RESTRICTED USE PESTICIDE
DUE TO ACUTE TOXICITY

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

METH-O-GAS® 100

COMMODITY FUMIGANT

ACTIVE INGREDIENT: Methyl Bromide 100%

This product weighs 14.4 pounds per gallon.

KEEP OUT OF REACH OF CHILDREN
DANGER • PELIGRO • POISON

THE USE OF THIS PRODUCT IS STRICTLY PROHIBITED IN RESIDENTIAL STRUCTURES INCLUDING, BUT NOT LIMITED TO, SINGLE AND MULTI-FAMILY RESIDENTIAL PROPERTIES, AND DAYCARE FACILITIES. THE USE OF THIS PRODUCT IS ALSO STRICTLY PROHIBITED IN NURSING HOMES, HOTELS, DORMITORIES, SCHOOLS, HOSPITALS, AND PUBLIC RESTAURANTS.

DO NOT STORE IN OR WITHIN 100 FEET OF A RESIDENCE. STORE IN A DRY, COOL, WELL-VENTILATED AREA UNDER LOCK AND KEY.

METHYL BROMIDE IS A NEUROTOXIC GAS THAT CAN CAUSE SEVERE RESPIRATORY ISSUES, CONVULSIONS, COMA, LONG-TERM HARM TO THE NERVOUS SYSTEM, OR DEATH.

READ THIS BOOKLET AND ALL LABELING BEFORE USING THIS PRODUCT AND FOLLOW ALL DIRECTIONS AND PRECAUTIONS. IF YOU DO NOT UNDERSTAND THE LABEL, FIND A CERTIFIED APPLICATOR TO EXPLAIN IT TO YOU IN DETAIL.

Si Usted no entiende la etiqueta, busque a alguien para que se la explique a Usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

FIRST AID	
If inhaled	• Move person to fresh air. Keep warm. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. • Do not give anything by mouth to an unconscious person. If not unconscious, rinse mouth out with water. • In all cases of overexposure, get medical attention immediately. Take person to a doctor or emergency treatment facility.
If Swallowed	• Call a poison control center or doctor immediately for treatment advice. • Have a person sip a glass of water if able to swallow. • Do not induce vomiting unless told to by a poison control center or doctor. • Do not give anything to an unconscious person.
If in eyes	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • In all cases of overexposure, get medical attention immediately. Take person to a doctor or emergency treatment facility.
If on skin or clothing	• Immediately remove contaminated clothing, shoes, and any other item on skin. • Rinse skin immediately with plenty of water for 15-20 minutes. • In all cases of overexposure, get medical attention immediately. Take person to a doctor or emergency treatment facility.
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-949-5167 for emergency treatment information.	
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 overexposures 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

Great Lakes
CHEMICAL CORPORATION
P.O. BOX 2200 • WEST LAFAYETTE, INDIANA 47996-2200 • U.S.A.

Label Booklet GLK 159J
EPA REG. NO. 5785-11

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PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
DANGER

Extremely hazardous liquid and vapor under pressure. Fatal if inhaled or swallowed. Corrosive. Causes skin burns and irreversible eye damage, both of which may have a delayed onset. Do not breathe vapor or gas. Inhalation may cause serious acute illness or delayed lung, nerve, or brain injury. Do not get in eyes, on skin 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.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other fumigation handlers must wear:

- Long-sleeved shirt and long pants
- Shoes and socks
- Protective eyewear when handling liquid.
- In addition, when a respirator is required in this label's *Respirator Requirements* section of the Directions for Use, applicators and other fumigation handlers must wear:
    - a supplied air respirator (NIOSH approval number prefix TC-19C),
    - a self-contained breathing apparatus (SCBA) (NIOSH approval number prefix TC-13F), or
    - if methyl bromide concentrations are less than 5 ppm, a NIOSH-certified half-mask or full-face piece air-purifying respirator with a cartridge certified by the manufacturer for protection from exposure to methyl bromide at concentrations up to 5 ppm (e.g., a 3M air-purifying respirator equipped with 3M Model 60928 Organic Vapor/Acid Gas/P100 cartridges).

See the "User Safety Requirements" section for additional restrictions.

Fumigation handlers entering the fumigation site before methyl bromide has been introduced to the treatment area or after the aeration period has ended are not required to wear the PPE listed above, except when moving, handling, opening fumigant containers, or when taking corrective action when a spill or leak has occurred.

USER SAFETY REQUIREMENTS

-- Respirator Requirements: When a respirator is required for use with this product, the certified applicator supervising the fumigation must make sure that:

a) Respirators must be fit tested and fit checked using a program that conforms with OSHA's requirements (described in 29 CFR Part 1910.134);

b) Respirator users must be trained using a program that conforms with OSHA's requirements (described in 29 CFR Part 1910.134);

c) Respirator users must be examined by a qualified medical practitioner to ensure the physical ability to safely wear the style of respirator to be worn;

d) Respirators must be maintained according to a program that conforms with OSHA's requirements (described in 29 CFR Part 1910.134.)

-- Do not wear jewelry, rubber gloves, goggles, tight clothing, rubber protective clothing, or rubber boots when handling. Methyl bromide can be trapped inside clothing or objects and cause skin injury.

-- If liquid fumigant splashes or spills on clothing, remove them at once and place them outdoors in an isolated place to aerate, because vapor or gas will be an intolerable source of irritation.

-- Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product. Do not reuse them. Air dry clothes in an isolated place prior to disposal.

-- At the end of the work day remove outer clothing, shoes, and socks. Do not reuse contaminated clothing or shoes until cleaned. Keep and wash the clothing and shoes separately from other laundry.

-- Follow manufacturer's instructions for cleaning/maintaining protective eyewear and respirators.

User Safety Recommendations

Users should wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.

Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

Users should remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This product is toxic to mammals and birds. Keep out of lakes, streams and ponds. Do not contaminate water by cleaning of equipment or disposal of equipment washwater or rinsate.

PHYSICAL AND CHEMICAL HAZARDS

Contents under pressure. Do not use or store near heat or open flame. In fires fueled by other materials, Meth-O-Gas®100 may liberate hazardous gases. Meth-O-Gas®100, used as a gaseous fumigant, is generally non-corrosive under dry conditions. However, the use of liquid methyl bromide with aluminum, magnesium, zinc and alkali metals may result in the liberation of toxic gases, and possible fire and explosion. In addition, the use of liquid methyl bromide may cause severe corrosion of containers and equipment made of these metals.

DIRECTIONS FOR USE

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

Applications in California:

Where a Restricted Materials Permit with site-specific Final Permit Conditions is required for fumigation pursuant to Title 3 of the California Code of Regulations section 6400, the certified applicator must follow the conditions and instructions specified in the Final Permit Conditions issued by the County Agricultural Commissioner provided that the buffer zone distances are equal to or greater than the buffer zone distances specified in the August 8, 1994 California Methyl Bromide Commodity Fumigation Reference Manual in place of the following sections of this label: *Buffer Zones*; *Buffer Zone Entry Restrictions; Respirator Requirements & Work Time Restrictions; and Aeration Period.*

Do not apply this product in a way that will contact handlers or other persons, either directly or through drift. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

Application Restrictions

Two fumigation handlers must be present during the treatment period, at the initiation of aeration, and when testing for reentry to the treatment area. Only one fumigation handler needs to be present if monitoring is conducted remotely (from outside the treatment area).

Fumigation handlers must be under direct on-site supervision of the certified applicator at the start of the fumigation, at the initiation of aeration, and when testing for reentry to the treatment area.

This fumigant is a highly hazardous material and must be used only by individuals trained in its proper use. Before using, you must read and obey all label precautions and directions.

All persons working with this fumigant must be knowledgeable about the hazards, and trained in the use of required respiratory protection equipment and detector devices, emergency procedures, and proper use of the fumigant.

THIS PRODUCT IS TO BE USED for control of pests in stored or residual food products, agricultural commodities and other materials and products as specified on this label. This product is to be used for these purposes **ONLY IN**: (a) enclosed spaces and structures that are intended or used for processing, transportation, handling, or storage of food products, agricultural commodities or other materials and products identified on this label; (b) enclosed spaces and structures in which food products, agricultural commodities, or other materials and products identified on this label have been processed, transported, handled or stored; and, (c) when this product is used for the foregoing purposes, storage areas, work areas and other areas which are located within or adjacent to the facility (such as employee break rooms, food service areas, or test kitchens) and which cannot be isolated from the treatment area may be considered part of the treatment area if they are evacuated of all persons who are not applicators or other fumigation handlers.

DO NOT USE THIS PRODUCT IN residential structures or in public food service facilities (such as public restaurants) , or for any purposes other than those described above.

If you have any questions about the proper use of this product, you should contact Great Lakes Chemical Corporation before using this product.

Terms Used in This Labeling

Aeration Buffer Zone**:** an area that extends from the point of methyl bromide emission from the treatment area (e.g., exhaust stack or building edge) to a specified distance where access is limited. Entry by any person except the certified applicator and authorized fumigation handlers under his/her direct supervision is prohibited except as provided in the *Exceptions to Buffer Zone Entry Restrictions* section of the label. The aeration buffer zone begins when aeration begins and ends when the air concentration of methyl bromide in the breathing zone of the treatment area for structural fumigation, or in the air space around the treated commodity is 5.0 ppm or less. Once the aeration buffer zone expires, *Respirator Requirements and Work Time Restrictions* continue only in the treatment area until the end of the aeration period.

Aeration Period: the period of time starting at the initiation of aeration and ending when the concentration of methyl bromide is 5.0 ppm or less as measured according to the directions in the *Aeration Period* section of the label and the minimum aeration time has elapsed.

Business (as referenced in the *Emergency Preparedness Measures* section): Structures and outdoor areas where business is conducted; e.g., offices, shops, equipment yards.

Breathing Zone: Areas where individuals typically stand, sit or lie down while performing work functions.

Exhaust Stack: A duct used to exhaust methyl bromide from the Treatment Area.

Fumigation Site: The location at which fumigation activities will be conducted, at a minimum encompassing the treatment area, buffer zones, and any secondary aeration locations.

Fumigation Handlers: Persons at the Fumigation Site involved in the fumigation, including the certified applicator and persons under his/her supervision. Fumigation handlers must be trained and equipped to use PPE according to label requirements. Does not include persons who do not enter the treatment area, treatment buffer zone, aeration buffer zone, or secondary aeration location.

Mechanical Aeration: The use of fans or any other mechanical devices to aerate or ventilate the treatment area. May also be referred to as "Active Aeration."

Owner: Any person or company who has a present possessory interest (including leasehold, rental, or other) in the commodity or space being fumigated.

Passive Aeration: Non-mechanical ventilation (i.e. opening doors, windows or removing tarpaulin cover) of the treatment area.

Release: When control and responsibility for the commodity or structure is passed to the owner of the commodity or structure, responsible site manager, or other person designated by the owner.

Remote Monitoring: Monitoring conducted remotely is performed using a system set up in a treatment area or structure prior to the introduction of methyl bromide which allows the fumigation handler to check concentrations from outside the treatment area and without opening the treatment area. Inserting a hand-held device into the treatment area through a port or seam is not considered remote monitoring.

Secondary Aeration Location: A separate area where commodities may be moved for the continuation of aeration under the *Moving Commodity before Aeration Period is Complete* section of this label. The secondary aeration location must allow the free flow of air through the area and must not hold or contain concentrations of methyl bromide. The perimeter of the secondary aeration location extends 24-inches from the outermost treated commodity, or carton, pallet, or box containing the treated commodity. The secondary aeration location and associated restrictions terminate upon the end of the aeration period. Secondary aeration locations may include outdoor covered areas, car ports, and areas surrounded by mesh barriers.

Start of the Fumigation: The point in time at which methyl bromide is first introduced/delivered/dispensed into the air of the treatment area.

Treatment Area: the structure, area or space which is, or was, enclosed or sealed to contain methyl bromide during the fumigation and continuing until the commodity or structure is moved or released.

Treatment Buffer Zone**:** an area surrounding a treatment area during the treatment period (exposure or holding period) where access is limited. The treatment buffer zone extends from the perimeter of the treatment area to a distance determined by this label. Entry by any person except the certified applicator and authorized fumigation handlers under his/her direct supervision is prohibited except as provided in the *Exceptions to Buffer Zone Entry Restrictions* section of the label. The treatment buffer zone begins when the fumigant is introduced into the fumigation enclosure and ends when aeration begins.

RESPIRATOR REQUIREMENTS & WORK TIME RESTRICTIONS

Overview of required respiratory protection once methyl bromide has been introduced into the treatment area until the end of the aeration period:

<table>
<tr><th>Sites</th><th>When</th><th>Methyl Bromide Concentration</th><th>Required Respiratory Protection</th></tr>
<tr><td rowspan="4">Treatment Area, Secondary Aeration Location, Treatment Buffer Zone, and Aeration Buffer Zone</td><td>• During Treatment Period (Treatment Area only)
• Installing portable exhaust systems
• Opening tarps for aeration</td><td>Any or unknown.</td><td>Supplied Air or SCBA respirator</td></tr>
<tr><td rowspan="2">• During Treatment Period (all areas except Treatment Area)
• During Aeration Period
• Removing tarps</td><td>> 5.0 ppm or unknown</td><td>Supplied Air or SCBA respirator</td></tr>
<tr><td>≤ 5.0 ppm</td><td>(i) APR along with air monitoring, OR
(ii) No respiratory protection required if following the Work Time Restrictions</td></tr>
<tr><td>• Commodity Released</td><td>n/a</td><td>No respiratory protection required.</td></tr>
</table>

Respirator Requirements:

Once methyl bromide has been introduced into the treatment area, fumigation handlers entering the treatment area, a buffer zone, or secondary aeration location must wear either a supplied air respirator (NIOSH approval number prefix TC-19C) or a self-contained breathing apparatus (SCBA) (NIOSH approval number prefix TC-13F) when:

- the concentration of methyl bromide is unknown,
- installing portable exhaust systems,
- opening tarps for aeration,
- removing tarps (when concentrations under the tarp are above 5 ppm or unknown).

Treatment Area and Secondary Aeration Location

Any fumigation handler entering the treatment area during the treatment period must wear either a supplied air respirator (NIOSH approval number prefix TC-19C) or a self-contained breathing apparatus (SCBA) (NIOSH approval number prefix TC-13F).

Any fumigation handler entering the treatment area or secondary aeration location during the aeration period must either (1) wear a respirator listed in the **PPE Section** of this label, or (2) follow the Work Time Restrictions in this section.

Treatment buffer zones and aeration buffer zones

Fumigation handlers entering a treatment buffer zone or aeration buffer zone must either (1) wear a respirator listed in the **PPE Section** of this label, or (2) follow the Work Time Restrictions in this section.

Respiratory Protection when Monitoring Air Concentrations

If methyl bromide concentrations are measured to be 5.0 ppm or less, and the Work Time Restrictions are not followed, fumigation handlers may wear the following respirator instead of the supplied-air or SCBA respirator:

- a NIOSH-certified half-mask or full-face piece air-purifying respirator with a cartridge certified by the manufacturer for protection from exposure to methyl bromide at concentrations up to 5.0 ppm (e.g., a 3M air-purifying respirator equipped with 3M Model 60928 Organic Vapor/Acid Gas/P100 cartridges).

When an air-purifying respirator is worn, the following air monitoring procedures must be followed to ensure that the 5.0 ppm upper protection limit of the air-purifying respirator plus respirator cartridge is not exceeded:

- Air monitoring samples for methyl bromide must be collected at least every hour in the fumigation handler's breathing zone. See the 'Monitoring Locations' section of this label for directions on where samples must be measured.

If any air sample is greater than 5.0 ppm for methyl bromide:

- All fumigation handlers wearing air-purifying respirators must either:
  - be removed from the treatment buffer zone and/or aeration buffer zone, or
  - put on a supplied-air respirator (NIOSH approval number prefix TC-19C), or a self-contained breathing apparatus (SCBA) (NIOSH approval number prefix TC-13F).
- Fumigation handlers can resume work activities with an air-purifying respirator if all of the following conditions exist:
  - Two consecutive air samples for methyl bromide taken at the work site at least 15 minutes apart must be less than or equal to 5.0 ppm, and
  - New cartridges have been installed.

During the collection of air samples after an air sample has measured greater than 5.0 ppm, a supplied-air respirator or an SCBA must be worn by the fumigation handler taking air samples or testing must be done remotely. New samples must be taken where the previous samples exceeded 5.0 ppm.

Work Time Restrictions:

Initial Test

The concentration of methyl bromide must be measured with an Initial Test using either:

-- a continuous real-time detection device (such as an IST sensor, PureAire monitoring system, or MiniRAE monitor) with a sensitivity at least 0.5 ppm for methyl bromide. Fumigation handlers using a continuous real-time detection device do not have to wear a respirator unless or until a measurement of 1.0 ppm or greater is obtained. The type of monitoring device must be recorded. Measurements, the date, time, and location of the measurement must be recorded at least every 15 minutes.

-- a direct reading detection device, such as a Matheson-Kitagawa, Draeger, or Sensidyne device, or a suitable electronic device, capable of accurately measuring methyl bromide levels with a sensitivity of at least 0.5 ppm for methyl bromide. Persons using direct read detection devices must follow manufacturer's directions. Fumigation handlers taking the Initial Test must wear either a supplied-air respirator (NIOSH approval number prefix TC-19C), or a self-contained breathing apparatus (SCBA) (NIOSH approval number prefix TC-13F).

- The Initial Test must be performed as required in the 'Monitoring Locations' instructions below.
- The Initial Test may be repeated prior to the subsequent entry of fumigation handlers using the Work Time Restrictions. Fumigation handlers must follow the Work Time Restrictions triggered by the monitoring at the time they enter the area.

- If at any time air concentrations exceed 5.0 ppm, then fumigation handlers must either wear an SCBA or supplied air respirator or move outside the buffer zone area.
- The type of monitoring device and the measurements taken must be recorded.
- The results of the Initial Test are used to determine the Maximum Entry Time, the length of time work is allowed without respiratory protection within (i) the treatment buffer zone; (ii) the aeration buffer zone; (iii) the treatment area during aeration; and (iv) secondary aeration location. This does not include time spent outside these areas.
- Additional monitoring is required during the Work Time Restriction period according to schedules set forth in the Work Time Restrictions table until work has ceased or the Work Time Restriction period has expired, whichever occurs sooner. If any subsequent tests indicate a higher concentration, the Work Time Restrictions for the higher concentration must be followed. If any subsequent tests are lower, the Work Time Restrictions for the higher concentration remain in effect.

Monitoring Locations:

- Air monitoring must be performed within the fumigation handler's breathing zone where work functions will be performed. The monitoring location(s) must be recorded in the FMP.
- Breathing zones are defined as areas where individuals typically stand, sit or lie down while performing work functions.

Work Time Restriction Air Monitoring Schedule

Use the following work time and air monitoring schedule for each 24 hour period.

If more than the Maximum Entry Time has elapsed since the last test, an SCBA or supplied air respirator must be worn during testing or testing must be done remotely.

For fumigation handlers who may be involved in multiple methyl bromide fumigations within a continuous 24 hour period, the maximum entry time is cumulative across all methyl bromide fumigations within that continuous 24 hour period.

Table I. Work Time Restrictions

Levels Allowed Per Test	**Air Monitoring Required**	**Maximum Entry Time per continuous 24 hours** (time allowed without respiratory protection inside the Treatment Buffer Zone, Aeration Buffer Zone, Treatment Area During Aeration, and Secondary Aeration Location)
>3.0 to 5.0 ppm	Initial Test requires taking 2 samples at least 15 minutes apart. Both sampling results must be less than the 'Maximum Level Allowed Per Test'. Take additional sample once every 30 minutes after entry until work ends, the aeration period ends, or the Maximum Entry Time expires, whichever is sooner.	90 Minutes (1 Hour and 30 Minutes)
>2.0 to 3.0 ppm	Initial Test requires taking 2 samples at least 15 minutes apart. Both sampling results must be less than the 'Maximum Level Allowed Per Test'. Take additional sample once per hour after entry until work ends, the aeration period ends, or the Maximum Entry Time expires, whichever is sooner.	160 Minutes (2 Hours and 40 Minutes)
>1.0 to 2.0 ppm	Initial Test requires taking 2 samples at least 15 minutes apart. Both sampling results must be less than the 'Maximum Level Allowed Per Test'. Take additional sample once every two hours after entry until work ends, the aeration period ends, or the Maximum Entry Time expires, whichever is sooner.	240 Minutes (4 Hours)
> 0 to 1.0 ppm	Initial Test requires taking 2 samples at least 15 minutes apart. Both sampling results must be less than the 'Maximum Level Allowed Per Test'. Take additional sample once every two hours after entry until work ends, the aeration period ends, or the Maximum Entry Time expires, whichever is sooner.	480 Minutes (8 Hours)
No Detectable Amount	Initial Test requires taking 2 samples at least 15 minutes apart. Both sampling results must be less than the 'Maximum Level Allowed Per Test'. Take additional sample once every two hours after entry until work ends, or the aeration period ends, whichever is sooner. After entry, testing may be discontinued after two consecutive No Detectable Amount results.	No Limit

BUFFER ZONES

The appropriate treatment buffer zone and aeration buffer zone must be determined using the EPA's Methyl Bromide Commodity Fumigation Buffer Zone Lookup Tables located at epa.gov/pesticide-registration/mbcommoditybuffer. The appropriate treatment buffer zone and the aeration buffer zone distances must be used and must be included in the site-specific fumigation management plan.

Minimum Buffer Zones: The minimum treatment or aeration buffer zone is 10 feet.

Buffers and Buildings:

If the treatment area is contained within a closed building (exterior windows, doors, ventilation intakes, and other openings are closed), the entire building must follow all buffer zone restrictions, even if the calculated treatment buffer zone distance would not encompass the entire building.

If the treatment area is within an opened building (all exterior windows, doors, and other openings are open), then only the area within the buffer zone must follow the buffer zone restrictions.

The treatment and aeration buffer zones extend into nearby buildings unless all openings (exterior windows, doors, ventilation intakes, and other openings) inside the buffer zone are closed or sealed.

Buffer Zone Overlap:

If treatment or aeration buffer zones overlap from more than one methyl bromide fumigation, then to determine the treatment and aeration buffer zone the certified applicator must:

- calculate the ***total volume fumigated*** for all the sites.
- select the ***highest application rate*** from the multiple fumigations,
- select the ***lowest percent retained*** from the multiple enclosures, and
- select the ***longest air exchange interval.***

Using those inputs, look up the buffer zone size. This buffer zone distance must be used for both the treatment and aeration buffer zones for each site.

BUFFER ZONE ENTRY RESTRICTIONS

Entry by any person, except the certified applicator supervising the fumigation, or persons under his/her direct supervision, is prohibited in the treatment buffer zone and in the aeration buffer zone. Authorized persons who enter the treatment or aeration buffer zones must follow the personal protective equipment requirements specified for fumigation handlers on this labeling.

If a structure within the treatment buffer zone or the aeration buffer zone is not occupied, ensure that persons do not enter the structure until the aeration buffer zone is terminated. For structures that have been vacated, persons may not re-enter until one air sample for methyl bromide, taken in the breathing zone on each floor of the structure after the termination of the aeration buffer zone indicates 1.0 ppm or less methyl bromide. The sampling requirement does not apply to unoccupied buildings used for storage (e.g. sheds, barns, garages).

Local, state, or federal officials performing inspection, sampling, or other similar official duties related to the fumigation are not excluded from the treatment area, treatment buffer zone, or aeration buffer zone by this labeling. The certified applicator supervising the application and the owner of the establishment where the application is taking place are not authorized to, or responsible for, excluding those officials from the treatment area, treatment buffer zone, or aeration buffer zone.

Exceptions to Buffer Zone Entry Restrictions: Two exceptions are permitted to enter the treatment buffer zones and aeration buffer zones

1. **Occupied Structure Exception:** Occupants of a structure that is within the treatment and/or aeration buffer zone may remain in the structure, *provided* continuous real-time monitoring indicates that methyl bromide concentrations are 1.0 ppm or less within the occupied structure. Fumigation handlers must monitor the air concentrations. This exception only applies to structures occupied by occupational workers. It does not apply to homes, apartment buildings, schools, hospitals, nursing homes, employee housing centers, or other prohibited sites. To use this exception, the FMP must state the distance of the occupied structure to the treatment area, the method of conducting the real time monitoring for methyl bromide during the period when the treatment buffer zone and aeration buffer zone are in force, and specific procedures for immediate intervention, such as cessation of aeration, evacuation of building, or other procedures if the concentration of methyl bromide exceeds 1.0 ppm at any time.
2. **Transit Exception**: Limited transit through treatment and aeration buffer zones is allowed if brief and unavoidable. Routine or repeated work-related tasks are prohibited in the buffer zones. No person is allowed to transit through a buffer zone for more than 30 cumulative minutes in a 24-hour period. To use this exception, the FMP must state the distance from the treatment area to areas where transit is anticipated, the estimated length of time persons in transit will be in the buffer zone, and the rationale why transit through the buffer zone will not exceed 30 minutes. No transit exception when horizontal exhaust stacks are used.

PLACARDING OF TREATMENT AREAS

The certified applicator in charge of the fumigation (or someone under his/her supervision) must placard all entrances to the treatment area with signs bearing:

-- skull and crossbones symbol

-- "DANGER/PELIGRO,"

-- "Area under fumigation, DO NOT ENTER/NO ENTRE,"

-- "Methyl Bromide Fumigant in use,"

-- the date and time of fumigation, and

-- name, address, and telephone number of the certified applicator in charge of the fumigation.

Do not enter or allow entry by anyone other than fumigation handlers into the treatment area until the signs are removed. Such signs must only be removed when aeration has occurred and when the air concentration level of methyl bromide is monitored as described in this labeling and indicates that handlers can enter without respiratory protection. Signs must remain legible during entire posting period.

The warning signs at entrances to fumigated structures may only be removed by the certified applicator in charge of the fumigation (or someone under his/her supervision).

AERATION PERIOD

The aeration period starts at the end of the treatment period and continues until:

- The concentration of methyl bromide is measured to be 5.0 ppm or less AND
- The minimum time specified below has elapsed:
    - 4 hours, if using mechanical aeration; OR
    - 12 hours, if using passive aeration.
    - Exceptions to the Minimum Time Requirement:
        - For vacuum chambers at least 4 Air Washes must be done before the commodity can be moved from the chamber. An Air Wash is an alternating cycle of pressurizing and depressurizing a vacuum chamber to achieve aeration. Vacuum chambers accelerate the rate of desorption of the methyl bromide.
            - If this exception is used, the FMP must explain the designation of the vacuum chamber and the number of air exchanges per hour.

Taking Concentration Measurements:

- For measurements intended to release or move a commodity, stop fans.
- Take concentration measurements in the air space around the treated commodity and, when feasible, inside cartons or boxes.
- For structural fumigations, take concentration measurements in the breathing zone of the area of the structure to be released.

Moving Commodity before Aeration Period is Complete:

For commodities treated at normal atmospheric pressure, fumigated commodities may be moved from the treatment area to continue aeration in a Secondary Aeration Location provided:

- the concentration of methyl bromide is measured to be 5 ppm or less as specified in the *Taking Concentration Measurement* section of this label,
- at least ten air exchanges have been completed in the treatment area; and
- during removal of commodity from fumigation chambers, all aeration fans must continue to run while handlers enter and exit the chamber to remove the commodity.

The Treatment Area PPE, Respirator Requirements & Work Time Restrictions, and monitoring requirements apply to the secondary aeration location to which the fumigated commodity is moved, beginning at the time it is moved and ending at the termination of the aeration period.

If a combination of aeration techniques is used, the minimum aeration time may be prorated to reflect the techniques used. For example, if two hours of mechanical aeration occur in the treatment area before the commodity is moved to a storage area, then that constitutes one-half of the required minimum aeration time (2 hours out of 4 hours for mechanical aeration). If the separate area uses passive ventilation, then the separate area would have to be passively ventilated for at least 6 hours (one half of the 12 hours for passive ventilation) before handlers would be permitted to handle the treated commodity.

Commodities aerated using a combination of aeration techniques may be released when the concentration of methyl bromide in the air space around the commodity is measured to be 5.0 ppm or less and the prorated minimum aeration time has been completed.

Record the location and time when the commodity was moved and method for achieving 10 air exchanges in the pesticide application record.

Releasing Fumigated Commodities and Structures:

- After the aeration period is completed by one of the aeration methods above, the commodity or structure may be released.
- After the commodity or structure is released, record the date and time of the release in pesticide application records.

- Record the concentration reading date, time, and concentration measured, in pesticide application records.

EMERGENCY PREPAREDNESS MEASURES

For each residence or business within 50 feet of the treatment or aeration buffer zones, the certified applicator must follow the directions below for either

- Option 1 – Fumigant Site Monitoring, or
- Option 2 –Information for Neighbors.

Option 1 – Fumigant Site Monitoring: NOTE: Fumigant Site Monitoring is required ONLY if directions in the Response Information for Neighbors section below are not followed.

From the start of the application until the aeration buffer zone period expires, a certified applicator or fumigation handler(s) under his/her supervision must:

- Monitor for methyl bromide with a direct read device in areas between the buffer zone perimeter and residences and businesses that trigger this requirement.
- Monitoring must begin within 1 hour of the start of the application and continue until the buffer zone period expires with a minimum of 2 air samples taken at least 1 hour apart every 6 hours during the buffer zone periods.
- If this option is selected:

  The FMP must include the certified applicator's plans for where, when, and how monitoring will be performed. Air sampling results must be recorded.
- Implement the emergency response plan immediately if an air sample is greater than or equal to 1.0 ppm for methyl bromide.

Option 2 –Information for Neighbors: NOTE: Information for Neighbors is required ONLY if directions in the Fumigant Site Monitoring section above are not followed.

The certified applicator supervising the application must ensure that residences and businesses that trigger the requirement have been provided the following information at least 1 week before the first fumigation begins and must be repeated annually or within 30 days of a change in the FMP, whichever occurs first.

- That methyl bromide fumigation(s) will take place
- The location(s) of the treatment area (s)
- Name of the product(s) to be used and the EPA Registration number(s)
- Contact information for the certified applicator(s) supervising the fumigation(s)
- Time period(s) when the application(s) is/are planned to take place (must not exceed 1 year from the date the information is provided)
- Signs and symptoms of exposure to methyl bromide. See "*Note to Physician*" section of this label.
- What to do and who to call if you believe you are being exposed (911 in most cases).

The Response Information for Neighbors may be provided through mailings, door hangers, or other methods that effectively communicate the information above to the residents and/or business owners/operators.

SITE-SPECIFIC FUMIGATION MANAGEMENT PLAN (FMP)

Prior to fumigating, the certified applicator supervising the fumigation must verify that a site-specific fumigation management plan (FMP) exists. The FMP is intended to ensure a safe and effective fumigation. The certified applicator in charge of the fumigation is responsible for working with the owners and/or responsible employees of the site to be fumigated to develop a site-specific FMP. The certified applicator supervising the fumigation must ensure that the FMP is up-to-date and applicable to the fumigation before it takes place.

Before the start of any fumigation, the certified applicator supervising the fumigation must verify in writing (sign and date) that the FMP reflects current site conditions and that it addresses all elements identified in this labeling.

For situations where an initial FMP is developed and certain elements do not change for the fumigation, only elements that have changed need to be updated in the site-specific FMP provided that the certified applicator supervising the application has verified that those elements are current and applicable to the fumigation site before the fumigation begins, and record-keeping requirements are followed for the entire FMP (including elements that do not change).

The FMP must document the characteristics of the site, the treatment and aeration area buffer zones and appropriate monitoring and notification requirements consistent with, but not limited to, the following:

1. The Certified Applicator, or a person under his/her supervision, must inspect the site to determine its suitability for fumigation.
2. Before fumigating a structure, the Certified Applicator, or a person under his/her supervision, must consult available previous records for any changes to the structure, potential leaks and monitoring of adjacent, occupied buildings.

3. The Certified Applicator, or a person under his/her supervision, prior to each fumigation must review any available existing FMPs, MSDS, methyl bromide label and other relevant safety procedures for the specific location or site, and consult with owners (whose structure or commodity is fumigated) and appropriate employees, if available.
4. The Certified Applicator, or a person under his/her supervision, must develop procedures and appropriate safety measures for nearby handlers and public personnel who will be in and around the area during fumigation and aeration and consult owners, if available.
5. The Certified Applicator, or a person under his/her supervision, must develop an appropriate exterior monitoring plan that will conform with the requirements of the treatment and aeration area buffer zones to ensure that nearby handlers and bystanders are not exposed to levels above the allowed limits during fumigation and aeration and consult with owners, if available.
6. The Certified Applicator, or a person under his/her supervision, must develop procedures for notification of local emergency responders in the event of an emergency (Emergency Response Plan) and consult with owners, if available.
7. The Certified Applicator, or a person under his/her supervision, must confirm the placement of warning placards around the fumigation site as described on the label.
8. The Certified Applicator, or a person under his/her supervision, must confirm the required safety and monitoring / clearance equipment (including that required for entry into an area under fumigation) is in place and the necessary, trained fumigation handlers are available to complete a safe, effective fumigation.
9. The Certified Applicator, or a person under his/her supervision, must determine the proper Treatment Buffer Zone and Aeration Buffer Zones according to the methyl bromide product label and record the application rate, fumigated volume, and other parameters used to determine the buffer distances.

Elements of the FMP may be fulfilled through the use of supplemental documents such as service reports, facility maps, facility emergency plans, state or federally required forms, and other supplemental documents prepared for or used during the actual fumigation.

RECORDKEEPING

The certified applicator's employer or the certified applicator supervising the fumigation must maintain all records required under the provisions of this label including the FMP and supplemental documents used to fulfill FMP requirements, information on incidents and complaints, and all air monitoring results for two years from the date of the fumigation. During the two-year period following a fumigation, these records must be made available upon request to any local, state, tribal, or federal pesticide enforcement personnel.

During the treatment and aeration buffer zone periods, the certified applicator must make a copy of the FMP and the associated Material Safety Data Sheets (MSDS) available for viewing by all fumigation handlers. The certified applicator must ensure the FMP is available upon request at the fumigation site while the buffer zones are in effect.

Records of air monitoring results must include:

- Date of fumigation,
- Monitoring equipment used,
- Location and time of each required sample, and
- Concentration of methyl bromide found for each required sample.

Records of spills, equipment failures and other emergencies must include:

- Description of what happened
- Emergency procedures followed
- Whether the incident was reported to the state lead agency or other agency.

Records of complaints related to the fumigation received by the applicator during or after the fumigation must include:

- Contact information for the person filing the complaint
- Description of control measures or emergency procedures followed after the complaint, if any.

COMMODITY, FOOD, AND FEED FUMIGATION DIRECTIONS.

THE FOLLOWING PROCEDURES MUST BE FOLLOWED FOR ALL USES.

Do not fumigate with this product when the space, commodity, or structure to be fumigated is below 40°F for control of insects or below 20°F for control of rodents and other warm-blooded pests. At temperatures below 60°F, an approved procedure to heat the fumigant must be used.

If monitoring indicates concentration of fumigant is insufficient to be effective for the target pest, additional fumigant may be added as required; but, concentration is not to exceed prescribed rates of application.

When fumigating tanks, silos, etc., of stored bulk flour, empty or draw down flour to less than one-half meter deep. Do not introduce liquid methyl bromide into flour storages. Set up fans or air circulation to avoid localized high concentrations of methyl bromide when shooting gaseous methyl bromide into the storage. Do not overdose flour storages. It is recommended that the fumigant be applied outside flour storages that are inside buildings and allowed to drift in through open hatches.

METHODS OF APPLICATION

A. Chamber and Vault Fumigation.

All procedures as outlined in the section COMMODITY, FOOD, AND FEED FUMIGATION DIRECTIONS must be followed.

Load the chamber with the material to be fumigated, close exhaust ports, turn on circulating fan and close chamber door. Determine the proper rate of application and exposure time from appropriate table. Introduce the fumigant into the chamber by releasing it into the air stream in front of a blower or fan, passing it through a vaporizer, or allowing it to evaporate from a shallow pan. All controls should be outside the chamber.

At the end of the treatment period, aerate by opening the exhaust port, turning on the exhaust fan and opening the chamber door slightly or an inlet port to permit fresh air to enter. At the end of the aeration period, check fumigant concentration with a detection device. See Aeration Period Section for instructions regarding the minimum time requirement, taking concentration measurements, and release of the commodity.

B. Vacuum Chamber Fumigation.

All procedures as outlined in the section COMMODITY, FOOD, AND FEED FUMIGATION DIRECTIONS, must be followed.

Place articles to be fumigated in the steel chamber and draw the vacuum (25-27 inches mercury). Release fumigant into the chamber (usually through an appropriate heating unit to insure complete non-destructive vaporization of methyl bromide). See appropriate table for rates of application and exposure times. At the end of the treatment period, release the vacuum and change the air in the chamber at least four times (see the Exceptions to the Minimum Time Requirement in the Aeration Period section). A vacuum of 15 inches mercury should be drawn for this purpose. After purging chamber, check fumigant concentration with a detection device. See Aeration Period Section for instructions regarding the minimum time requirement, taking concentration measurements, and release of the commodity.

C. Railroad Car, Truck, Van, Trailer or Air and Sea Container Fumigation.

All procedures as outlined in the section COMMODITY, FOOD, AND FEED FUMIGATION DIRECTIONS, must be followed.

Railroad car should be placed on seldom used trackage or siding. Railroad car is not to be moved until the aeration period is complete. Park vehicle or container out of traffic area; if possible on the lee side of a building to protect from winds. Do not fumigate while strong winds are blowing. Seal the doors, ventilators and other openings. If vehicle or container cannot be adequately sealed, cover with tarpaulin or plastic sheeting. See Tarpaulin Fumigation Section.

The end(s) of the shooting line(s) should be anchored inside an evaporation pan unless a volatizer is used to apply gaseous fumigant. Use a fan or blower to aid in even distribution of the fumigant. Always apply fumigant from outside the vehicle. Place warning signs on doors and as needed to be easily visible. See Placarding of Treatment Areas section. Secure or lock vehicle or container to ensure it is not moved until the aeration period is complete. **DO NOT FUMIGATE VEHICLES IN TRANSIT.**

Consult appropriate table for specific articles, rates of application and exposure times.

After the appropriate treatment period, open the unit and aerate according to requirements in the Aeration Period section. The vehicle must be aerated to **5 ppm** or less before movement is allowed to a secondary aeration location (see Moving Commodity before Aeration Period is Complete section under Aeration Period). The vehicle may be resealed for shipment when the Aeration Period is completed. See Aeration Period Section for instructions regarding the minimum time requirement, taking concentration measurements, and release of the commodity.

D. Tarpaulin Fumigation.

All procedures as outlined in the section COMMODITY, FOOD, AND FEED FUMIGATION DIRECTIONS, must be followed.

The article or stacked articles should be placed on a concrete floor or other air-tight surface. If the floor or surface is not air-tight, it may be made so by sealing or covering it with additional tarpaulin or polyethylene sheeting. Provide a space on top of the stack for a gas expansion dome to facilitate distribution. Evaporating pans are essential for the volatilization and uniform dispersion of fumigant except where a vaporizer is used. Shallow pans or basins made of plastic or metal (except aluminum) are satisfactory for this purpose. Use one evaporator pan for each 1000 cubic feet contained under the tarp. For delivery of Meth-O-Gas®100 from outside the tarpaulin, do not use polyvinyl tubing; polyethylene tubing is recommended. Anchor one end of each tube into an evaporating pan with tape or a suitable weight. This ensures that the liquid will be directed into the evaporating pan. Place evaporating pan(s) with anchored applicator tubing in the center of the expansion dome. Extend the free ends of the polyethylene tubes outside the area to be covered. Cover and seal the stack with a gas tight tarpaulin or polyethylene sheeting of 4 mil or greater thickness. Allow a margin of at least two feet at the base of the stack for sealing. Sweep around the stack to provide a clean surface for sealing the tarpaulin. Seal tarpaulin to floor by sand and/or water snakes, by taping or by means of moist soil or sand.

Attach each polyethylene tube to a cylinder valve outlet and release fumigant. Use a cylinder dispenser or scale to meter small amounts from cylinders. Fans normally should be used in tarp fumigations to aid in the even distribution of fumigant. A vaporizer or heat exchanger may be required and is also useful to aid in application and distribution of the fumigant. Dosage rates and exposure times are shown in Tables II through IV. At the end of the treatment period, unseal opposite ends of the tarpaulin and allow to aerate per the requirements in the Aeration Period section before completely removing the tarp. The fumigation concentration must be measured to be less than 5.0 ppm and the minimum time requirement for aeration must be met before unprotected persons may be in the area. See Aeration Period Section.

E. Warehouse, Grain Elevator, Food Processing Plant, And Other Structures Containing Listed Commodities and Materials.

All procedures as outlined in the section COMMODITY, FOOD, AND FEED FUMIGATION DIRECTIONS, must be followed.

Check with appropriate municipal and county authorities before fumigating to be completely familiar with local regulations. Ordinances may require watchmen or locks, during fumigation and/or notification of the nearest fire station.

1. **Preparation for Fumigation.** Remove or protect the following items from the structure to be fumigated: 1) all food and feed commodities not included in Tables II or III; 2) medicinals not sealed in metal or glass; 3) pets (including fish and birds); 4) furs, horsehair articles, and leather goods sensitive to methyl bromide; 5) rubber goods (natural latex); 6) carbonless carbon forms and blueprints; 7) cinder blocks; 8) articles containing sulfur; 9) seeds, bulbs, and live plants; 10) live cultures; 11) wool and woolen articles.

   Prior to fumigation, extinguish all open flames and turn off all high temperature electrical equipment including laboratory ovens, pilot lights, gas refrigerators, oil burners, etc. Meth-O-Gas®100 in the presence of intense heat from such sources may generate some hydrobromic acid which may be injurious to commodities and equipment.

2. **Sealing the Building.** The most important part of the fumigation is the preparation and sealing of the structure. A thorough sealing job is necessary. Avoid fumigating under windy conditions.

   Sealing of the building begins with the closing of all external openings to the building. Wrap roof ventilators, chimneys and other large openings with a tarpaulin or plastic sheet and seal with duct or other appropriate tape. Screened and small openings may also be sealed with a wide, commercial duct or masking tape. Cleaning of the surfaces to be taped and the use of commercial spray-on adhesives will improve sealing.

   For masonry or metal structures, seal all cracks and other air leaks with caulking material or tape, and seal cracks around doors, windows, vents and other openings. Wooden structures and others that cannot be readily sealed may be completely enveloped with an impervious tarpaulin. Seal securely all seams between tarps and seal the lower edges of the tarp to the ground with moist soil or with sand or water snakes. To prevent escape of gas through the ground, wet the soil to a depth of six inches for a distance of one foot outward from the edge of the tarp.

   Exterior doors and windows must be tightly sealed and locked. Large exterior doors may require additional efforts to seal properly. Check for cracks around the eaves, in the floor and roof, and seal them.

   Storage or work areas in a building that are not to be fumigated must be carefully sealed off. Adjoining buildings sharing a common wall **must follow the requirements in the Buffers and Buildings section**. If occupants are present, seal with a gas tight tarp or polyethylene sheeting (thickness of 4 ml or greater) to prevent spread of the fumigant to undesirable areas. In all such cases where the adjoining building is occupied, it **must be monitored as specified in the occupied structure exception section**. Check local regulations for specific requirements.

   Doors or hatches on milling machinery should be opened prior to fumigation. These include elevator boots, conveyor lids, settling chamber doors, dust trunks, and any other openings that will allow fumigant into the equipment. Inside doors, openings to attics and crawlspaces, cabinets, lockers, and drawers should also be opened to facilitate treatment and aeration. "Dead" spouts are particularly difficult to penetrate and should be opened before the fumigation.

   Set up fumigant application equipment and fans as necessary to achieve uniform fumigant concentrations and to facilitate thorough aeration after the treatment period. The choice of a fan or fans depends upon fan capability to perform the desired function without jeopardizing the success of the fumigation. Small battery operated fans may be suitable in very small situations. A fan with tubing attached may be useful for internal recirculation of the fumigant within a building or space to aid in reaching and maintaining equalized concentrations. Adequate fans should also be available to effectively aerate difficult to ventilate situations because of construction or unexpected wind direction or calm. It may be possible to use heating system fans or other installations already in a building for improved circulation or distribution of Meth-O-Gas® 100, as well as aid in ventilation after the treatment period. All fans used for the fumigation should be running when fumigant is being introduced, and left running until uniform distribution has been accomplished. Fumigators should not enter a space or building under fumigation to turn fans off or on.

   See appropriate table for rate of application and exposure times.

3. **Fumigating the Structure.** Inside Release. Cylinders must be placed by a team of two people and the location of each cylinder in the building should be mapped. The cylinders should be arranged so that the fumigators can walk away from the released gas as they open each subsequent cylinder. It is recommended that polyethylene sheeting or something functionally similar be used underneath cylinders and at the point of release to prevent staining or damage to floor surfaces. Narrow cylinders must be secured to prevent tipping.

   Cylinders should be placed within a room for best distribution into all areas. Cylinders must be placed in a normal upright position and the shipping caps removed. Standpipes or curved pipes directed up and away from the cylinder can be attached. Polyethylene, nylon or similar tubing, possibly divided with tees or crosses, or other equipment can also be attached to facilitate distribution of the gas within the room or space to be fumigated.

   Place warning signs or placards as instructed in the Placarding of Treatment Areas section. Signs and placards should conform to all local, state, and federal regulations. It is best to inform police, fire and health officials that a fumigation process is about to begin. Observe the location of the nearest outside telephone for use in case of an emergency.

Practice or review the shooting procedure so that the operation will be done efficiently and safely. Respiratory protection equipment must be checked for leaks and other problems before the "practice session". While wearing respiratory protection, quickly open and close the cylinder valves to make certain they are in working order and thus avoid delay during the actual release.

Applicators must not be in the building longer than 30 minutes while releasing the gas. If it is impossible for one team to do it within this time period, additional experienced teams should be used. Two people must be present while the gas is being released and when entering the structure during aerating and monitoring of methyl bromide concentrations.

Fumigators should always remain in sight of each other from the time they open the first cylinder until the time they leave the building together. While the fumigant is being released, it is advisable to have additional people, with respiratory protection equipment ready, waiting outside to assist if necessary. One member of the team should record the release of the fumigant from each cylinder so that none are missed. After making sure fumigation area is vacated, immediately lock and seal the last exit. If guards are used, they should remain on duty during release, treatment, and aeration periods to prevent unauthorized entry.

4. **Fumigating the Structure.** Outside Release. Releasing the fumigant from outside the space to be fumigated is possible in some situations and can minimize applicator exposure to the fumigant. Prepare the building as outlined previously in the Inside Release section.

   Secure the ends of each "shooting" line or hose to each point where the fumigant is to be released, using evaporating pans or plastic sheeting to prevent possible damage to some surfaces. Run each line to the cylinder(s) or manifold located outside the area to be treated. Connect each line to the cylinder(s) or manifold.

   When fumigating storages of bulk grain or other bulk commodities, such as silos, grain bins, tanks, etc., the fumigator should plan sealing and fumigant distribution to effectively fumigate all the target pests contained in the sealed space. The fumigant can be applied in several locations such as the top and bottom of the storage. For bulk commodities more than 20 feet deep, a permanent or temporary fumigant recirculation system should be considered. When recirculating fumigant through a closed loop system, plan to run fans long enough to achieve at least three complete cycles.

   After making sure fumigation area is vacated, immediately lock and seal the last exit. If guards are used, they should remain on duty during release, treatment, and aeration periods to prevent unauthorized entry.

   Open the valves to release the fumigant. Respiratory equipment must be worn as required in the Personal Protective Equipment and Respirator Requirements and Work Time Restrictions sections.

5. **Aerating the Building.** See Aeration Period Section for requirements. When the treatment period is complete, aeration generally should be started by opening previously sealed doors and windows on the ground floor. Ventilators accessible from the outside should be opened at this time.

   After partial aeration, a team of at least two trained people with appropriate respiratory protection, should begin opening windows or remaining sealed openings, starting at the lower floors and working upward. Fans should be on to assist aeration. See Aeration Period section for requirements.

   Contact the police, fire and health officials previously notified of the fumigation and inform them that it has been completed.

F. Shipboard, In Transit Ship or Shiphold Fumigation.

IMPORTANT. Shipboard, in transit ship or shiphold fumigation is also governed by the U.S. Coast Guard Regulations. Refer to and comply with those regulations prior to fumigation.

Prior to fumigating a vessel for in transit 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 must not be fumigated unless all crew members are removed from the vessel. The crew members must not be allowed to reoccupy the vessel until the vessel has been properly aerated as required in the Aeration Period section of this label 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: 1) relating to the use of respiratory protection equipment; 2) relating to the use of detection equipment; and 3) that 2 persons 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 fumigation, or until the cargo is aerated as required in the Aeration Period section of this label, the person in charge of the fumigation shall ensure that a qualified person using gas detection equipment tests spaces for fumigant leakage. If leakage of the fumigant is detected, the person in charge of the fumigation shall take action to correct the leakage, or inform the master of the vessel, or his representative, of the leakage so that corrective action can be taken.

Using appropriate gas detection equipment, monitor spaces adjacent to areas containing fumigated cargo and all regularly occupied areas for fumigant leakage. Do not enter fumigated areas except under emergency conditions. If necessary to enter a fumigated area, wear a NIOSH/MSHA approved self-contained breathing apparatus (SCBA) or combination air-supplied/SCBA respirator (see PPE section). Never enter fumigated area alone. At least one other person, wearing personal protection equipment, must be available to assist in case of an emergency.

If it is necessary for a fumigation handler to enter holds at any time prior to the release of the fumigated commodity, refer to the Respirator Requirements and Work Time Restrictions section for further information.

If the fumigation is not completed and the vessel aerated before the manned vessel leaves port, the person in charge of the vessel shall ensure that there be on board the vessel during the voyage: 1) at least two NIOSH/MSHA approved self-contained breathing apparatus (SCBA) or combination air-supplied/SCBA respirators; 2) one gas detection device; and 3) 2 persons qualified in their operation.

Fumigation of any ship, shiphold, or a portion of the vessel (e.g., galley) requires careful planning. All procedures as outlined previously must be followed. Aeration must be planned so that it can be safely and effectively conducted. See Aeration Period Section for requirements. Adequate supplemental fans to ventilate quarters, decks, bottom of shipholds, etc., should be available for use. Tubing attached to fans or used as a temporary exhaust stack for aeration should also be prepared in advance. Recirculation systems for fumigation of grain and other commodities in shipholds must be installed before loading.

The master of the vessel or his representative and the fumigator should discuss security of an unoccupied vessel under fumigation and make arrangements to prevent unauthorized boarding. After the fumigation has commenced through the completion of the aeration period, crew members of the vessel are not allowed to enter the treatment area or aeration area for any reason.

See appropriate table for rates of application and exposure times.

TABLE II

APPLICATION INSTRUCTIONS OR SCENARIOS FOR STORED PRODUCTS PESTS INFESTING RAW AGRICULTURAL COMMODITIES (NOT PROCESSED FOOD)

METH-O-GAS® 100

COMMODITY	**PESTS CONTROLLED**	**TOLERANCE** (ppm)	**DOSAGE** (lb/1000 ft^3)	**EXPOSURE TIME** (hrs)
Almonds	confused flour beetle, saw toothed grain beetle, dermestids, Indian meal moth, rice weevil, khapra beetle, drugstore beetle, cigarette beetle, warehouse moth, rusty grain beetle, cadelle, groundnut bruchid, pecan weevil, naval orange worm, almond moth, dried fruit beetle, ants	200	3.5	12 - 24
Brazil Nuts		200	3.5	12 - 24
Macadamia Nuts (Bushnuts)		200	3.5	12 - 24
Butternuts		200	3.5	12 - 24
Cashews		200	3.5	12 - 24
Chestnuts		200	6(a) 3.5	6(a) 24
Hazelnuts (Filberts)		200	3.5	12 - 24
Hickory Nuts		200	3.5	12 - 24
Peanuts		200	3.5	12 - 24
Pecans		200	3.5	12 - 24
Pistachios		200	3.5	12 - 24
Walnuts		200	3.5	12 - 24
Apples	Fruit flies, oriental fruit moth, codling moth, apple maggot, apple curculio, twig borer, melon fruit fly, Mediterranean fruit fly, Oriental fruit fly, cherry fruit fly, brown mite, green peach aphid, scales, thrips, ants	5	5	2
Apricots		20	5	2
Blueberries		20	1-2	3-4
Cherries		20	5	2
Nectarines		20	5	2
Peaches		20	5	2
Pears		5	5	2
Plums		20	5	2
Quinces		5	5	2
Strawberries		60	2-3	3-4

COMMODITY	PESTS CONTROLLED	TOLERANCE (ppm)	DOSAGE (lb/1000 ft^3)	EXPOSURE TIME (HRS)
Barley, grain	granary weevil, lesser grain borer, rusty grain beetle, Angoumois grain moth, Indian meal moth, confused flour beetle, rice weevil, saw toothed grain beetle, cadelle, khapra beetle, drugstore beetle, Australian spider beetle, cigarette beetle, warehouse moth, common grain mite, flat grain beetle, Mediterranean flour moth, red flour beetle, common bean weevil, copra beetle, fruit fly, ants	50	5	12
Field corn, grain		50	2	24
Oats		50	3	24
Popcorn		240	1.5(a)	2(a)
Rice, grain		50	6(b)	12(b)
Rice, grain		50	3	24
Rye, grain		50	3	24
Rye, grain		50	6(b)	12(b)
Sorghum, grain		50	4	24
Wheat		50	3	24
Copra		100	2.5	24
Dried Peas	Indian meal moth, almond moth, cow pea weevil, granary weevil, lesser grain borer, rusty grain beetle, angoumois grain moth, confused flour beetle, rice weevil, saw toothed grain beetle, cadelle, khapra beetle, drugstore beetle, Australian spider beetle, cigarette beetle, warehouse moth, common grain mite, flat grain beetle, Mediterranean flour moth, red flour beetle, common bean weevil, copra beetle	125	4	24
Beans (all)	Indian meal moth, almond moth, cow pea weevil, armyworms, cabbage looper, European corn borer, Japanese beetle, pod borer, oriental fruit fly, Mediterranean fruit fly, corn earworms, green stink bug, sawbugs, spider mites, cabbage maggots, lygus bug, melon aphid, pickleworm, carrot rust fly, stink bug, bean leaf beetle, mexican bean beetle, Diabrotica beetle, loopers, symphylans, blister beetle, onion maggot, onion thrips, mealybugs, pepper maggot, Colorado potato beetle, potato psyllid, squash bug, squash vine borer, earwigs, darkling beetle, ants	50	3.5	24
Peas (succulent)		50	3	2

COMMODITY	PESTS CONTROLLED	TOLERANCE (ppm)	DOSAGE (lb/1000 ft^3)	EXPOSURE TIME (HRS)
Beets (roots)	armyworms, cabbage looper, European corn borer, Japanese beetle, pod borer, oriental fruit fly, Mediterranean fruit fly, corn earworms, green stink bug, sawbugs, spider mites, cabbage maggots, lygus bug, melon aphid, pickleworm, carrot rust fly, stink bug, bean leaf beetle, mexican bean beetle, Diabrotica beetle, loopers, symphylans, blister beetle, onion maggot, onion thrips, mealybugs, pepper maggot, Colorado potato beetle, potato psyllid, squash bug, squash vine borer, earwigs, darkling beetle, ants	30	3	4
Cabbage		50	4(d)	4(d)
Cantaloupe		20	2	2
Carrots (roots)		30	4	4
Citron		30	3	2
Cucumbers		30	2.5	4
Eggplant		20	3	4
Honeydew Melon		20	2.5	2
Jerusalem Artichoke		30	3.5	4
Muskmelon		20	2.5	2
Okra		30	3.5(c)	2(c)
Onions (bulb & green)		20	3	6
Parsnips (roots)		30	3	4
Sweet Corn		50	3	4
Peppers		30	4	2
Pimentos		30	2.5	3
Pineapples		20	2	4
Potatoes		75	3	6
Pumpkins		20	2.5	2
Radishes		30	3	4
Rutabagas (roots & tops)		30	3	6
Squash (summer)		30	4	2
Squash (winter)		20	4	2
Squash (zucchini)		20	2.5	3
Sweet Potatoes		75	3.5	4
Tomatoes		20	3	4
Turnips (roots)		30	3	4
Watermelons		20	2.5	2
Yams		75	3.5	4

COMMODITY	PESTS CONTROLLED	TOLERANCE (ppm)	DOSAGE (lb/1000 ft^3)	EXPOSURE TIME (HRS)
Cipolini Bulbs	*Exosoma lusitanica,* fruit flies, ants, mites	50	4	4
Cocoa Beans	cocoa moth, cigarette beetle, confused flour beetle, warehouse moth, flat grain beetle, coffee bean weevil, tobacco moth, saw-toothed grain beetle, ants	50 50	1.5(a) 1-2	12(a) 16-24
Garlic	*Brachycera spp., dyspessa ulula*, brown wheat mite, onion maggot, onion thrips, fruit fly, ants	50	3	4
Horseradish (roots)	*Baris lepidi*, fruit flies, ants	30	3	4
Salsify Roots	armyworm, flea beetle, leafhoppers, stink bugs, tarnished plant bug, fruit fly, ants	30	3	3
Grapefruit[1]	*Anastrepha spp., Proeulia spp., Leptoglossus spp., Megalometis spp., Naupactus spp., Listroderes spp., Conoderus spp., Bravipalpus spp.,* aphids, citrus scale, citrus mites, leaf rollers, white flies, thrips, California orangedog, mealybugs, orange tortrix, fruit flies, ants	30	3	2
Grapes		20	4	2
Kumquat		30	3	2
Lemons[1]		30	3	2
Lime[1]		30	3	2
Oranges[1]		30	3	2
Tangelos[1]		30	3	2
Tangerines[1]		30	3	2

[1]Tolerance of fruit to methyl bromide may vary with variety of fruit. Check with local authorities or Great Lakes Chemical Corporation for additional information.

[a] Vacuum chamber fumigation

[b] Khapra beetle quarantine.

[c] Pink bollworm quarantine.

[d] Must be used in accordance with the plant quarantine program of the USDA.

TABLE III

APPLICATION INSTRUCTIONS OR SCENARIOS FOR PROCESSED FOOD

METH-O-GAS® 100

COMMODITY	PESTS CONTROLLED	TOLERANCE (ppm)	DOSAGE (lb/1000 ft^3)	EXPOSURE TIME (HRS)
Dried Fruits	Indian meal moth, almond moth, dried fruit beetle, saw-toothed grain beetle, merchant beetle, confused flour beetle, Australian spider beetle, cigarette beetle, warehouse moth, common grain mite, coffee bean weevil, carob moth, ants	125	1	24
Dried Figs		250	1	24
Cheese (parmesan and Roquefort only)	cheese mites, cheese skipper, cheese maggot, ants	325	1-2	12-24
Dried Eggs	larder beetles, ants, mites	400	1-2	12-24
Processed Foods (including cured meat)	saw-toothed beetle, flat grain beetle, flour beetle, cigarette beetle, Indian meal moth, *Lepidoptera*, *Coleoptera* , ants, cheese skipper, larder beetle, red legged ham beetle, mites	125	1-2	12-24
Processed Grain (a)	confused flour beetle, rice weevil, granary weevil, saw-toothed grain beetle, rusty grain beetle, lesser grain borer, cadelle, khapra beetle, drugstore beetle, Australian spider beetle, cigarette beetle, *Lepidoptera*, *Coleoptera,* ants	125	1.5	24
Processed Grain (b)	flour beetle, saw-toothed grain beetle, Mediterranean flour moth, *Lepidoptera*, *Coleoptera,* ants	125	1-2	12-24
Processed Grain (c)	flour beetle, grain beetle, mealworms, cigarette beetle, Indian meal moth, *Lepidoptera*, *Coleoptera,* ants	125	1.5	24
Processed Spices and Herbs	Saw-toothed grain beetle, flat grain beetle, cigarette beetle, *trogoderma spp.*, Indian meal moth, dried fruit beetle, Australian spider beetle, warehouse moth, confused flour beetle, rusty grain beetle, lesser grain borer, drugstore beetle, ants	400	3	12
Pet Food	Indian meal moth, cigarette beetle, saw-toothed grain beetle, flour beetle, *Lepidoptera, Coleoptera,* ants	400	1-2	12-24

(a) Corn grits and cracked rice.

(b) Processed grain from equipment fumigation

(c) Processed grain used in production of fermented beverages.

TABLE IV

APPLICATION INSTRUCTIONS FOR NON-FOOD PRODUCTS

METH-O-GAS® 100

MATERIALS AND PRODUCTS	PESTS CONTROLLED	DOSAGE (lb/1000 ft^3)	EXPOSURE TIME (hrs)
Baled Tobacco	drugstore beetle, cigarette beetle, tobacco beetle, tobacco moth, *Lepidoptera*, *Coleoptera*, ants	2-3 4(a)	48-72 4(a)
Processed Tobacco	drugstore beetle, cigarette beetle, tobacco beetle, tobacco moth, *Lepidoptera*, *Coleoptera,* ants	4(a)	4(a)
Baled Cotton	pink bollworm, boll weevil, *Lepidoptera*, *Coleoptera,* ants	3 4(a)	24 2(a)
Machinery, packing & bagging material, miscellaneous non-food cargo, (e.g., ceramic, marble, brassware, handicrafts, burlap, appliances)	Wood-boring insects, *Coleoptera*, mites, spiders, snails, cockroaches, *Lepidoptera, Hymenoptera*	2-6	24-72
Forest and plant products (e.g., lumber, firewood, driftwood, pallets, crates, paper, cardboard, carvings, grapevine wreaths, dried plants, Spanish moss, bamboo and wicker, mulch)	pinewood nematode, woodborers, bark beetles, termites, carpenter ants, horntails, old house borer, powder post beetles, *Hymenoptera*, *Coleoptera*, woodworm, wharf borer, wood wasps, mites, *Lepidoptera,* psocids	3-6	16-24
Beehives and Beekeeping Equipment, Beeboards	greater wax moth, mites, *Lepidoptera, Coleoptera*, insects, diseased and feral bees	1.5-2	16-24

[a] Vacuum chamber fumigation

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

Pesticide Storage

Store in a dry, cool, well-ventilated area under lock and key. Post as a pesticide storage area. Persons moving, handling, or opening fumigant containers must wear the personal protective equipment (including prescribed respirators when necessary) specified in the *Personal Protective Equipment* section of this labeling. 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.

Pesticide Disposal

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

Container Handling

Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. 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 cylinders.

Return empty containers according to the Great Lakes Chemical Corporation Container Return Policy. Contact Great Lakes for policy details. Return partial containers only after consulting Great Lakes Chemical Corporation for proper shipping instructions.

SPILL AND LEAK PROCEDURES

In case of a rupture of a hose or fitting while applying fumigant, immediately stop the fumigation. Evacuate everyone from the immediate area of spill or leak.

Only applicators or other fumigation handlers, or emergency responders, are permitted to perform corrective action and cleanup. Use personal protective equipment specified in the Personal Protective Equipment (PPE) section of this labeling for entry into 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 concentration of methyl bromide is determined to be less than 1.0 ppm. For concentrations of methyl bromide over 1.0 ppm, see the Respirator Requirements and Work Time Restrictions section of this label for additional directions.

Contaminated soil, water, and other cleanup debris is a toxic hazardous waste. Report spill to the National Response Center (800-424-8802) if the reportable quantity of 1000 pounds is exceeded.

STATEMENT OF WARRANTY AND LIABILITY

The directions for use of this product are believed to be adequate and must be followed carefully.

Seller warrants that this product complies with the specifications expressed in this label. SELLER MAKES NO OTHER WARRANTIES; AND DISCLAIMS ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTIES OF MERCHANTABILITY AND FITNESS FOR THE INTENDED PURPOSE. To the extent consistent with applicable law, Seller's liability for default, breach, or failure under this label shall be limited to the amount of the purchase price. To the extent consistent with applicable law, Seller shall have no liability for consequential damages.

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