

(CONTAINER LABEL)

**GASTOXIN ALUMINIUM PHOSPHIDE TABLETS GROUNDHOGS**

For control of Groundhogs and ground squirrels

**READ THE ENTIRE LABEL, WHICH INCLUDES, THE APPLICATOR'S MANUAL AND GUIDANCE FOR PREPARATION OF A FUMIGATION MANAGEMENT PLAN BEFORE USING.**

**THIS PRODUCT CAN ONLY BE USED IN CONJUNCTION WITH A DETAILED FUMIGATION MANAGEMENT PLAN**

**A FUMIGATION MANAGEMENT PLAN MUST BE WRITTEN FOR ALL FUMIGATIONS PRIOR TO ACTUAL TREATMENT**

**RESIDENTIAL USE IS STRICTLY PROHIBITED**

**USE ONLY OUTDOORS**

Product permitted for use only by licensed/certified applicators or by trained personnel under direct supervision of an applicator.

**RESTRICTED**

**DANGER (insert skull & crossbones) POISON**

**KEEP OUT OF REACH OF CHILDREN AND PREVENT ACCESS BY UNAUTHORIZED PERSONNEL**

**ACTIVE INGREDIENT: Aluminum Phosphide 57%**

**REGISTRATION NO. 23842 PEST CONTROL PRODUCTS ACT**

**NET CONTENTS: 100 Round Tablets**

**NET WEIGHT: 300g**

**Manufacturer:**

**BEQUISA INDUSTRIA QUIMICA DO BRASIL LTDA  
Gleba 37 Avenida Antonio Bernardo, 3950  
Parque Industrial Imigrantes – Conjunto Residencial Humaita  
Sao Vicente, Sao Paulo, Brazil 11349-380  
Telephone: (55 13) 3565-1268**

**Canadian Agent:**

**Gardex Chemicals, Ltd.  
7 Meridian Road  
Etobicoke, Ontario  
Canada M9W 4Z6  
Telephone: 416-675-1638  
Fax: 416-798-1647**

**NOTICE TO USER: This pest control product is to be used only in accordance with the directions on the label. It is an offense under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label.**

**NATURE OF RESTRICTION:**

For use as a fumigant for the control of groundhogs and ground squirrels. The use of this product is RESTRICTED due to the high acute inhalation toxicity of hydrogen phosphide (phosphine, PH<sub>3</sub>) gas which is formed when this product is exposed to moisture in the air.

This product is for retail sale to and use only by individuals holding an appropriate pesticide applicator certificate or license recognized by the provincial/territorial pesticide regulatory agency where the pesticide application occurs or by persons trained in accordance with the Applicator's Manual working under the direct supervision and in the physical presence of an applicator holding an appropriate pesticide applicator certificate or license recognized by the provincial/territorial pesticide regulatory agency where the pesticide application occurs. Consult local pesticide regulatory authorities about use permits which may be required.

This product is accompanied by an approved label, an Applicator's Manual and Guidance for Preparation of a Fumigation Management Plan. **READ AND UNDERSTAND THE ENTIRE LABEL AND APPLICATOR'S MANUAL.** All parts of the label and manual are equally important for safe and effective use of this product. Call the manufacturer if you have any questions or do not understand any part of this label and the Applicator's Manual.

**DO NOT APPLY INDOORS**

**THE USE OF THIS PRODUCT IS STRICTLY PROHIBITED WITHIN 500 METRES OF RESIDENTIAL AREAS,** such as single family homes (except the farm house), multi-family residential properties and nursing homes, schools, daycare facilities, hospitals, assisted living facilities, in-patient clinics, prisons, athletic fields, golf courses, cemeteries and parks and recreational areas.

For application sites listed under Directions for Use, **DO NOT APPLY THIS PRODUCT TO A BURROW SYSTEM THAT IS WITHIN 30 METRES OF A BUILDING THAT IS, OR MAY BE, OCCUPIED BY HUMANS, AND/OR DOMESTIC ANIMALS** and that is under the control of the owner/operator of the application site. **DO NOT APPLY TO BURROWS THAT OPEN OR MAY OPEN UNDER OR INTO OCCUPIED BUILDINGS. NOT FOR USE IN AREAS WHILE OPEN TO THE PUBLIC.**

Appropriate respiratory protection must be worn during delivery/dispensing of the product, attending to spills and clean-up, and while inspecting the treated area following application. The minimum protection required is a NIOSH-approved air-purifying, full face piece respirator (gas mask) with a chin-style, front- or back-mounted canister approved for hydrogen phosphide OR a NIOSH-approved supplied-air respirator (i.e., air-line respirator or self-contained breathing apparatus) with a full face piece.

For emergency use and/or to escape from conditions which are Immediately Dangerous to Life or Health (IDLH), keep available for use an adequate number of NIOSH-approved self-contained breathing apparatus with a full face piece operated in a pressure-demand or other positive-pressure mode.

This product must be stored away from lodging for humans, animal quarters and normal work areas to avoid inadvertent exposure. Store in a cool, dry, locked, ventilated room which has been placarded and out of reach of children or unauthorized persons.

This product is highly toxic to birds and mammals. To avoid unintentional poisonings of endangered, threatened or vulnerable species, do not apply this product without confirming that the burrow, den or tunnel is inhabited by the pest.

The Fumigation Management Plan must be written **PRIOR TO ACTUAL TREATMENT.**

**PRECAUTIONS:**

**Forms Extremely Hazardous Gas**

**KEEP OUT OF REACH OF CHILDREN AND PREVENT ACCESS BY UNAUTHORIZED PERSONNEL**

**Fatal if inhaled, swallowed or absorbed through eyes or skin.**

**DO NOT inhale gas or dust.**

**DO NOT ingest tablets or dust.**

**DO NOT get in eyes or on skin or clothing.**

**DO NOT eat, drink or smoke while handling GASTOXIN®.**

GASTOXIN® releases poisonous hydrogen phosphide (phosphine, PH<sub>3</sub>) gas when exposed to moisture. Piling of tablets or

the addition of liquid to the product is prohibited. Spontaneous ignition may result if contacted by liquids such as water, acids, or chemicals.

Wear a loose fitting long sleeve shirt, long pants, socks and shoes and wear dry gloves of cotton or other breathable material when handling GASTOXIN®. After fumigation activities, remove all protective clothing, check and ensure that there is no GASTOXIN® trapped inside clothing, aerate in a well-ventilated area then wash thoroughly, separately, before re-use.

Appropriate respiratory protection must be worn during delivery/dispensing of the product, attending to spills and clean-up, and while inspecting the treated area following application. The minimum protection required is a NIOSH-approved air-purifying, full face piece respirator (gas mask) with a chin-style, front- or back-mounted canister approved for hydrogen phosphide OR a NIOSH-approved supplied-air respirator (i.e., air-line respirator or self-contained breathing apparatus) with a full face piece.

For emergency use and/or to escape from conditions which are Immediately Dangerous to Life or Health (IDLH), keep available for use an adequate number of NIOSH-approved self-contained breathing apparatus with a full face piece operated in a pressure-demand or other positive-pressure mode.

Always open GASTOXIN® in open air. When opening the product canister, point the canister away from the face and body and slowly loosen the cap. Although the chances for a flash are very remote, never open these containers in a flammable atmosphere. Should the sealed containers of GASTOXIN® become ruptured, moisture or liquid water could cause the sudden release of hydrogen phosphide gas which, under certain conditions, is flammable.

#### **DO NOT APPLY INDOORS**

**THE USE OF THIS PRODUCT IS STRICTLY PROHIBITED WITHIN 500 METRES OF RESIDENTIAL AREA**, such as single family homes (except the farm house), multi-family residential properties and nursing homes, schools, daycare facilities, hospitals, assisted living facilities, in-patient clinics, prisons, athletic fields, golf courses, cemeteries and parks and recreational areas.

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Theft of products: Immediately report to the local police department thefts of metal phosphide fumigants. Registrant must be informed of any incident involving the use of this product.

#### **ENVIRONMENTAL HAZARDS:**

Toxic to birds and mammals. **DO NOT** contaminate irrigation or drinking water supplies or aquatic habitats such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoir and wetlands by cleaning of equipment or disposal of wastes.

To avoid unintentional poisonings of endangered, threatened or vulnerable species, do not apply this product without confirming that the burrow, den or tunnel is inhabited by the pest.

#### **DISPOSAL:**

Refer to the DISPOSAL instructions of the Applicator's Manual for proper disposal of unused, unwanted product or contact Bequisa Industria Quimica do Brasil LTDA (55 13) 3565-1268, or Gardex Chemicals Ltd., or the provincial regulatory agency. Open dumping is prohibited. Do not contaminate water, food or feed by disposal. Proper disposal of aluminum phosphide is required to ensure minimal impact on the environment. See the Applicator's Manual for additional disposal instructions.

**TOXICOLOGICAL INFORMATION:** GASTOXIN ALUMINIUM PHOSPHIDE TABLETS GROUNDHOGS containing aluminum phosphide reacts with moisture from the air, acids and many other liquids to release hydrogen phosphide (phosphine, PH<sub>3</sub>) gas. Mild exposure by inhalation causes malaise (indefinite feeling of sickness), ringing in the ears, fatigue, nausea and pressure in the chest which is relieved by removal to fresh air. Moderate poisoning causes weakness, vomiting, pain just above the stomach, chest pain, diarrhea and dyspnea (difficulty in breathing). Symptoms of severe poisoning may occur within a few hours to several days. Severe poisoning may result in pulmonary edema (fluid in lungs) and may lead to dizziness, cyanosis (blue or purple skin colour), unconsciousness, and death. In sufficient quantity, phosphine affects the liver, kidneys, lungs, nervous system and circulatory system, and may result in (1) pulmonary edema, (2) liver elevated serum AST, ALT and ALP, reduced prothrombin, hemorrhage and jaundice (yellow skin colour) and (3)

kidney haematuria (blood in urine) and anuria (abnormal or lack of urination). Pathology is characteristic of hypoxia (oxygen deficiency in body tissue). Frequent exposure to concentrations above permissible levels over a period of days or weeks may cause poisoning.

Inhalation can cause lung edema (fluid in lungs) and hyperaemia (excess of blood in a body part), small perivascular brain hemorrhages and brain edema (fluid in brain). Poisonous if swallowed. Ingestion can cause lung and brain symptoms but damage to the viscera (body cavity organs) is more common.

Treatment is symptomatic. The following measures are suggested for use by the physician in accordance with the physician's own judgment:

In its milder to moderate forms, symptoms of poisoning may take up to 24 hours to appear. Monitoring should continue for at least this long. Manifestations of severe poisoning appear early. Hypoxia and hypotension should be treated with usual supportive measures of oxygenation, intubation, ventilation and positive pressure as needed, and intravenous fluids, pressors and inotropes as required, respectively. In the event of the ingestion of a large quantity of aluminum phosphide, once the patient is stabilized, aspiration of gastric contents by inserting a 16 french naso-gastric tube to suction the stomach contents might be considered. There is no specific antidote. Hemodialysis may be indicated if renal failure develops but does not remove the toxin.

#### **FIRST AID:**

Symptoms of exposure to hydrogen phosphide gas-releasing products can include headache, dizziness, nausea, difficult breathing, vomiting, and diarrhea. In all cases of exposure, protect yourself, remove the person from the source of exposure and get them to an Emergency department. If possible, bring the Applicator's Manual, the container, label or product name and Pest Control Registration Number with you when seeking medical attention.

**FIRST AID RESPONDER PROTECTION:** Hydrogen phosphide gas is a highly toxic systemic poison and a severe respiratory tract irritant. Persons exposed to solid phosphides, which react with moisture to produce phosphine gas, can pose risks to others if phosphides are on clothes, skin, or hair. First Aid responders should protect themselves through the use of appropriate personal protective equipment before attempting to rescue or care for a person who has been exposed to a hydrogen phosphide gas-releasing product, and/or if entering a zone with potentially unsafe hydrogen phosphide levels. A NIOSH-approved self-contained breathing apparatus with a full face piece operated in a pressure-demand or other positive-pressure mode OR a NIOSH-approved air-line respirator with a full face piece operated in a pressure-demand or other positive-pressure mode combined with an auxiliary self-contained positive-pressure breathing apparatus is required in response situations that involve exposure to potentially unsafe or unknown levels of hydrogen phosphide (see the PRECAUTIONS section of product label or Applicator's Manual for further guidance regarding personal protective equipment).

**IF INHALED:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration using a bag-valve-mask device to prevent possible secondary exposure to hydrogen phosphide gas to the first aid responder. Do not perform mouth-to-mouth resuscitation. Do not give anything by mouth to an unconscious person. Call a poison control centre or doctor immediately for further treatment advice.

**IF SWALLOWED:** Call a poison control centre or doctor immediately for treatment advice. **DO NOT DRINK WATER.** Do not administer anything by mouth or make the person vomit. It is likely that this exposure will lead to spontaneous vomiting.

**IF ON SKIN OR CLOTHING:** Brush or shake material off clothes and shoes in a well-ventilated area. Allow clothes to aerate in a ventilated area prior to laundering. Do not leave contaminated clothing in occupied and/or confined areas such as automobiles, vans, motel rooms, etc. Wash contaminated skin thoroughly with soap and water for 15-20 minutes. Call a poison control centre or doctor for further treatment advice.

**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. Call a poison control centre or doctor for treatment advice.

#### **HOT LINE NUMBER**

Have the product container label or Applicator's Manual with you when calling a poison control centre, doctor, or when going for treatment. **CONTACT 1-800-308-4856 FOR ASSISTANCE WITH HUMAN OR ANIMAL MEDICAL EMERGENCIES.** You may also contact Bequisa Industria Quimica do Brasil LTDA (55 13) 3565-1268 or, GARDEX CHEMICALS, LTD. 416-675-1638. For all other chemical emergencies, please contact CHEMTREC – 1-800-424-9300 or Canadian Transport Emergency Centre (CANUTEC) 613-996-6666.

For additional copies of the container label and applicator's manual, contact Bequisa Industria Quimica do Brasil LTDA: (55 13) 3565-1268

Gleba 37 Avenida Antonio Bernardo, 3950

Parque Industrial Imigrantes - Conjunto Residencial Humaita

11349-380 São Vicente, SP Brazil

or  
GARDEX CHEMICALS LTD.  
7 MERIDIAN RD  
ETOBICOKE ON M9W 4Z6  
Telephone: 416-675-1638

(Insert Red Maple Leaf)

APPLICATOR'S MANUAL FOR CONTROL OF GROUNDHOGS AND GROUND SQUIRRELS

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(08/2017)

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acids, or chemicals.

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or

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7 MERIDIAN RD  
ETOBICOKE ON M9W 4Z6  
Telephone: 416-675-1638

## **DIRECTIONS FOR USE**

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Wear a loose fitting long sleeve shirt, long pants, socks and shoes and wear dry gloves of cotton or other breathable material when handling GASTOXIN®.

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### **List of Burrowing Pests**

GASTOXIN ALUMINIUM PHOSPHIDE TABLETS GROUNDHOGS may be used out-of-doors only for control of Groundhogs and ground squirrels.

### **Application Sites**

This product is for outdoor use in the following areas ONLY:

- Farms
- Orchards
- Non-crop areas (such as pasture and rangeland)
- Airports
- Rights-of-Ways
- Earthen dams
- Other non-residential institutional or industrial sites

### **DO NOT APPLY INDOORS**

**THE USE OF THIS PRODUCT IS STRICTLY PROHIBITED WITHIN 500 METRES OF RESIDENTIAL AREA**, such as single family homes (except the farm house), multi-family residential properties and nursing homes, schools, daycare facilities, hospitals, assisted living facilities, in-patient clinics, prisons, athletic fields, golf courses, cemeteries and parks and recreational areas.

When applying this product specifically in any of the areas listed above, DO NOT APPLY THIS PRODUCT TO A BURROW SYSTEM THAT IS WITHIN **30 METRES** OF A BUILDING THAT IS, OR MAY BE, OCCUPIED BY HUMANS, AND/OR DOMESTIC ANIMALS and that is under the control of the owner/operator of the application site. DO NOT APPLY TO BURROWS THAT OPEN OR MAY OPEN UNDER OR INTO OCCUPIED BUILDINGS. NOT FOR USE IN AREAS WHILE OPEN TO THE PUBLIC. FOR ALL OTHER APPLICATIONS, THE RESTRICTION FOR RESIDENTIAL AREAS (i.e. 500 METRES) APPLIES.

Document in the Fumigation Management Plan any burrows that open under or into occupied buildings, and DO NOT apply to these burrows. In addition, check for any other source through which the gas may enter occupied buildings as a result of application to burrows. If there is any way gas can move through pipes, conduits, etc. from burrows, DO NOT treat these burrows.

### **Placarding of Fumigated Areas**

When this product is used outdoors in an area listed above, the licensed/certified applicator must post appropriate warning signs around the application site that are at least 28 cm long and 21 cm wide and made of substantial material that can be expected to withstand adverse weather conditions. Signs should be placed in advance of the fumigation to keep unauthorized persons away and they must bear the following information:

- The signal word DANGER in letters at least 7 cm high and the skull and crossbones symbol in red.
- The 'DO NOT WALK' symbol.
- The statement, "Area under fumigation. DO NOT ENTER."

- Name of the fumigant used: GASTOXIN ALUMINIUM PHOSPHIDE TABLETS GROUNDHOGS – Reg. No. 23842
- The date and time when fumigation begins and the date and time when aeration can begin.
- Contact information (name, address and telephone number) for the fumigant handler in charge of the fumigation.
- A 24-hour emergency response telephone number.

Signs may be removed 2 days after the final treatment. Only a licensed/certified applicator can authorize removal of warning signs.

#### **Application Directions**

1. Add from 1 to 2 GASTOXIN ALUMINIUM PHOSPHIDE TABLETS GROUNDHOGS to each burrow opening. Seal tightly with soil after first packing the opening with crumpled newspaper, a clod of soil or something similar so as to prevent soil from covering GASTOXIN ALUMINIUM PHOSPHIDE TABLETS GROUNDHOGS and hindering the release of hydrogen phosphide gas. Every attempt should be made to treat and seal all openings of the burrow being treated.
2. For Richardson's ground squirrel control, it is recommended that the product be applied immediately prior to sunset (while there is still sufficient light), at which time it is likely that the rodents will have entered their burrows.
3. In general, use lower rates in packed soil under moist soil conditions and higher rates in porous soils when soil moisture is low. If burrows are reopened, treat as described above a second time 1 to 3 days after the initial treatment.
4. GASTOXIN ALUMINIUM PHOSPHIDE TABLETS GROUNDHOGS may be used out-of-doors only for control of woodchucks (groundhogs) and Richardson's ground squirrels.
5. To avoid unintentional poisonings of endangered, threatened or vulnerable species, do not apply this product without confirming that the burrow, den or tunnel is inhabited by the pest.

#### **DISPOSAL**

Pesticide wastes are toxic. Open dumping is prohibited. Do not discharge this product, or material containing this product, into natural waterways, wetlands (swamps, bogs, marshes, potholes, etc.) or municipal wastewater collection systems. DO NOT contaminate irrigation or drinking water supplies or aquatic habitats such as lakes, rivers, sloughs, ponds, prairie potholes, creeks, marshes, streams, reservoirs and wetlands by cleaning of equipment or disposal of wastes. Proper disposal of aluminum phosphide is required to ensure minimal impact on the environment.

For information on disposal of unused, unwanted product, contact Bequisa Industria Quimica do Brasil LTDA (55 13) 3565-1268, or Gardex Chemicals Ltd., or the provincial regulatory agency. Contact Bequisa Industria Quimica do Brasil LTDA (55 13) 3565-1268, or Gardex Chemicals Ltd., and the provincial regulatory agency in case of a spill and for cleanup of spills.

**DISPOSAL OF CONTAINER:** Do not reuse this container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site.

The container must be cleaned prior to disposal and before taking the container to the collection site. Appropriate respiratory protection must be worn during this process and this should be done in a secured and well-ventilated area or outdoors, away from inhabited buildings to prevent access by unauthorized personnel:

1. Triple rinse the empty container with water. Pour the rinsate into a sanitary landfill, by pouring it out onto the ground or by other procedures.
2. Alternatively, the unstoppered container may be exposed to atmospheric conditions for one or two days so that any residue is dry-deactivated by exposure to the air. If properly exposed, any residual dust remaining will be a grayish-white powder. This will be a non-hazardous waste and contain only a small amount of unreacted aluminum phosphide.
3. Once the empty, rinsed container is clean, it may be made unsuitable for further use by puncturing the container.
4. If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

#### **SPILLS AND CLEAN-UP**

A spill, other than incidental to application or normal handling, may produce high levels of hydrogen phosphide gas. Appropriate respiratory protection must be worn while attending to spills and clean-up. The minimum protection required is a NIOSH-approved air-purifying, full face piece respirator (gas mask) with a

chin-style, front- or back-mounted canister approved for hydrogen phosphide OR a NIOSH-approved supplied-air respirator (i.e., air-line respirator or self-contained breathing apparatus) with a full face piece.

Wear a loose fitting long sleeve shirt, long pants, socks and shoes and wear dry gloves of cotton or other breathable material when handling GASTOXIN ALUMINIUM PHOSPHIDE TABLETS GROUNDHOGS.

Do not use water at any time to clean up a spill of GASTOXIN ALUMINIUM PHOSPHIDE TABLETS GROUNDHOGS. Water, acids and other liquids in contact with unreacted tablets will greatly accelerate the production of hydrogen phosphide gas which could result in a toxic and/or fire hazard.

#### **Directions for Handling Spills**

Return all intact containers to fibreboard cases or other packaging and storage areas.

- If containers have been punctured or damaged so as to leak, the container may be temporarily repaired with aluminum tape or GASTOXIN ALUMINIUM PHOSPHIDE TABLETS GROUNDHOGS may be transferred from the damaged container to a sound metal container which must be sealed and properly labelled as aluminum phosphide. Transport the damaged containers to an area suitable for pesticide storage and inspection. Further instructions and recommendations may be obtained from the manufacturer.
- If a spill has occurred which is only a few minutes old, collect the tablets and place them back in the original containers, if they are intact, and stopper tightly. Place the collected tablets in a sound metal container if the original containers are damaged. **Caution, these containers may flash upon opening at some later time. When possible, open containers outdoors. Do not open containers in an explosive environment.**
- If the age of the spill is unknown, or if the tablets have been contaminated with soil, debris, water, etc., contact BEQUISA INDUSTRIA QUIMICA DO BRASIL LTDA or Gardex Chemicals Ltd. or the provincial regulatory agency.

#### **FUMIGATION MANAGEMENT PLAN**

The Fumigation Management Plan must be written PRIOR TO ACTUAL TREATMENT.

The licensed/certified applicator is responsible for working with the owners and/or responsible employees of the site to be fumigated to develop and follow a Fumigation Management Plan. The Fumigation Management Plan is intended to ensure a safe and effective fumigation. The Fumigation Management Plan must address characterization of the site, and include appropriate monitoring and notification requirements and include a record that the following have been completed:

1. Inspect the site to determine its suitability for fumigation.
2. When sealing is required, consult previous records and note changes to the burrow system, seal leaks, and monitor any occupied adjacent buildings to ensure safety.
3. Prior to each fumigation, review any existing Fumigation Management Plan, MSDS, Applicator's Manual and other relevant safety procedures with company officials and appropriate employees.
4. Consult company officials in the development of procedures and appropriate safety measures for nearby workers that will be in and around the area during application.
5. Confirm that nearby workers and bystanders will not be exposed during the fumigation.
6. Develop procedures for local authorities to notify nearby residents in the event of an emergency.
7. Confirm the placement of warning signs around the application site to secure entrance into any area under fumigation.
8. Confirm the required safety equipment is in place and the necessary manpower is available to complete a safe and effective fumigation.

It is important to note that some Fumigation Management Plans will be more comprehensive than others. All Fumigation Management Plans should reflect the experience and expertise of the licensed/certified applicator and circumstances at and around the burrow system.

In addition to the development of the Fumigation Management Plan, the licensed/certified applicator must read the entire label and the Applicator's Manual and follow its directions carefully. If the licensed/certified applicator has any questions about the development of a Fumigation Management Plan, contact the product manufacturer for further assistance.

The Fumigation Management Plan and related documentation, including monitoring records, must be maintained for a minimum of 2 years.

## **GUIDANCE FOR PREPARATION OF A FUMIGATION MANAGEMENT PLAN**

### **Purpose**

A Fumigation Management Plan (FMP) is an organized, written description of the required steps involved to help ensure a safe, legal and effective fumigation. It will also assist you and others in complying with pesticide product label requirements. The guidance that follows is designed to help assist you in addressing all the necessary factors involved in preparing for and fumigating a burrow system.

This guidance is intended to help you organize any fumigation that you might perform, **PRIOR TO ACTUAL TREATMENT**. It is meant to be somewhat prescriptive, yet flexible enough to allow the experience and expertise of the fumigator to make changes based on circumstances which may exist in the field. By following a step-by-step procedure, yet allowing for flexibility, a safe and effective fumigation can be performed.

Before any fumigation begins, carefully read and review the label and the Applicator's Manual. This information must also be given to the appropriate company officials (supervisors, foreman, safety officer, etc.) in charge of the site. Preparation is the key to any successful fumigation. If you do not find specific instructions for the type of fumigation that you are to perform listed in this Guidance Document, you will want to construct a similar set of procedures using this document as your guide or contact BEQUISA INDUSTRIA QUIMICA DO BRASIL LTDA or Gardex Chemicals Ltd. for assistance.

Finally, before any fumigation begins, you must be familiar with and comply with all applicable federal, provincial and municipal laws and regulations. The success of the fumigation is not only dependent on your ability to do your job but also upon carefully following all rules, regulations and procedures required by governmental agencies.

## **A CHECKLIST GUIDE FOR A FUMIGATION MANAGEMENT PLAN**

This checklist is provided to help you take into account factors that must be addressed prior to performing all fumigations. It emphasizes safety steps to protect people and property. The checklist is general in nature and cannot be expected to apply to all types of fumigation situations. It is to be used as a guide to prepare the required plan. Each item must be included if it is applicable to the fumigation. However, it is understood that each fumigation is different and not all items will be necessary for each fumigation site.

### **A. PRELIMINARY PLANNING AND PREPARATION**

1. Specify the purpose of the fumigation
  - a) Control of vertebrate pests, vertebrate type.
2. Specify the type of fumigation.
  - b) Outdoor area – open burrow system (ground squirrels, groundhogs).
3. Inspect the site to determine its suitability for fumigation. Fully acquaint yourself with the site to be fumigated, including:
  - a) The general area/burrow system layout, fire or combustibility hazards, connecting structures and escape routes, and other unique hazards or area/burrow system characteristics. Prepare, with the owner/operator/person in charge, a drawing or sketch of area/burrow system to be fumigated, delineating features, hazards, and other area characteristics.
  - b) The number and identification of persons who routinely enter the area to be fumigated (i.e. employees, visitors, customers, etc.)
  - c) The previous treatment history of the burrow system, if available.
  - d) Accessibility of utility service connections
  - e) Nearest telephone or other means of communication. Mark the location of these items on the drawing/sketch.
  - f) Emergency shut-off stations for electricity, water and gas. Mark the location of these items on the drawing/sketch.
  - g) Current emergency telephone numbers of local health, fire, police, hospital and physician responders.
  - h) Name and phone number (both day and night) of appropriate company officials.
  - i) Check, mark and prepare the points of fumigant application locations for fumigation.
  - j) Review labeling and Applicator's Manual
  - k) Exposure time considerations:

- 1) Product to be used
  - 2) Minimum fumigation period, as defined and described by the label use directions.
  - 3) Down time required to be available
  - 4) Cleanup requirements, including equipment, and personnel needs, if necessary.
- l) Determination of dosage:
- 1) Burrow sealing capability and methods
  - 2) Label recommendations
  - 3) Temperature, humidity, wind
  - 4) Past history of fumigation for burrow system
  - 5) Exposure time
  - 6) Amount of fumigant used: number of tablets
- m) Distance to other on-site and neighbouring off-site structures, recreational areas or areas where bystanders may be exposed.

## **B. PERSONNEL**

1. Confirm in writing that all personnel in and around the site to be fumigated have been notified prior to application of the fumigant. Consider using a checklist that each employee initials indicating they have been notified.
2. Instruct all fumigation personnel to read the Applicator's Manual, MSDS and Fumigation Management Plan concerning the hazards that may be encountered, and about the selection of personal protection equipment.
3. Confirm that all personnel are aware of and know how to proceed in case of an emergency situation.
4. Instruct all personnel on how to report any accident and/or incidents related to fumigant exposure. Provide a telephone number for emergency response reporting.
5. Instruct all personnel to report to proper authorities any theft of fumigant and/or equipment related to fumigation.
6. Establish a meeting area for all personnel in case of an emergency.

## **C. MONITORING**

1. Safety
  - a. Exposures to hydrogen phosphide must not exceed 0.1 ppm for unprotected workers and nearby bystanders. **An evacuation action is necessary when hydrogen phosphide levels exceed 0.1 ppm.** To determine hydrogen phosphide levels, readings may be taken using low level detector tubes or electronic metering devices.

## **D. NOTIFICATION**

1. Confirm all the appropriate local authorities (fire departments, police departments, etc.) have been notified as per label instructions, local ordinances, or instructions of the client.
2. Prepare written procedure ("Emergency Response Plan"), which contains explicit instructions, names, and telephone numbers so as to be able to notify local authorities if hydrogen phosphide levels are exceeded in an area that could be dangerous to bystanders and/or domestic animals. Elaborate in this section the key elements of an Emergency Response Plan including reference to evacuation procedures, etc.

## **E. SEALING PROCEDURES**

1. Locate all entrances to each burrow system. Sealing must be adequate to control the pests. Care should be taken to ensure that sealing materials will remain intact until the fumigation is complete.
2. If the burrow system has been fumigated before, review the previous Fumigation Management Plan for previous sealing information.
3. Make sure that construction/remodeling has not changed the burrow system in a manner that will affect the fumigation.
4. Warning signs must be placed around the application site to secure the fumigated site from access by unauthorized persons.

**F. APPLICATION PROCEDURES AND FUMIGATION PERIOD**

1. Plan carefully and apply the product in accordance with the label requirements.
2. Appropriate respiratory protection must be worn during delivery/dispensing of product, attending to spills and clean-up, and while inspecting the treated area following application.
3. Protective clothing: wear a loose fitting long sleeve shirt, long pants, socks and shoes and wear dry gloves of cotton or other breathable material when applying aluminum phosphide tablets. Gloves should remain dry during use.
4. Wash hands thoroughly after handling aluminum phosphide tablets.
5. After fumigation activities, remove all protective clothing, check and ensure that there are no tablets trapped inside clothing, aerate in well-ventilated area then wash thoroughly, separately, before re-use.

**G. POST-APPLICATION OPERATIONS**

1. Return all unused fumigant product to an approved, locked chemical storage area.
2. Re-inspection and re-treatment: inspect treated areas 1 or 2 days following treatment for signs of residual activity of target species. Treat all reopened burrows in the same manner.
3. Remove warning signs 2 days after the final treatment. Only a licensed/certified applicator can authorize removal of warning signs.
4. Inform business/client that employees/other persons may return to work or otherwise be allowed to enter the area.