (d) some camera films.
- 8. Other metals.
- 9. Any materials that may contain traces of cyanide.
- 10. **CAUTION: PRODUCTS MAY BE HINDER EFFECTIVENESS OF THE FUMIGANT.**
- 11. Check materials — check materials the Methyl Bromide releasing the effective concentration and containing the chemical.
- 12. There is a question whether a material may develop on a test fumigation may be run with a small quantity of the material.

STORAGE AND RETURN OF FUMIGANT CYLINDERS

- STORAGE**
- (1) Do not store with food, feeds or clothing.
 - (2) Storage areas should be:
 - (a) Sealed by lock and key.
 - (b) Painted as pesticide storage.
 - (c) Always have drainage and work areas.
 - (d) Dry and cool.
 - (e) Well ventilated.
- SPILL OR LEAK PROCEDURE**
- Prevent affected areas, use respiratory protection and correct problem. Place cylinder outdoors in an isolated location. Allow to evaporate. Do not permit re-entry to area until free of fumes.
- RETURN OF CYLINDERS**
- (1) Cylinders are the property of Soil Chemicals Corp. 2940 E. 223rd Street Long Beach, CA 90810
 - (2) Cylinders are the property of Soil Chemicals Corp. 37171 Buena Road Highway 25 Corona, CA 92620
 - (3) Cylinders should be returned promptly by rail or auto freight.
 - (4) When a cylinder is empty, the valve should be closed, the safety cap screwed on the valve neck, and the protective label replaced prior to its return to the shipper.
 - (5) Do not ship any cylinder without a safety cap or valve protection device.
 - (6) When a cylinder is partially full and there is no further requirement for the product, contact Soil Chemicals Corporation for return instructions.
 - (7) Containers should never be refilled by the consumer or used for any other product or purpose.
- SHIPPING**
- The fumigant is classified in the U.S. Department of Transportation Hazardous Materials Regulations as Methyl Bromide, Liquid, class 1B, poison and an exemption from specific packaging marking and labeling is available from exemptions from specific packaging marking. Liquid, Do not ship with food, feeds or clothing.
- HANDLING**
- (1) The valve protection device and safety cap should be removed only when fumigant is about to be released from the cylinder.
 - (2) Cylinders should never be subjected to rough handling or to abnormal mechanical shock such as dropping, banging, dragging or skidding.
 - (3) Ropes, straps, hooks, lings, and other hoisting devices should not be used for unlatching cylinders. A suitable block, fork truck, or similar device to which the cylinders can be firmly secured, should be used for transferring the heavier cylinders which are firmly secured.
 - (4) Heavy loads should be placed on the bottom as an aid to removal from cylinder. Serious valve damage and possible leakage may occur.



1.50 METHYL BROMIDE LIQUID

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