

DEC 15 1987

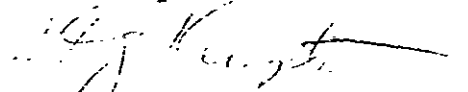
Flavio G. Simoes
General Manager
Bernardo Chemicals, LTD, Inc.
3994 Swinnea Road
Memphis, TN 38118

SUBJECT: Your letter of October 29, 1987
EPA Reg. Nos. 43743-1

Your submission has been reviewed and found to be acceptable. However, note that the type size on the final printed label must be in accordance with EPA regulations (i.e., no smaller than 6 point type). I also assume that this label will comply with P.R. Notice 87-5 as indicated in ~~your certification letter of September 18, 1987.~~

Enclosed for each product is a stamped, approved label. Submit five copies of finished printed labels for our records before releasing the product for shipment.

Sincerely,



Jeff Kempter
Product Manager 32
Registration Division (TS-767C)

Enclosure

BEST AVAILABLE COPY

BEST AVAILABLE COPY

**RECEIVED
EP**

**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
KEEP OUT OF REACH OF CHILDREN**

DANGER - POISON

Aluminum phosphide powder, granules, or pellets may be fatal if swallowed. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke while handling aluminum phosphide fumigants. If a sealed container is opened or if the material comes in contact with moisture, water, or acids, extremely toxic phosphine gas will be released. If a garlic odor is detected, refer to section on applicator/water exposure for appropriate monitoring procedures. Pure phosphine gas is odorless; the odor is due to a contaminant. Since an odor may not be detected under certain circumstances, the absence of a garlic odor does not mean that phosphine gas is absent. Observe proper application, aeration, entry and disposal procedures specified elsewhere in the labeling to prevent over exposure.

NOTE TO PHYSICIAN: Aluminum phosphide granules, powder, or pellets react with moisture in the air, acids, and many other liquids to release phosphine gas. Mild exposure by inhalation causes malaise, ringing of ears, fatigue, nausea, and pressure in the chest which is relieved by removal to fresh air.

Moderate poisoning causes weakness, vomiting, epigastric pain, chest pain, diarrhea and dyspnea. Severe poisoning may occur in a few hours to several days, resulting in pulmonary edema and may lead to dryness, cyanosis, unconsciousness and death. In sufficient quantity, phosphine affects the liver, kidneys, lungs, nervous system and circulatory system. Inhalation can cause lung edema and hypertension, small perivascular brain hemorrhages and brain edema. Ingestion can cause lung and brain symptoms but damage to the viscera is more common. Phosphine poisoning may result in all pulmonary edema, (2) liver elevated serum GGT, LDH and alkaline phosphatase, reduced pin point pupils, hemorrhage and jaundice, and (3) kidney hematuria and anemia. Pathology is characteristic of hypoxia. Frequent exposure over a period of days or weeks may cause poisoning. Treatment is symptomatic.

ENVIRONMENTAL HAZARDS

This product is highly toxic to wildlife. Run target organisms exposed to phosphine gas in burrows will be killed. Do not apply directly to water or wetlands (swamps, bays, marshes, and ponds). Do not contaminate water by cleaning of equipment or disposal of wastes.

STORAGE AND HANDLING

Store in a dry, well ventilated area away from heat, under lock and key. Post as a pesticide storage area. Do not contaminate water, food, or feed by storing pesticides in the same areas used to store these commodities. Do not store in buildings inhabited by humans or domestic animals. Aluminum phosphide products shall not be placed in, or attached to packages, intended for retailers.

DIRECTIONS FOR USE

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

Detailed use and disposal instructions for the fumigation of specified raw agricultural commodities, processed foods, animal feeds, tobacco, non food items, creosolites, feed mills, and warehouse as well as for control of moles and burrowing rodents are to be found in the booklet entitled "Applicators Product Manual for use with GASTOXIN Tablets and GASTOXIN Pellets". Before using this product, read and follow all precautions and directions on the label and in the product manual.

SPILL AND LEAK PROCEDURES

A spill, other than incidental to application or normal handling, may produce high levels of gas and, therefore, attending personnel must wear SCBA or its equivalent when the concentration of phosphine gas is unknown. Other NIOSH/MSHA approved respiratory protection may be worn if the concentration is known. Do not use water at any time to clean up a spill of aluminum phosphide. Water in contact with unreacted pellets will greatly accelerate the production of phosphine gas which could result in a toxic and/or fire hazard. Wear cotton gloves when handling pesticides.

(Continued on right page)

**RESTRICTED USE PESTICIDE
DUE TO ACUTE INHALATION TOXICITY OF
HIGHLY TOXIC PHOSPHINE GAS**

For retail sale to and use only by Certified Applicators for those uses covered by the applicators certification or persons trained in accordance with the attached product manual working under the direct supervision and in the physical presence of the Certified Applicator who must be available on site or on the premises. Read and follow the label and Bernardo Chemicals product manual which contain complete instructions for the safe use of this product.

**gastoxin[®]
FUMIGATION TABLETS**

Active Ingredient
Inert Ingredients

57% Aluminum Phosphide
43%



POISON



PELIGRO

DANGER

PRECAUCION AL USUARIO: Si usted no lee las etiquetas, no use este producto hasta que la etiqueta sea legible y sea leído cuidadosamente.

STATEMENT OF PRACTICAL TREATMENT

Symptoms of overexposure to phosphine are: headache, dizziness, nausea, difficulty breathing, vomiting and diarrhea. In all cases of overexposure get medical attention immediately. Take victim to a doctor or emergency treatment facility.

IF THE GAS FROM ALUMINUM PHOSPHIDE IS INHALED: Get exposed person to fresh air. Keep warm and make sure person can breathe freely. If breathing has stopped, give artificial respiration by mouth-to-mouth or other means of resuscitation. Do not give anything by mouth to an unconscious person.

IF ALUMINUM PHOSPHIDE POWDER, GRANULES, OR PELLETS ARE SWALLOWED: Drink or administer one or two glasses of water and induce vomiting by touching back of throat with finger or, if available, syrup of ipecac. Do not give anything by mouth if victim is unconscious or not alert.

IF POWDER, GRANULES OR PELLETS OF ALUMINUM PHOSPHIDE GET ON SKIN: Brush material off clothes and shoes in a well ventilated area. Allow clothes to aerate in a ventilated area prior to laundering. Wash contaminated bare skin thoroughly with soap and water.

IF IN EYES: Flush with plenty of water. Get medical attention.

Manufactured by
CASA BERNARDO LIMITADA
Rod. Pôr. M. da Noroeste km 65
Cidade 37 - Pq. Ind. Im. granites
Samarita - S.V. - São Paulo - BR
Tel: (13) 32-8331
Telex: 131300 CBLS

Sold by
BERNARDO CHEMICALS LTD
3994 Swinnea Road
Memphis, TN 38118
Tel: (901) 363 0463
Telex: 533016

EPA LIST # 43743-BR-01
EPA REG # 43743-01-AA

Contents: 100 Rounds Tablets - Net Weight: 0.662 lbs (300 g)

Return all intact aluminum phosphide to cardboard cases or other container which has been properly marked according to DOT regulations. No shipping of damaged cases.

If aluminum phosphide has been punctured or damaged so as to leak, be temporarily repaired with aluminum tape or the aluminum phosphide removed from the damaged waste to a sound metal container which should be properly labeled as aluminum phosphide. Transport the damaged container for pesticide storage for inspection. Further instructions and information obtained if required from BERNARDO CHEMICALS LTD.

PHYSICAL/CHEMICAL HAZARD

Aluminum phosphide in tablets, pellets and partially spent dust will react with moisture from the air or if it comes into contact with many other liquids. Fuming of tablets, pellets or dust from their original container will occur and the release of gas will begin to occur.

Always open containers of aluminum phosphide products outdoors or in a well ventilated area. When opening, point the container away from the face and body. Always wear eye protection. Always wear gloves. Never open in a flammable atmosphere. These precautions will also reduce the release of phosphine gas.

Pure phosphine gas is practically insoluble in water, and oils, and is highly flammable. However, it may react with certain metals and especially at higher temperatures and relative humidities. Metals such as iron, copper, silver, and other reactive metals such as gold and silver corrode on contact with phosphine. Thus, small electric motors, smoke detectors, batteries, and battery chargers, for this reason, should be protected from phosphine gas. Phosphine gas is also highly flammable and should be protected from sparks, flames, and other sources of ignition.

STORAGE AND DISPOSAL

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

Unreacted or partially reacted aluminum phosphide is acutely hazardous. Use of excess pesticide, spray mixture, or residue is a violation of the law. Do not dump or dispose of by use, except as directed by label instructions. Residue or Environmental Control Agency, with the nearest EPA Regional Office or nearest EPA Regional Office of course. For specific instructions, see the label.

Some local and state waste disposal regulations may vary from the federal regulations. Disposal procedures should be reviewed with appropriate local, state, and federal authorities. Contact your state Pesticide or Environmental Agency or Hazardous Waste Specialist at the nearest EPA Regional Office for more information.

Triple rinse tanks and sleepers with water. Then either for recycling or for disposal, or dispose of in a sanitary landfill, or by other procedure, and local authorities. Rinsate may be disposed of in a sanitary landfill, or by other approved procedure. It is also permissible to remove the tanks outdoors until residue in the tanks is reacted. Then puncture, incinerate, landfill, or other approved use or by other procedures approved by local authorities.

If properly stored, the residual dust remaining after a fumigation of phosphine will be grayish white and contains only a small amount of unreacted phosphine dust from incompletely reacted aluminum phosphide.

WARRANTY

Seller does not make warranties expressed or implied on the use of this product. Buyer assumes all risk. Customer will pay all handling and return to label requirements.