RESTRICTED USE PESTICIDE
DUE TO ACUTE TOXICITY

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

57-43
PREPLANT SOIL FUMIGANT
FOR CONTROL OF WEEDS, NEMATODES, WILDFERNS, AND SEEDS
fungus diseases, grubs, and soil-born insects

ACTIVE INGREDIENT:
By wt.
Methyl Bromide: .................................................. 57%
Chloropicrin: ...................................................... 43%
TOTAL: .......................................................... 100%
14.0 lbs. of active ingredient per gallon (liquid in cylinder)

KEEP OUT OF REACH OF CHILDREN

POISON

(*Slit ear tag or ear plate; foil to an airtight plate or an envelope labeled as an odorous material.)

IN ALL CASES OF EXPOSURE, GET MEDICAL ATTENTION IMMEDIATELY.
TALK TO A DOCTOR or take person to an EMERGENCY TREATMENT FACILITY.

FIRST AID:
Inhaled
• Move person to fresh air. Keep warm.
• If person is not breathing, call 911 or an ambulance and get immediate medical attention.

In case of ingestion:
• Give large amounts of water or milk. Do not induce vomiting unless instructed by a physician.

If on skin:
• Remove contaminated clothing and wash skin thoroughly with soap and water. If necessary, seek medical advice.

If in eyes:
• Hold eye open and rinse gently and continuously with large amounts of water for 15-20 minutes.
• Remove contact lenses, if present, after the first 5 minutes. Continue rinsing.
• Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center (1-800-222-1222), doctor, or going for treatment.

NOTE TO PHYSICIAN
• Early symptoms of overdose to methyl bromide are dizziness, headache, nausea and vomiting, trembling, and weakness. Later symptoms include: confusion, hallucinations, tremors, and disorientation. Life-threatening complications include: cardiac arrest, respiratory depression, and coma.

SEE SIDE PANELS FOR ADDITIONAL PRECAUTIONARY STATEMENTS

Produced for:
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95 Mac动脉le Ave., SW
Sandy, OR 97055-2500
Tel: (503) 293-8350
Fax: (503) 745-3101

LEGAL CONSIDERATION

NOTICE TO APPLICATOR
• This product is registered for use in the United States by the U.S. Environmental Protection Agency (EPA).

NOTICE TO DISTRIBUTOR
• The information contained in this material is subject to change without notice. Read all instructions carefully before using the product.

NOTICE TO ENDUSER
• Read all directions and precautions carefully before using the product. Keep this material and all labels and materials supplied with the product in the original container and dispose of appropriately.

Environmental HAZARDS
• This pesticide is toxic to mammals and birds. Do not allow water to come in contact with soil where water is present or in intertidal areas below the high water mark. Do not contaminate water where aquatic life is present. Do not contaminate water, food, or feed by storage or disposal.

Physical and Chemical Hazards
• Do not use on or near fruits, vegetables, or ornamental flowers, or in areas where drift may cause damage. Avoid spraying where it may be blown into the drift-sensitive area. Do not contaminate water by mishandling, misapplication, or from sensitive areas. Do not contaminate sensitive areas by improper disposal.

Agricultural Use Requirements
• This product is registered for use in the United States by the U.S. Environmental Protection Agency (EPA). It is registered for use in the United States by the United States Department of Agriculture (USDA) and the Food and Drug Administration (FDA). The use of this product is subject to Federal, State, and local laws and regulations.

Restrictions on Use:
• Do not use this product on or near exposed edible plant parts or crops that have not been declared safe for consumption.

Physical and chemical hazards
• Do not contaminate water, food, or feed by storage or disposal. Do not contaminate water by mishandling, misapplication, or from sensitive areas. Do not contaminate water by improper disposal. Do not contaminate water, food, or feed by storage or disposal. Do not contaminate water by mishandling, misapplication, or from sensitive areas. Do not contaminate water by improper disposal.

DIRECTIONS FOR USE
Restrict Use PESTICIDE
• It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will cause water to travel to or to be dispersed into areas below the water surface, into topsoil, irrigation systems, or discharges to water. Do not apply this product in a way that will cause water to travel to or to be dispersed into areas below the water surface, into topsoil, irrigation systems, or discharges to water. Do not apply this product in a way that will cause water to travel to or to be dispersed into areas below the water surface, into topsoil, irrigation systems, or discharges to water. Do not apply this product in a way that will cause water to travel to or to be dispersed into areas below the water surface, into topsoil, irrigation systems, or discharges to water.

At the time of application, if soil temperature is below 50°F, the soil temperature must be greater than 50°F for at least 8 hours before application.

Physical and chemical hazards
• Do not contaminate water, food, or feed by storage or disposal. Do not contaminate water by mishandling, misapplication, or from sensitive areas. Do not contaminate water by improper disposal. Do not contaminate water, food, or feed by storage or disposal. Do not contaminate water by mishandling, misapplication, or from sensitive areas. Do not contaminate water by improper disposal. Do not contaminate water, food, or feed by storage or disposal. Do not contaminate water by mishandling, misapplication, or from sensitive areas. Do not contaminate water by improper disposal.

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In addition, when an air-purifying respirator is required, handlers (including applicators) must wear:
- NIOSH-approved full-face, hood-style respirator with a cartridge or canister 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 6092/6098 Organic Vapor/Acid Gas/P100 cartridges).

IMPORTANT: A self-contained breathing apparatus (SCBA) is not permitted for routine handler tasks. Wear an SCBA and PPE required for liquid contact potential in emergencies such as a spill or leak when corrective action is needed to reduce air levels to acceptable levels.

**USER SAFETY REQUIREMENTS**

- Immediately after contamination, remove outer clothing, shoes and socks, and do not re-use them until thoroughly sanitized or vented. Keep such clothing and shoes outdoors until thoroughly sanitized.
- Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product’s concentrate. Do not reuse.
- Follow manufacturer’s instructions for cleaning/maintaining PPE. If no such instructions exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

**USER SAFETY RECOMMENDATIONS**

Users should:
- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets on clothing. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.

Exclusion of Non-Handlers From Application Block

The certified applicator supervising the application and the owner/operating of the establishment where the fumigation is taking place must make sure that all persons who are not trained and PPE-equipped are not performing any of the handling tasks as stated in this label and are excluded from the application block during the entry-restricted period.

Providing, Cleaning, and Maintaining PPE

The employer of any handler (as stated in this label) must make sure that all handlers are provided and correctly wearing the required PPE. The PPE must be cleaned and maintained as required by the Worker Protection Standard for Agricultural Pesticides.

Air-Purifying Respirator Availability for Pre-Plant Soil Use

At a minimum two handlers have the appropriate air-purifying respirator and cartridges available and that these handlers are fit-tested, trained, and medically examined. This must be documented in the FMP.

The employer of any handler must confirm that an air-purifying respirator and appropriate cartridges of the type specified in the PPE section of this labeling are immediately available for each handler who will wear one.

Availability of Respirators for Emergencies

The employer of any handler must confirm that at least one self-contained breathing apparatus (SCBA) is available on-site and ready for use in case of an emergency. This must be documented in the FMP.

Respirator Fit Testing, Medical Qualification, and Training

- Employers must verify that any handler who uses a respirator is:
  - Fit-tested and fit-checked using a program that conforms to OSHA’s requirements (see 29 CFR Part 1910.134).
REGENERATIVE REPRODUCTION RISK FACTORS

The following program provides a general outline of the steps that are required for the identification and investigation of reproductive hazards. The steps must be followed in order, and the results of each step must be documented in detail.

1. Identify the hazard.
2. Determine the potential for reproduction.
3. Evaluate the risk of reproduction.
4. Implement controls to reduce the risk.

REPRODUCTIVE RISK FACTORS

1. Chemicals
   - Toxic substances that can affect the reproductive system.
   - Endocrine disruptors that can interfere with normal hormone levels.
   - Mutagens that can cause genetic damage.
2. Physical factors
   - Radiation exposure.
   - Vibration or impact injuries.
3. Biological factors
   - Infections such as viruses or bacteria.
4. Environmental factors
   - Indoor and outdoor environmental factors, such as temperature and humidity.
5. Social factors
   - Stress and other psychological factors.

REPRODUCTIVE RISK ASSESSMENT

The assessment should be conducted by a qualified professional and should be based on the following criteria:

1. Exposure assessment
   - Determine the magnitude and duration of exposure.
2. Dose-response relationship
   - Evaluate the relationship between dose and response.
3. Exposure assessment
   - Assess the potential for exposure to reproductive hazards.
4. Health effects
   - Define the health effects associated with reproductive hazards.
5. Risk management
   - Identify and implement appropriate risk management strategies.

REPRODUCTIVE RISK CONTROL

The following control measures should be implemented to reduce the risk of reproductive hazards:

1. Engineering controls
   - Ventilation systems.
   - Protective clothing and equipment.
2. Administrative controls
   - Training and education.
   - Work practices and procedures.
3. Personal protective equipment
   - Gloves, respirators, and other protective gear.
4. Medical surveillance
   - Regular medical exams.
   - Monitoring of reproductive health.

REPRODUCTIVE RISK COMMUNICATION

The following steps should be taken to communicate the reproductive risk to employees:

1. Provide information on the reproductive hazards.
2. Explain the potential risks to employees.
3. Provide training on the proper use of protective equipment.
4. Encourage employees to report any concerns or symptoms.

REPRODUCTIVE RISK MONITORING

The following monitoring procedures should be implemented to ensure that the control measures are effective:

1.定期的暴露评估
   - 定期进行暴露评估，以确定接触水平和暴露风险。
2. 剂量-反应关系
   - 评估剂量与反应之间的关系。
3. 屏蔽
   - 采取适当的屏蔽措施来降低接触水平。
4. 健康效应
   - 定义与生殖风险相关的健康效应。
5. 风险管理
   - 确定并实施适当的风险管理策略。

生殖风险控制

以下的控制措施应按所列顺序实施，以减小生殖风险：

1. 工程控制
   - 通风系统。
   - 个人防护装备。
2. 行政控制
   - 培训和教育。
   - 作业程序和做法。
3. 个人防护装备
   - 手套、呼吸器和其他防护设备。
4. 医学监测
   - 定期医学检查。
   - 监测生殖健康。

生殖风险沟通

以下步骤应被采取以沟通生殖风险给员工：

1. 向员工提供关于生殖风险的信息。
2. 向员工解释潜在的风险。
3. 向员工提供正确使用防护设备的培训。
4. 鼓励员工报告任何担忧或症状。

生殖风险监测

以下的监测程序应被实施以确保控制措施的有效性：

1. 定期暴露评估
   - 定期进行暴露评估，以确定接触水平和暴露风险。
2. 剂量-反应关系
   - 评估剂量与反应之间的关系。
3. 屏蔽
   - 采取适当的屏蔽措施来降低接触水平。
4. 健康效应
   - 定义与生殖风险相关的健康效应。
5. 风险管理
   - 确定并实施适当的风险管理策略。
MANDATORY GOOD AGRICULTURAL PRACTICES (GAPs)

The following GAPs must be followed during all fumigation applications. All measurements and other documentation planned to ensure that the mandatory GAPs are achieved must be recorded in the FMP and/or the Post Application Summary.

**Terps (required for all applications)**
- Terps must be installed immediately after the fumigant is applied to the soil for bedded or broadcast applications.
- A written terp plan must be developed and included in the FMP. The plan must include:
  - schedule and procedures for checking terps for damage, tears, and other problems
  - plans for determining when and how repairs to terps will be made, and by whom
  - minimum time following injection that terp will be repaired
  - minimum size of terp damage that requires repair
  - other factors used to determine how and when terp repair will be conducted
- Schedule, equipment, and methods used to perforate terps
- Selection plans and procedures for perforation of terp, but prior to term removal or planting/transplanting
- Schedule, equipment, and procedures for term removal.

**Weather Conditions**
- Prior to fumigation the weather forecast for the day of the application and the 48-hour period following the fumigation must be checked to determine if unfavorable weather conditions exist (see **Identifying Unfavorable Weather Conditions section** or are predicted and whether fumigation should begin.
- Wind speed at the application site must be a minimum of 0 mph at the start of the application or forecast to reach at least 3 mph during the application.
- Do not apply if a shallow, compressed (low-level) temperature inversion is forecast to persist for more than 18 consecutive hours for the 48-hour period after the start of application, or if there is an air stagnation advisory issued by the National Weather Service in effect for the area in which the fumigation is planned.
- Detailed local forecasts for weather conditions, wind speed, and air stagnation advisories may be obtained online at: [http://www.nws.noaa.gov](http://www.nws.noaa.gov) or by contacting your local National Weather Service Forecasting Office.

**Application**
- Always presurize the system with compressed gas or by use of a compressed air system before opening the fumigant cylinder valve.
- Before using a fumigation rig for the first time, or when preparing it for use after storage, the operator must check the following items carefully:
  - Check the filter, and clean or replace the filter element as required.
  - Check all tubes and chokes to make sure they are free of debris and obstructions.
  - Check and clean the orifice plates and screen, check filters, and install.
  - Pressureize the system with compressed gas or compressed air, and check all fittings, valves, and safety devices.
  - Install the fumigant cylinder, connector, and secure all tubing. Slowly open the compressed gas or compressed air valve, and increase the pressure to the desired level. Slowly open the fumigant cylinder valve, always watching for leaks.
  - When the application is complete, close the fumigant cylinder valve and allow residual fumigant out of the fumigation lines into the soil using compressed gas or compressed air. At the end of the application, disconnect all fumigant cylinders from the application rig. At the end of the season, seal all tubing openings with tape to prevent the entry of insects and dirt.

**Proper Calibration**
- Proper calibration is essential for equipment to deliver the correct amount of fumigant uniformly to the soil. Refer to the manufacturer's instructions on how to calibrate your equipment, usually the equipment manufacturer, fumigant dealer, or Cooperative Extension Service can provide assistance.

**Planting Interval**
- Wait a minimum of two weeks after fumigation before planting or transplanting. If odors of the fumigant persist beyond this two-week period (and after terps are perforated and removed), disc or plow the soil to help aerate. See Terp Perforation and/or Removal section on this labeling for further requirements.

**Pre-Plant Soil Fumigation in Greenhouses: Mandatory GAPs**
- During the application keep doors, vents, and windows to the outside open and fans or other mechanical ventilation systems running with the application block.
- Leaks through which gases could enter adjacent enclosed areas must be sealed.
DO NOT CONTAMINATE WATER, FOOD, OR FEED BY STORAGE OR DISPOSAL. PESTICIDE STORAGE AND HANDLING: Store in a secure manner either outdoors under ambient conditions or indoors in a well-ventilated area. Post as a pesticide storage area. Persons moving, handling, or opening containers must wear the personal protective equipment specified in the Pesticide Storage and Handling regulations. Open container only in a well-ventilated area. Store pesticides upright, secured to a rack or wall to prevent tipping. Cylinders must not be subjected to rough handling or mechanical shock, such as dropping, bumping, dragging, or sliding. Do not use rope slings, hooks, forks, 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. PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or residue 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 DISPOSAL: Cylinders are the property of the manufacturer or distributor and must be returned promptly by collective effort. 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 the manufacturer or distributor for return instructions. Do not refill containers or use them for any other product or purpose. SHIPPING: This fumigant is classified in the U.S. Department of Transportation Hazardous Materials Regulations as Chloropicrin and Methyl Bromide Mixtures, 2.3 UN 1581, Poison-Inhalation Hazard, Hazard Zone B and no exemptions from specifications, packaging, marking, or labeling are allowed. Describe empty cylinders as having last contained Chloropicrin and Methyl Bromide Mixtures (inhalation hazard). Do not ship with foods, feeds, or clothing. WARRANTY: Seller warrants that this product complies with the specifications expressed in this label. To the extent consistent with applicable law, Seller makes no 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 or defect, 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.

57-43, a preplant soil fumigant, is used for the control of soil-borne pests such as:

- Wireworms, June beetle larvae, white grubs and garden syrphus in the soil at the time of planting.
- Soil borne fungi, including Verticillium, Fusarium, Pythium, Rhizoctonia, Phytophthora, Pythium, Sclerotinia, Sclerotium, Armillaria, and the clubroot organism, Plasmodiophora.
- Nematodes (such as Crenocermoides, Tylenchus, Pratylenchus, Xiphinema and Paracyclosis species).
- Broadleaf and grassy weeds, such as annual bluegrass, brome, common lambsquarters, torpedo grass, nutseed, Bermuda grass and quackgrass at higher rates.

57-43 Preplant Soil Fumigant is not effective against mallow, filaree dodder, some species of clover and certain other hard seeded weeds. Crops listed below can be treated.