

PM 20 68146-1

<p>US ENVIRONMENTAL PROTECTION AGENCY OFFICE OF PESTICIDES PROGRAMS REGISTRATION DIVISION (75-767) WASHINGTON, DC 20460</p> <p>NOTICE OF PESTICIDE: <input checked="" type="checkbox"/> REGISTRATION <input type="checkbox"/> REREGERATION</p> <p><i>Under the Federal Insecticide, Fungicide and Rodenticide Act, as amended.</i></p>	<p>EPA REGISTRATION NO. 68146-1</p> <p>TERM OF ISSUANCE Conditional</p> <p>NAME OF PESTICIDE PRODUCT 100% Methyl Bromide MAKR</p>	<p>DATE OF ISSUANCE 30 DEC 1994</p>
<p>NAME AND ADDRESS OF REGISTRANT (Include ZIP code)</p> <p>Integrated Environments International, Inc. 9119 Alondra Boulevard Bellflower, CA 90706</p>		
<p>NOTE: Changes in labeling formula differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above U.S. EPA registration number.</p>		
<p>On the basis of information furnished by the registrant, the above named pesticide is hereby Registered/Reregistered under the Federal Insecticide, Fungicide, and Rodenticide Act.</p> <p>A copy of the labeling accepted in connection with this Registration/Reregistration is returned herewith.</p> <p>Registration is in no way to be construed as an endorsement or approval of this product by this Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.</p> <p>This product is conditionally registered in accordance with FIFRA sec. 3(c)(7)(A) provided that you:</p> <ol style="list-style-type: none"> 1. Submit/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; and submit acceptable responses required for reregistration of your product under FIFRA section 4. 2. Make the labeling changes listed below before you release the product for shipment: <ol style="list-style-type: none"> a. Add the phrase "EPA Registration No. 68146-1." b. In the Ingredient Statement, revise "Active Ingredients" to the singular form, "Active Ingredient". c. In the Pesticide Disposal section of the label, after the sentence "Pesticides wastes are acutely toxic", insert the sentence: "Do not contaminate water, food or feed by storage or disposal of this product." d. Forward three copies of the associated applicator's manual entitled "Manual for the Safe Handling and Application of Methyl Bromide Products" to the Agency. <p><input type="checkbox"/> ATTACHMENT IS APPLICABLE</p>		
<p>SIGNATURE OF APPROVING OFFICIAL</p>		<p>DATE 30 DEC 1994</p>

3. Submit five (5) copies of your final printed labeling before you release the product for shipment. Refer to the A-79 enclosure for a further description of final printed labeling.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA sec. 6(e). Your release for shipment of the product constitutes acceptance of these conditions.

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

Sincerely,



Ruth G. Douglas
Product Manager (32)
Antimicrobial Program Branch
Registration Division (7505C)

Enclosures

**RESTRICTED USE PESTICIDE
DUE TO ACUTE TOXICITY**

For retail sale to and use only by Certified Applicators, or persons under their direct supervision, and only for those uses covered by the Certified Applicator's certification.

100% METHYL BROMIDE MAKR*

COMMODITY FUMIGANT

**ACTIVE INGREDIENTS:
METHYL BROMIDE
TOTAL**

**100.00%
100.00%**

NET CONTENTS LBS.

**KEEP OUT OF REACH OF CHILDREN
DANGER PELIGRO
POISON**

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

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

STATEMENT OF PRACTICAL TREATMENT

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

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

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

NOTE TO PHYSICIAN: Early symptoms of overexposure are dizziness, headache, nausea and vomiting, weakness, and collapse. Lung edema may develop in 2 to 48 hours after exposure, accompanied by cardiac irregularities; these effects are the usual cause of death. Repeated over exposure can result in blurred vision, staggering gait, and mental imbalance, with probable recovery after a period of no exposure. Blood bromide levels suggest the occurrence, but not the degree, of exposure. Treatment is symptomatic.

See Side Panel For Additional Precautionary Statements.

**E.P.A. EST. NO.
E.P.A. REG. NO.**

**Integrated Environments International, Inc.
9119 Alondra Blvd.
Bellflower, CA 90706**

ACCEPTED
with COMMENTS
of EPA Letter Dated:

30 DEC 1974
Insecticide
Pesticide Act of
the pesticide
EPA Reg. No.
65146-4

PRECAUTIONARY STATEMENTS
HAZARD TO HUMANS
AND DOMESTIC ANIMALS:

D A N G E R

EXTREMELY HAZARDOUS LIQUID AND VAPOR UNDER PRESSURE.
INHALATION MAY BE FATAL OR CAUSE SERIOUS ACUTE ILLNESS OR DELAYED LUNG OR
NERVOUS SYSTEM INJURY.

DO NOT 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.

METHYL BROMIDE VAPOR IS ODORLESS AND NON-IRRITATING TO SKIN AND EYES DURING EXPOSURE.
EXPOSURE TO TOXIC LEVELS MAY OCCUR WITHOUT WARNING OR DETECTION BY THE USER.

OBSERVE THE FOLLOWING PRECAUTIONS:

GENERAL PRECAUTIONS

1. Do not get in eyes, on skin, or on clothing.
2. Do not spill or discharge contents outside of areas confined for treatment.
3. Comply with all local regulations and ordinances.
4. It is advisable to supply your physician with information on methyl bromide. Literature is available from Integrated Environments International, Inc.
5. Obtain medical assistance at once in case of illness after exposure, and do not allow conditions which could accidentally cause further exposure until recovery is complete. (See Note to Physician.)

RESPIRATORY PROTECTION:

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

CLOTHING PRECAUTIONS:

1. Wear loose clothing and socks that are cleaned after each wearing. Do not wear jewelry, gloves, or tight clothing when handling. Methyl bromide is heavier than air and may be trapped inside clothing and cause skin injury. If full-face respiratory protection is not required, wear goggles or full face shield for eye protection when handling liquid.
2. Following exposure, immediately remove clothing, shoes, and socks. Do not reuse contaminated clothing or shoes until thoroughly cleaned and aerated. Drenched clothing cannot be adequately decontaminated.
Do not wear gloves of any type, or rubber protective clothing, or rubber boots.

WARNING SIGNS: Structural, Transportation, Space Fumigation

1. The applicator must placard or post all entrances to the fumigated area with signs bearing in English and Spanish: (1) The signal word DANGER/PELIGRO and the skull and crossbones symbol; (2) The statement, "Area under fumigation, DO NOT ENTER/NO ENTRE"; (3) The date of fumigation; (4) Name of fumigant used; (5) Name, address, and telephone number of the applicator.
2. Do not remove a placard until the treated space is completely aerated. To determine whether aeration is complete, each fumigated site or vehicle must be monitored and shown to contain less than 5 ppm methyl bromide in the air space around and, when feasible, in the mass of the commodity. If less than 5 ppm methyl bromide is detected, the placard must be transferred with the commodity to the new site. Workers who transfer or handle incompletely aerated commodity must be informed and appropriate measures must be taken (i.e., ventilation or respiratory protection) to prevent exposures from exceeding 5 ppm or greater methyl bromide.
3. Boxcars must be placarded with D.O.T. specified warning sign. Warning signs are available from your dealer or distributor.

SPILL OR LEAK PROCEDURE:

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

PRECAUTIONS FOR COMMODITY USE

GENERAL PRECAUTIONS:

1. Keep animals, children, and unauthorized people away from area under treatment until area is certified free of methyl bromide (See Aeration Statement).
2. When used for fumigation of enclosed spaces containing commodities, two persons trained in the use of this product must be present during introduction of the fumigant, initiation of aeration, and after aeration when testing for reentry. Two persons do not need to be present if monitoring is conducted remotely (outside the area being fumigated).
3. Do not fumigate with this product when commodity temperature is below 40 degrees F.
4. Whenever possible, apply methyl bromide from outside of structure or car being fumigated. Make sure the fumigated area is properly sealed and posted. Do not move trucks, trailers, or vans during fumigation. They must be completely aerated before movement is allowed.

AERATION AND REENTRY:

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

ENVIRONMENTAL HAZARD

This product is toxic to wildlife. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

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

CHEMICAL HAZARD

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

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

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

1. Foodstuffs: (a) iodized salt; (b) Full-fat soya flour; (c) Any kinds of materials that contain reactive sulfur compounds, such as some soap powders, some baking sodas, 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 stamps and other similar forms of reclaimed rubber.
3. Furs, horsehair, and pillows (especially feather pillows).
4. Leather goods (particularly white kid or any other leather goods tanned with sulfur processes).
5. Woolens (extreme caution should be used in the fumigation of any angora woolens, and some adverse effect has been noted on the fumigation of woolen suits, coats, blankets, hand-knit woolen socks, sweaters, shawls, and woolen yarn).
6. Viscose rayons (those rayons processed or manufactured by a process in which carbon bisulfide is used).
7. Paper: (a) Silver-polishing papers; (b) Certain writing papers cured by sulphide processes; (c) Carbonless paper or Blue-prints.
8. Photographic chemicals as used in photo processing darkrooms (does not include camera film).
9. Cinder blocks, or mixed concrete which occasionally picks up odors.
10. Any materials that may contain reactive sulfur compounds. **THESE PRODUCTS MAY HINDER EFFECTIVENESS OF THE FUMIGANT:** Charcoal materials (charcoal absorbs the methyl bromide, reducing the effective concentration and contaminating the charcoal).
11. If there is a question whether a material may develop an odor, a test fumigation may be run with a small quantity of the material.

DIRECTIONS FOR USE

007-12

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

STORAGE AND DISPOSAL

STORAGE AND HANDLING:

Store in dry, cool, well-ventilated area under lock and key. Post as a pesticide storage area. Do not contaminate water, food or feed by storage. Persons moving or handling containers should wear protective clothing. Open container only in a well-ventilated area wearing protective clothing, and respiratory protection if necessary. Store cylinders upright, secured to a rack or wall to prevent tipping. Cylinders should not be subjected to rough handling or mechanical shock such as dropping, bumping, dragging, or sliding. Do not use rope slings, hooks, tongs, or similar devices to unload cylinders. Transport cylinders using hand truck, fork truck or other device to which the cylinder can be firmly secured. Do not remove valve protection bonnet and safety cap until immediately before use. Replace safety cap and valve protection bonnet when cylinder is not in use. When cylinder is empty, close valve, screw safety cap onto valve outlet, and replace protection bonnet before returning to shipper. Only the registrant is authorized to refill cylinders. Do not use cylinders for any other purpose. Follow registrant's instructions for return of empty or partially empty cylinder.

RETURN OF CYLINDERS:

Cylinders are the property of:

Integrated Environments International, Inc.
9119 Alondra Blvd.
Bellflower, CA 90706

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

SHIPPING:

This fumigant is classified in the U.S. Department of Transportation Hazardous Materials Regulations as methyl bromide, 2.3, UN 1062, Poison-Inhalation Hazard, Hazard Zone C and no exemptions from specifications, packaging, marking, or labeling are allowed. Describe empty cylinders as having last contained methyl bromide (inhalation hazard). Do not ship with food, feeds, or clothing.

PESTICIDE DISPOSAL:

Pesticide wastes are acutely toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the hazardous waste representative at the nearest EPA Regional Office for guidance.

ACCEPTED
with COMMENTS
in EPA Letter Dated

30 DEC 1994
Under the Federal Insecticide,
Fungicide, and Rodenticide Act
for the pesticide
EPA Reg. No.

68146-1

GENERAL INSTRUCTIONS

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

COMMODITY FUMIGATION

AREAS TO BE FUMIGATED:

Under sealed tarpaulins, in flour mulls, spice mills, textile mills, warehouses, boxcars, fumigation vaults and chambers, flat or upright bulk grain storages, tobacco warehouses, and cargo ships.

INSECTS AND PESTS CONTROLLED:

Granary Weevil	<u>Dermestes sp.</u>	Pink Boll Worm
Rice Weevil	Angoumois Grain Moth	Potato Tuber Moth
Confused and Red Flour Beetle	Naval Orange Worm	Mealy Bugs
Drug Store Beetle	<u>Brachyrhinus sp.</u>	Vegetable Miner
Cadelle	Cowpea Beetle	Leaf Miner
Mealworms	Rusty Grain Beetle	Plum Moth
Bean Weevil	Merchant Grain Beetle	Pin Worms
Dried Fruit Beetle	European Corn Borer	Khapra Beetle
Raisin Moth	Red-Legged Ham Beetle	<u>Trogoderma sp.</u>
Worm Moth	European Pineshoot Moth	<u>Anthrenus sp.</u>
Indian Meal Moth	Tobacco Moth	Cigarette Beetle
Mediterranean Flour Moth	Japanese Beetle	Peach Twig Borer
Mites	Thrips	Lesser Grain Borer
Sweet Potato Weevil	Flat Grain Beetle	Pea Weevil
Oriental Fruit Moth	Golden Nematode	Sawtoothed Grain Beetle
Corn Borer	Tobacco Beetle	Hairy Fungus Beetle
Mice and Rats	White Fringed Beetle	Fruit Flies of the family <u>Tephritidae</u>
Carpet Beetle	Bull Flies	(quarantine species)
Warehouse Beetle	Aphids	Bamboo Shothole Borer
	Olive Scale	

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. Certain food crops require fumigation at times, most of which are specified by certain quarantines. In such cases follow the 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.
- (2) Do not fumigate food products other than those for which a residue tolerance is registered with the Environmental Protection Agency (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. Repeated fumigations may also result in excess residues.
- (4) Do not fumigate grain if: moisture is high, temperature is low (below 60° F), or there is excessive dockage.
- (5) Commodity 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 stripping the screened openings with a wide commercial masking tape. Stairwells and interior doors should be closed. Any broken window 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 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, Sicalkraft or asphalt laminated paper, plastic film, or heavily oiled Kraft 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 from outside of structure 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.B.A. must be worn as described in Precautionary Statements. Operate electric fan(s) for a minimum of 30 minutes after release to accelerate distribution of gas.

PROCEDURES - SHIP

IMPORTANT:

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

PREFUMIGATION PROCEDURES:

- a. Prior to fumigating a vessel for intransit 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 aerated and a determination has been made by the master of the vessel and the fumigator that the vessel is safe for occupancy.
- b. 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.
- c. During the fumigation or until a manned vessel leaves port or the cargo is aerated, 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 aerated before the manned vessel leaves port, the person in charge of the vessel shall insure that at least two units of personal protection equipment and one gas or vapor detection device, and a person qualified in their operation be on board the vessel during the voyage.

PRECAUTIONS AND PROCEDURES DURING VOYAGE:

If necessary to enter holds 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 fumigant, jointly approved by the Mining Enforcement and Safety Administration and the National Institute of Occupational Safety and Health.

AERATION AND REENTRY

7/2/12

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.

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

Certain materials absorb methyl bromide during fumigation and desorption during aeration may call for extended monitoring and aeration periods.

DRAEGER GAS DETECTOR, BENDIX GASTECH DETECTOR:

(Hand Pump and Detector Tube) Methyl bromide may be detected at the Threshold Limit Value (T.L.V.) of 5 ppm. Detectors are available from Soil Chemicals Corporation.

HALIDE LAMP 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 ppm	LB/1000 CU.FT.	FLAME COLOR (DAYLIGHT)
0	0	None
25	0.00625	None
50	0.0125	Moderate Green
125	0.031	Green
250	0.0625	Strong Green
500	0.125	Strong Blue-Green Fright
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.

NOTE: Halide lamp detector is suitable for locating leaks and for determining extent of aeration down to approximately 50 ppm. It is not suitable for clearing a structure for reentry.

RATE OF APPLICATION, 100% METHYL BROMIDE MAKR

100/12

COMMODITY	Examples of Pests Controlled	Dosage lbs/1000 cu ft	Exposure Time In Hours	Minimum Temperature in °F	Estimated Aeration Time in Hrs.
Beans & Peas, Dry for example lima, kidney, blackeye, pinto, cowpeas	Indian meal moth	2	24	60	12
	Almond moth	3	24	40	
	Cowpea Weevil				
Candy	Indian meal moth Sawtoothed grain beetle	1-2	12-24	60	24
Cocoa Beans (bags)	Tobacco moth, Sawtoothed grain beetle	1 1/2	12-24	60	12
Fruits Dried: for example: apple apricot, date, fig peach, pear, prune, raisins	Indian meal moth	1 1/2	12-24	50-59	
	Almond moth	1		60	
	Dried Fruit beetle				
	Sawtoothed grain beetle				
Flour and cereal products (bags, packages)	Flour beetles Sawtoothed grain beetle Indian meal moth	1-2	12-24	60	24
Un dried corn	Indian meal moth, Angoumois grain moth, Granary weevil	2	24	60	12
Barley, Oats, Rice, Rye, Wheat	Flour beetles Rice weevil Sawtoothed grain beetle	3	24	60	Use forced re-circulation for bulk bins
Grain sorghum (Milo)	Lesser grain borer Indian meal moth, Granary weevil	4	24	60	Use forced re-circulation for bulk bins
Nuts Almond, brazil, macadamia, filbert chestnut, pecan, hickory, pistachio, cashew, walnut	Naval orange worm Almond moth Dried Fruit beetle	3 1/2	12-24	60	24
Processed Foods	Sawtoothed grain beetle Cigarette beetle indian meal moth	1-2	12-24	60	
Tobacco Atmospheric Vacuum chamber	Tobacco moths	2	48-72	45-70	24
	Tobacco beetle	4	4	70	4
Hay (Alfalfa)	Sawtoothed grain beetles Angoumois grain moths	2	16-24	70	24
Lumber	Lycus, or Powder post beetles	2	24-36	60	12
Miscellaneous such as burlap bags, wood stakes	Indian meal moth Lycus, or Powder post beetles	3-4	24	60	
Cotton and Cotton seed Tarpaulin fumigation Vacuum chamber	Indian meal moth	3	24	60	12-24
	Cigarette beetle	4	4	60	4
Dog Feed	Indian meal moth Cigarette beetle	1-2	12-24	50	48
Strawberries	Mites Thrips	3	3-4	60	3
Fresh fruits and vegetable	Fruit flies	1-4	3	60	24

Fumigate only fruits and vegetables for which tolerances have been established

SPACES CONTAINING COMMODITIES	Examples Of Pests Controlled	Dosage lbs/1000 cu.ft.	Exposure Time In Hours	Minimum Temperature in °F	Estimated Aeration Time in Hrs.
Buildings, warehouses, flour mills, food processing plants	Indian meal moth	1-2	16-24	60	12
	Warehouse beetle	2-3	16-24	40	12
	Sawtoothed grain beetle				
Less than 100,000 cu.ft.		1	16-24	60	12
		2	16-24	40	12
100,000 - 500,000 cu.ft.					

NOTE: The above dosages are for insect control.

For rodents, bats, moles, and other warm blooded animals, 1/4 lb/1000 cu.ft. with 6 hours exposure should be sufficient. At temperatures below 60°F (15.5°C) the dosages should be increased by 1/2 lb. (227 grams) per thousand cubic feet (28.3 cu.meters) for every 10°F (5.5°C) drop in temperature.

BOX CARS	Examples Of Pests Controlled	Dosage lbs/1000 cu.ft	Exposure Time In Hours	Minimum Temperature in °F	Estimated Aeration Time in Hrs.
NOTE: FUMIGATE STATIC CARS ONLY, DO NOT FUMIGATE IN TRANSIT.					
Steel	Sawtoothed grain beetle Flour beetles	3-3 1/2	16-24	60	4
Wood	Indian meal moths	3 1/2 - 4 1/2	16-24	60	4
Vans, Trailers**	Sawtoothed grain beetle Flour beetles Indian meal moths	1-3	16-24	60	4
Vacuum chambers	Sawtoothed grain beetle Flour beetles Indian meal moths	1-2	3	60	4
Cargo Ships (Do Not Fumigate Underway)	Sawtoothed grain beetle	1	10	60 and above	
	Flour beetles	1	12	50-59	
	Indian meal moths	1.5	12	40-49	

* Aeration time can be shortened if the fumigated area is determined to be free of methyl bromide by a suitable methyl bromide detector. If no aeration time is given in the table, a suitable methyl bromide detector must be used to determine when aeration is completed.

Aerate products 48 hours before offering to consumer.

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

REDUCED RATE APPLICATION METHOD USING MAKR[®] FUMIGATION PROCESS

12/27/04

DOSAGE: To fumigate dried fruits, grain, beans, peas (dry) and nuts, use 0.5 pounds of 100% Methyl Bromide MAKR[®] with 11 pounds of MAKR[®] Carbon Dioxide per 1000 cu ft. For the other commodities listed above, use rate of 0.5 lbs of 100% Methyl Bromide MAKR[®] or up to a maximum 50% of the rate given in the table above with 11 pounds of MAKR[®] Carbon Dioxide per 1000 cu ft.

METHOD OF APPLICATION:

General Preparation and Instructions for Application

1. Plan the application by calculating the amount of 100% Methyl Bromide MAKR[®] required at the appropriate rate for the commodity, chamber, volume of space, and target pest to be fumigated
2. Plan the amount of MAKR[®] Carbon Dioxide required at the rate of 11 pounds per 1,000 cubic feet to be fumigated
3. Introduce 100% Methyl Bromide MAKR[®] and MAKR[®] Carbon Dioxide through suitable leakproof tubing. The entire amount may be released in one place; but for larger spaces, release it at two or more locations, so chosen to ensure even gas distribution
4. If it is necessary to release 100% Methyl Bromide MAKR[®] from inside a structure, a SCBA must be worn as described in Precautionary Statements.
5. Operate a fan or fans with a minimum equivalent of 5 amps power inside the space while introducing 100% Methyl Bromide MAKR[®] and MAKR[®] Carbon Dioxide for a minimum of 30 minutes thereafter. It is preferable to operate the fan(s) throughout the fumigation treatment.

Method 1: Use of Authorized Dispensing Machine:

The MAKR[®] calibrated dispensing machine is to be operated by a trained, certified applicator. The dispensing machine heat exchanger should be brought to the minimum operating temperature of 70°F. Begin the introduction of the required quantity of MAKR[®] Carbon Dioxide. Meter the required quantity of 100% Methyl Bromide MAKR[®] into the stream of hot MAKR[®] Carbon Dioxide, adjusting the flow of MAKR[®] Carbon Dioxide and 100% Methyl Bromide MAKR[®] to maintain a minimum temperature of 70°F and an optimum of 130°F.

Method 2: Application Alternative for Small Fumigation Chambers or Small Volumes of Space Fumigation.

- STEP 1:** Introduce the required amount of 100% Methyl Bromide MAKR[®] through a heat exchanger, maintaining a minimum temperature of 70°F
- STEP 2:** Introduce last, the required amount of MAKR[®] Carbon Dioxide to the chamber or space to be fumigated. Meter through a heat exchanger, maintaining a minimum temperature of 70°F and optimum of 130°F.
- Exposure Time:** Exposure times are 50-100% of those listed in the Rate of Application Chart.

AERATION AFTER TREATMENT.

Following fumigation, aerate the treated area until the concentration of methyl bromide is below 5.0 ppm, as measured by a Draeger gas detector, and the level of carbon dioxide, as measured by a Draeger gas detector, is below 10,000 ppm. Entry into the treated area is permitted when methyl bromide levels are above 5.0 ppm if the person wears a NIOSH/MSHA approved self-contained breathing apparatus (SCBA) or combination air-supplied/SCBA respirator. Short-term entry into the treated area is permitted when measured carbon dioxide levels are between 10,000 and 15,000 ppm; respiratory protection, such as a U.S. Divers' Survivair or a comparable device must be worn if 15 or more minutes are spent in the treated area. If measured carbon dioxide levels exceed 15,000 ppm, no person shall enter the treated area without a respiratory protection device such as a U.S. Divers' Survivair or a comparable device.

TARPAULIN FUMIGATION/AERATION: Remove tarpaulins and seals. Open any doors and vents that are operational. Operate circulation fans.

CHAMBER FUMIGATION/AERATION: Operate exhaust fan system. Provide air flow by opening vents and cracking door.

WARNING SIGNS:

1. The applicator must placard or post all entrances to the fumigated area with signs bearing in English and Spanish.
 - (1) The signal word DANGER/PELIGRO and the skull and crossbones symbol.
 - (2) The statement, "Area under fumigation DO NOT ENTER/NO ENTRE."
 - (3) The date of fumigation.
 - (4) Name of fumigant used
 - (5) Name, address, and telephone number of the applicator
2. Do not remove placards until the treated space is completely aerated to the requirements of the label, and only under the supervision of a certified applicator.
3. Additional warning signs for CO₂ are required to be posted at all entrances to the fumigated area, warning that hazardous levels of CO₂ may be present with possible oxygen deficiency. The methyl bromide and CO₂ warning signs may be combined. Warning signs are available from your dealer or distributor.

QUALIFICATIONS OF APPLICATOR/LICENSEE.

Only applicators/licensees who have completed a training program on the MAKR[®] Fumigation Process and been issued a pocket certification card shall be permitted to utilize this protocol. At a minimum, four hours of training will be required including one classroom hour and three hours in the field. Subjects covered shall include the proper application of methyl bromide and MAKR[®] Carbon Dioxide, proper posting of warning signs, proper aeration and ventilation, proper testing for reentry, proper certification, and proper preparation and filing of reports.

POSSESSION OF LABELS.

Each user of the MAKR[®] Fumigation Process must be in possession of this label and the label for MAKR[®] Carbon Dioxide at the time of pesticide application.

WARRANTY: 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 the 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 the seller, and buyer assumes the risk of any such use.

* MAKR is a trademark of Integrated Environments International, Inc.

ACCEPTED
with COMMENTS
EPA Letter Dated:
30 DEC 1994
Insecticide
Fumigant
The pesticide
under EPA Reg. No.
65146-1