

28 JAN 1979

Soil Chemicals Corp.
P.O. Box 531
Morgan Hill, CA 95037

Gentlemen:

Subject: Methyl Bromide 100
EPA Registration No. 8536-15
Your Letter of: January 15, 1979

The labeling referred to above, submitted in connection with
registration under the Federal Insecticide, Fungicide and
Rodenticide Act is acceptable, and a stamped copy is enclosed
for your records.

Sincerely,

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Marilyn Mautz
Acting Product Manager (16)
Insecticide-Rodenticide Branch
Registration Division (TS-767)

Enclosure

IR:MMAUTZ:kep75:RAVEN:x473-2060:DCR#31391:01/22/79

SPECIMEN

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

ACCEPTED

JAN 23 1979

has the Federal Insecticide, and Fungicide Act approved, for the pesticide labeled under U. S. Reg. No. 8536-15

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%

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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; R-1

E.P.A. REG. NO. 8536-15

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NET CONTENTS 140 LBS.

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8536-15

ENVIRONMENTAL HAZARD

The successful use of Methyl Bromide depends upon its complete containment during the fumigation exposure period. Monitor area immediately surrounding the fumigation site with a halide detector (see instruction 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 permits it to be vented from space 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 such as an improper disposal. (See instructions under handling and shipping for return of excess Methyl Bromide-100.)

CHEMICAL HAZARD

Methyl Bromide is practically non-flammable. There is no danger from fire or explosion in use concentrations. However, flame can change the chemical to produce some corrosive damage to items in the space being fumigated. Pilot lights and 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 odor when encountered in structural fumigation and should be removed from the space being fumigated:

1. Feedstuffs: (a) Iodized salt (b) Wall-fat soya flour (c) Any kind of materials that contain reactive sulfur compounds, such as some soap powders, some baking soda and some salt blocks used for cattle licks.
2. Certain rubber goods: (a) Sponge Rubber (b) Foam Rubber, as in rug padding, pillows, cushions, and mattresses (c) Rubber blankets and other similar forms of reclaimed rubber.
3. Furs, horsehair and pillows, (especially feather pillows.)
4. Leather goods—particularly while and/or any other leather goods tanned with sulfur processes.
5. Woollen—extreme caution should be used in the fumigation of any angora woollens, and some adverse effect has been noted on the fumigation of woollen suits, coats, blankets, hand-knit woollen socks, sweaters, shawls and woollen yarns.
6. Viscose rayon—those rayons processed or manufactured by a process in which carbon disulfide is used.
7. Paper: (a) Silver-polishing papers (b) Certain writing papers coated by sulfide processes.
8. Photographic chemicals as used in photo processing darkrooms. (does not include camera film).
9. Rug padding.
10. Candy blocks.
11. Mixed concrete, which occasionally picks up odor.
12. Any materials that may contain sulfur compounds.

THESE PRODUCTS MAY HINDER EFFECTIVENESS OF THE FUMIGATION. Charcoal materials—charcoal absorbs the methyl bromide reducing the effective concentration and contaminating the charcoal.

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 the ventilation fans whenever feasible 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 desorption 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	None
5	0.0025	Faint green fringe
10	0.013	Moderate green
20	0.025	Green
50	0.0625	Strong Green
100	0.125	Strong blue-green fringe
200	0.25	Strong blue-green
500	0.625	Blue
1000	1.25	Blue

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

DRAUGER GAS DETECTOR: Hand Pump and Detector Tube, range: 5 to 50 p.p.m. Methyl Bromide may be detected at the Threshold Limit Value (T.L.V.) of 10 p.p.m.

DETECTORS AVAILABLE FROM SOIL CHEMICALS CORPORATION.

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, boxcars, fumigation vaults, and flat or upright bulk grain storages.

INSECTS, PESTS CONTROLLED: Granary weevil, rice weevil, saw-toothed grain beetle, confused and red flour beetles, drugstore beetle, tropicoderma spp., cadella, mealyworms, leaf weevil, dried fruit beetle, grain moth, almond moth, Indian meal moth, Mediterranean flour moth, and miller.

PREPARATION FOR FUMIGATION:

- (1) Remove fresh fruit, seeds, bulbs and living plants from the area to be fumigated as they may be damaged during treatment. However, some of these items may be fumigated under Department of Agriculture recommendations under controlled conditions.
- (2) Do not fumigate food products other than those for which a residue tolerance is registered with the E.P.A.
- (3) Do not use dosages higher than those recommended as this may, in some cases result in residues in excess of those permitted.
- (4) Do not fumigate grain if: moisture is high, temperature is low (below 60° F.) or there is excessive dockage.
- (5) Space to be fumigated should be covered with tarpaulins and sealed, or in the case of boxcars and buildings all external openings should be closed. Seal building roof ventilators and chimneys by wrapping them with a tarpaulin, or plastic sheet, or by strapping the screened openings with a wide commercial masking tape.

Stairwells and interior doors should be closed. Any broken panes should be replaced, then exterior doors and windows should be wedged tight, locked, and cracks 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 a building. Adjoining buildings sharing a common wall should be sealed before fumigation, if possible. If this is not feasible, spread a glossy type building paper, Siluakraft or asphalt laminated paper, plastic film, or a heavily oiled kraft or wrapping paper to prevent spread of the fumigant into undesired areas. In all such cases where the adjoining building is occupied, it should be checked frequently with a Halide Detector during fumigation to insure the safety of the occupants.

FUMIGATION: Release Methyl Bromide-100 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 must be worn as described in No. 1 of Precautionary Statement. Operate electric fan(s) for 30 min. after release to accelerate distribution of gas.

CONTINUED IN FOURTH COLUMN

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RATES OF APPLICATION
METHYL BROMIDE-100

COMMODITY	Dosage in lbs. per 1000 cu. ft.	Exposure time in hours	Temperature in ° F.	Aeration time in hrs. and comments
Beans & peas, dry	2	24	60	12
Candy	1-2	15-24	60	24
Cocoa Beans (bags)	1½	24	60	12
Fruits, Dried	1½	24	60-69	48
Apple, apricot, date, fig, peach, pear, prune, raisins	1	60		
Flour and cereal products (bags, packages)	1	24	60	24
Grain	2	24	60	12
Shelled corn	2	24	60	
Barley, Oats, Rice, Rye, Wheat	3	24	60	Use forced recirculation for bulk bins
Grain Sorghum (Milo)	4	24	60	
Nuts				
Almond, brazil, macadamia, (Roast, candied, pecan, hickory, pistachio, cashew, walnut)	2½	24	60	24
MISC. SPACE FUMIGATION				
Buildings, warehouses, flour mills, food processing plants				
Less than 100,000 cu. ft.	1-2	18-24	60	12
100,000 to 500,000 cu. ft.	1	16-24	60	12
BOXCARS				
Fumigate static cars only, do NOT fumigate in transit.				
Steel	3-3½	16-24	60	4
Wood	3½-4½	16-24	60	4
Vans, Trailer	1-2	16-24	60	4
Vacuum chambers	1-2	3	60	4

*AERATION
See aeration statement. Adhere to specific aeration periods as per the above table.

STRUCTURAL FUMIGATION

AREAS TO BE FUMIGATED: Dwellings, garages, barns and storage buildings.
INSECTS AND PESTS CONTROLLED: Lyctus or powder post beetle, old house worm, death watch beetle, termites, carpenter ants, millipedes, carpet beetles, clothes moths, silverfish, booklice, fleas, ticks and rats.
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 no less than 4 mils), all foods and medicinals. Polyethylene bags must be sealed with masking tape or clamps. Open all doors and access to crawl spaces, attics and sub-floors. For fabric pest control, open storage chests, drawers, and closets. For masonry or total structures, caulk or tape all cracks and other air leaks, around doors, windows, vents. Wood structures and others that cannot be sealed effectively may be enveloped in a gas cover (plastic or polyethylene plastic sheet at least 4 mils thick) and sealed all edges of the envelope with moist soil or sand. Seal soil with water one foot from the edge of the envelope as necessary to protect nearby plants.
RATES OF APPLICATION: For general fumigation under ideal conditions at temperatures of 70° F. and above use 2-4 to 3 pounds of Methyl Bromide 100 per 1000 cu. ft. for 16-24 hours exposure time. Under adverse conditions, increase dosage to 3-5 to 5-10 pounds per 1000 cu. ft.
WARNING: AGENT FOR USE IN CLEARING STRUCTURES PRIOR TO FUMIGATION: After preparing the structure for fumigation and sealing except for gas 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 outer can into a heat exchanger to convert from liquid to a gas. Start fan to reduce thru a suitable leak proof tube (such as polyethylene) attached to an evaporating pan to prevent splashing over interior. Operate an electric fan during introduction and for a minimum of 30 minutes thereafter to accelerate distribution of the gas. For an average structure, the entire amount may be released in one place, but for large or complex structures, release it at two or more locations, so chosen as to ensure even gas distribution.
AERATION: See aeration statement.

FUMIGATION FOR CONTROL OF THRIPS ON POST HARVEST STRAWBERRY FRUIT (FOR DISTRIBUTION AND USE ONLY WITHIN CALIFORNIA)

Apply 5 lbs. Methyl Bromide-100 per 1000 cubic feet for two hours at 60° to 70° F. Fumigation must be carried out in a gas tight chamber or under gas tight tarpaulins.
PREPLANT SOIL FUMIGATION
METHYL BROMIDE 100% may be used as a preplant soil fumigant applied as a volatile liquid by soil injection methods under gas-proof tarp to previously conditioned soil.
USES ARE:
LAND TO BE PLANTED TO GRAPE.
CONTROLS THE FOLLOWING SOIL PESTS:
Nematodes as listed: Citrus, Pin, Ring, L., and Dagger, and Root Knot.
WHEN TO TREAT:
Treat in spring or fall whenever soil conditions are suitable. In northern states, late summer or early fall treatment is best for hard to be applied to early spring crops. DO NOT TREAT WHEN SOIL TEMPERATURES ARE BELOW 50°.
APPLICATION:
DEEP CHISEL METHOD:
Subsurface soil should be as dry as possible, as excess soil moisture will block deep penetration of Methyl Bromide 100. Wet soils and soils very high in organic content should not be fumigated. Clay soils and soils that drain poorly may be dried out by planting Sudan Grass. Follow seed producer's recommended practices, except that water should be withheld during the summer, and Sudan Grass should be thoroughly chopped before commencing final land preparation. Chisel the soil as deeply as possible, preferably 24 inches, and in at least two directions, with aid in moisture removal and provide optimum tilth. A light surface sprinkling with water, sufficient to wet the upper 6 to 12 inches may aid in soil surface preparation, and will improve control of surface weed seeds without adversely affecting the deep fumigation. Disk to smoothness. Inject fumigant by means of tractor mounted chisel spaced not more than 5 ft. apart and at a depth of 18 to 26 inches below soil surface. Seal fumigant immediately after application with a gas tight tarpaulin applied by means of a mechanical tarp layer.
CONTINUED IN FIFTH COLUMN

DOSAGE AND EXPOSURE TABLE FOR SOIL FUMIGATION WITH METHYL BROMIDE 100%
NOTE: ONE GALLON OF METHYL BROMIDE 100 WEIGHS 14.4 LBS.

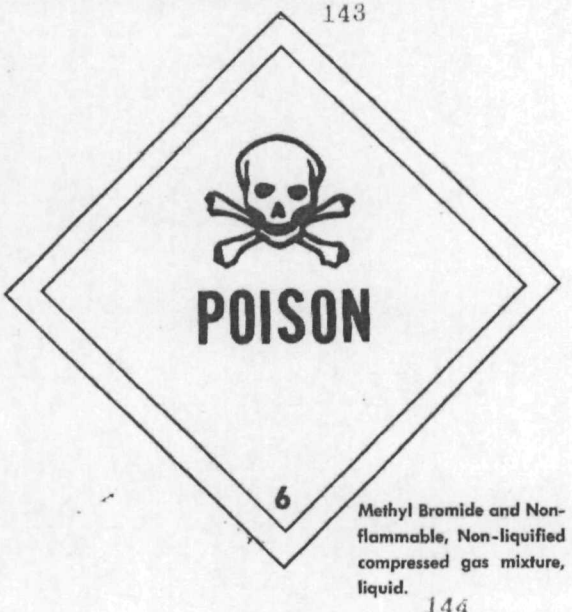
PEST CONTROL DESIRED	CROP OR TYPE OF SOIL	METHOD OF APPLICATION	DOSAGE	EXPOSURE TIME	AERATION TIME PLANTING
Nematodes:	Grapes	Light	Deep Chisel	400 lbs. per acre	Do Not Plant
(Citrus, Pin, Ring, L., and Dagger, Root Knot.)	Soils	Method	Heavy Deep Chisel	600 lbs. per acre	7 Days Before
	Soils	Method	per acre	30 Days	

Do not apply to soil where vines will bear fruit within 24 months.

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) Posted as pesticide storage.
(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.
RECOVERY OF CYLINDERS
(1) Cylinders are the property of:
Soil Chemicals Corp.
2001 Commercial Corp.
2000 East 22nd Street
Long Beach, Ca.
and should be returned promptly by collect auto freight.
(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 cylinders without safety caps or valve protection bonnets.
(4) When a cylinder is partially full and there is no further requirement for the product, contact Soil Chemicals Corp. for return instructions.
(5) 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 and Nonflammable, Non-liquefied compressed gas mixture, liquid, class "B" poison, and no exemptions from specification packaging, marking and labeling are allowed. Describe empty cylinders as having formerly contained Methyl Bromide and Nonflammable, Non-liquefied compressed gas mixture, liquid. Do not ship with food, feeds, or clothing.
HANDLING
(1) The valve protection bonnet and safety cap should be removed only when fumigant is about to be removed from the cylinder.
(2) Cylinders should never be subjected to rough handling or to abnormal mechanical shock such as dropping, bumping, dragging or sliding.
(3) Hooks, slings, ladders, tongs, 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.

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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