

Using Aluminum Phosphide to Control Burrowing Rodents in Tree Fruit Orchards



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When using aluminum phosphide products to control burrowing rodents, understanding all the relevant information and requirements can help keep you and others safe.

The product container label and applicator manual provides important details that the certified applicator must read and understand before applying aluminum phosphide products. The applicator manual is part of the labeling for these products. If you did not receive a manual at the time of purchase, you must get one before using the product. This document focuses on applying aluminum phosphide to control pocket gophers in tree fruit orchards. It supplements information provided on the product labeling.

All aluminum phosphide products (e.g., Fumitoxin, Phostoxin, etc) are federal restricted-use pesticides due to the high acute inhalation toxicity of phosphine gas. Aluminum phosphide tablets and pellets react with moisture to release phosphine gas. Misuse of aluminum phosphide products has killed people.

It is critical that the applicator read and understand the container label and the applicator manual before applying these products.

Q: Who can purchase and apply aluminum phosphide products?

A: As federal restricted-use pesticides, aluminum phosphide products can only be purchased and applied by certified applicators or people under their direct supervision. A certified applicator may be a Private Applicator, or either a Commercial Applicator/Operator or Public Operator with the “Pest Animal Control” category. The Commercial Applicator must hold all the categories in which Commercial Operators conduct applications.

The certified applicator must be physically present and be in visual and/or voice contact with all fumigant handlers during all phases of the fumigant application. This is a higher standard for direct supervision. The requirement to be physically present applies to all certified applicators, including Private Applicators.

Q: What are the restrictions for application near buildings and structures?

A: Do not apply aluminum phosphide products to any burrow system within 100 feet of any building. Fatalities have occurred as a result of rodent burrow fumigation that was too close to a structure. WSDA will issue a civil penalty for any such instance of application, even if no one is injured.

Q: What protective clothing is required?

A: You must wear dry gloves made of cotton or other material if any contact with tablets, pellets, or dust is likely. Keep gloves dry during use to prevent converting aluminum phosphide to phosphine gas from moisture contact. Do not bring gloves that become wet or damp during the application into the cab of your vehicle.

Q: What type of respiratory protection must be worn for open space applications?

A: When the product is used according to label directions for outdoor rodent burrow baiting, wearing a respirator is not required, because this is within established safety thresholds. However, the product label requires a respirator be available in case of emergency. The applicator manual specifies a NIOSH/MSHA¹ approved full-face gas mask - phosphine canister combination for concentrations up to 15 ppm (see applicator manual for other possible options).

Q: Must the orchard be monitored with gas detection equipment for phosphine gas?

A: No

Q: Can I add water when I place the tablets or pellets in the burrow to activate the aluminum phosphide?

A: **No.** Adding water or other liquids when tablets or pellets are placed is strictly prohibited. This creates a dangerous condition and is not allowed by the label. WSDA will issue a civil penalty for any such instances of this practice, even if no one is injured.

Q: What are the posting requirements for application to rodent burrows?

A: The fumigation area must be posted with signs that contain the following information:

- Signal word DANGER/PELIGRO and the SKULL AND CROSSBONES symbol in red.
- Name and EPA registration number of fumigant used.
- A 24-hour emergency response telephone number.

Signs must be at least 9-by-11 inches in size and be placed at least 18 inches above the ground. All entrances to the fumigated area must be posted. Where possible, signs should be placed before the fumigation occurs to keep unauthorized people away. Signs may be removed two days after the final treatment.

Q. Is a fumigant management plan (FMP) required prior to applying aluminum phosphide?

A. Yes. An FMP must be prepared each time an aluminum phosphide fumigant is applied.

¹ *National Institute for Occupational Safety and Health (NIOSH), Mine Safety and Health Administration (MSHA)*

Q: What is the purpose of an FMP?

A: All aluminum phosphide labels require preparing a written fumigation management plan (FMP) before using the fumigant, including in rodent burrows.

An FMP is intended to ensure the safety of applicators, agricultural workers, bystanders (people who live, work, or otherwise spend time near a treated area), and the environment. An FMP is a structured, written description of the required steps to ensure the application is performed safely and effectively. It also helps the pesticide applicator and others to comply with the requirements of the pesticide product label. The FMP is somewhat prescriptive, yet flexible enough to allow the fumigator to make changes based on circumstances, using their experience and expertise. A certified applicator is responsible for making sure an FMP is developed and is carried out completely. (Section 20 of the applicator manual lists the information that must be considered in preparing an FMP.)

Carefully read, review, and follow both the pesticide label and the applicator manual before writing an FMP. You should have received these documents at the time of product purchase. In addition to the FMP, the certified applicator must be familiar with and comply with all applicable federal, state, and local regulations.

Q: Who can write the Fumigant Management Plan?

A: It's not specific who writes the FMP. However, the certified applicator is responsible for working with owners and/or responsible employees of area to be fumigated to develop and follow the FMP. The FMP must be prepared jointly with the owner, operator, or person-in-charge.

Q: How long must the FMP be kept, and by whom?

A: The FMP and related documents, including monitoring records, must be maintained for a minimum of two years. The certified applicator and appropriate company officials (supervisors, foreman, safety officer, etc.) in charge of the site must retain the records.

Q: Must WSDA staff be notified of a planned application of aluminum phosphide?

A: No

Q: Who must receive a copy of the label and the applicator manual?

A: Before starting the application, the label and the applicator manual must be given to the appropriate company officials (supervisors, foreman, safety officer, etc.) in charge of the application site. Before treating a rodent burrow on a property containing an inhabited structure, the applicator must provide the customer (e.g. tenant, homeowner, or property manager) with an SDS (safety data sheet, formerly MSDS) or appropriate sections of the

applicator manual. Remember - never treat a burrow system that is within 100 feet of a building.

Q: Must notification be given before an application?

A: The certified applicator must confirm in writing that all personnel in and around the area to be fumigated have been notified before applying the fumigant. Personnel initials will suffice as written confirmation that notification has occurred.

Q: What is the restricted entry interval (REI)?

A: There is no restricted entry interval when fumigating for burrowing rodents. WSDA recommends a prudent, common sense approach, keeping the safety of employees and others in mind.

Q: What are the storage requirements for aluminum phosphide products?

A: At a minimum, storage must be locked and posted. Warning signs must display the skull and crossbones symbol and the words “Danger/Poison (or Pesticide or Chemical) Storage Area/Keep Out.” Letters must be large enough to be legible from 30 feet. The storage unit must have a warning sign on each exterior wall and at each exit and entrance. (Refer to WAC 16-228-1220 for posting requirements on alternative storage structures.)

The applicator manual lists the following signage requirements:

- Danger/Poison (with skull and cross bones)
- “Authorized Personnel Only”
- National Fire Protection Association (NFPA) Hazard Identification Symbol. (*Note: The most hazardous material stored will dictate the numeral value for each hazard category.*)

Q: What is the procedure for disposal of empty aluminum flasks?

A: The aluminum flasks are non-refillable containers, but are recyclable. The certified applicator should triple rinse empty flasks and stoppers with water, and dispose according to the label, or offer for recycling or reconditioning. If a flask contains residue, the certified applicator should remove the lid and expose the empty flask to the air in an open, outdoor area until residue in the flask has reacted. Pour any spent product (a grayish-white power) onto the ground. It’s best to cover the spent material with soil. The label specifies deactivation procedures for partially spent (“Green”) dust.