

**ACCEPTED**  
MAR 1 0 1981  
Under the Federal Insecticide,  
Fungicide, and Rodenticide Act,  
as amended, for the pesticide  
registered under  
EPA Reg. No. 43568-3

**NOTE TO USER:**

For technical assistance or additional  
information contact:

**PHOS-FUME CHEMICAL CO.**

11211 James Ct.

Chaska, MN. 55318

Tel: (612) 448-4505

**Phos-Kill**

**Pellet**

EPA Registration No. 43568-1

**and**

**Tablet**

EPA Registration No. 43568-3

**Application**

**and**

**Instruction**

**Booklet**

EPA Establishment No. 41876-1Y-1

**Remove and Unfold**

**for**

**Use and Directions**

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## DIRECTIONS - GENERAL

PHOS-KILL is effective in providing economic levels of control of:

Granary Weevil, Rice Weevil, Lesser Grain Borer, Saw-Toothed Grain Beetle, Confused Flour Beetle, Cadelle, Angoumois Grain Moth, Khapra Beetle, Indian Meal Moth, Yellow Meal Worm, Red Flour Beetle, Spider Beetle, Hairy Fungus Beetle, Mediterranean Flour Moth, Dried Fruit Moth, Bean Weevil, Cigarette Beetle and Tobacco Moth.

Its use is suited for the fumigation of bulk stored grain, and certain commodities in space; Box cars and bulk rail cars (static or in-transit) vaults, warehouses, static trailers vans (not tarped grain trailers) and shipping containers. A fumigation consists of placing the pellets and/or tablets in a specified manner once the facility being fumigated has been prepared. Minimum preparation consists of:

1. Notifying local authorities (Fire, Police, etc.)
2. Sealing area or structure as gas tight as possible.

3. Posting of danger signs; w/skull and crossbones, "area under fumigation, do not enter", Date of fumigation, name and address of fumigators, "Do not remove warning signs until fumigated area is safe for entry."
4. Being certain first aid information and proper respiratory equipment is at the site.
5. Being certain that all adjoining facilities are evacuated.
6. Being certain of the recommended application procedure.
7. Being certain that operators have been trained and have read and understood labeling.

## DIRECTION - SPECIFIC

WEAR GLOVES WHEN HANDLING. ALWAYS OPEN CANS IN OPEN AIR IMMEDIATELY PRIOR TO USE. ALWAYS WORK IN PAIRS, NEVER ALONE. BULK STORED GRAIN: Add pellets and/or tablets to grain stream as silos or bins are filled. Filling must be continuous. Determine additions sequence on pellets and/or tablets per grain basis, to insure even distribution throughout. Close bin openings, seal and post warning signs.

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#### COMMODITIES IN SPACE:

##### (1) Warehouses and vaults;

Place pellets and/or tablets on floor in systematic manner on sheets of kraft paper. Use total floor space available.

##### (2) Box Cars, Bulk Rail Cars, Static Trailers Vans, Shipping Containers;

Place 10 Pellets or 2 Tablets in moisture permeable envelope. Place and tape bags on rigid perforated cardboard with spacing between bags. Tape across the envelope ends only. Place or fix the cardboard, envelope side up, inside the box-car van or shipping container. In the case of bulk rail cars place the cardboard on the flanges of the hatch openings. This may require cutting the cardboard to size. Close, seal and post warning signs on doors and hatch covers.

#### DOSAGE SCHEDULE

**ABOUT DOSAGE:** Satisfactory results with PHOS-KILL are dependent upon obtaining a tight seal of the structures to be fumigated. The Dosage Schedule reflects a dosage range. The lower level should only be used in tightly sealed structures. The higher level should be used if sealing has been difficult or if other adverse conditions are present, such as high wind.

#### PELLET AND TABLET

##### EXPOSURE GUIDE

The release of phosphine from PHOS-KILL is dependent on atmospheric temperature and humidity. Plan fumigations accordingly.

#### NON-FOOD PRODUCTS

Cotton (cloth and unprocessed), Feathers, Human Hair, Vulcanized Hair, Mop Hair, Wool, Tobacco, Wood and Bamboo Products.

#### ANIMAL FEEDS & FEED PRODUCTS:

##### SUGGESTED DOSAGE SCHEDULE

PELLETS	100 - 200	120 - 200
TABLETS	20 - 40	20 - 40

#### MINIMUM EXPOSURE REQUIREMENTS

COMMODITY TEMPERATURE	MINIMUM EXPOSURE PERIOD
Commodity at 54-59° F. (12-15° C.)	at least four days
Commodity at 60-68° F. (16-20° C.)	at least three days
Commodity at over 68° F. (20° C.)	Not less than two days

**DO NOT FUMIGATE WHEN COMMODITY TEMPERATURES ARE BELOW 40° F. (5° C.)**

**NOTE:** Aerate all fumigated products for at least 48 hours before offering to consumer. Note specific aeration instruction for tobacco.

#### TOBACCO TEMPERATURE ABOVE 60° F.

Temperature Above 68° F.	Dosage: Bags/1000 Cubic Feet	Minimum Exposure
	110 - 135 Pellets	4 days
	or	
60° - 68° F.	20 - 30 Tablets	6 days
Post Fumigation Aeration:	Hogsheads	3 days minimum
	Other	2 days minimum

#### TOBACCO TEMPERATURE 40° - 59° F.

##### For Kill of Cigarette Beetle Larvae

Temperature 40° - 59° F.	Dosage: Per 1000 Cubic Feet	Minimum Exposure
	110 - 135 Pellets	See Below
	20 - 30 Tablets	

Best results are achieved when tobacco is fumigated at temperatures above 60° F. However where it is not possible to achieve these temperatures fumigation at temperatures in the 40° - 59° F. range have provided satisfactory controls of the cigarette beetle larvae. Eggs and pupae of the cigarette beetle may survive a fumigation at these lower temperatures. The appropriate exposure periods for fumigation of tobacco are:

59° F.	168 hours
40° F.	336 hours

**NOTE:** Warehouses and containers must be tightly sealed. Post fumigation aeration time is a minimum of 4 days.

**NOTE:** Aerate all fumigated products for at least 48 hours before offering to consumer. Note specific aeration instructions for tobacco.

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U.S. DEPARTMENT OF AGRICULTURE  
BUREAU OF PLANT INDUSTRY  
OFFICE OF PEST CONTROL  
WASHINGTON, D.C. 20250  
EPA Reg. No. 43568-3

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS  
(& DOMESTIC ANIMALS)

**DANGER:** PHOS-KILL releases poisonous gas when moist. Do not breathe dust or fumes. Poisonous if swallowed. Do not get in eyes or on skin. Do not eat, drink or smoke while handling. KEEP AWAY FROM LIQUID OR WATER as this causes immediate release of gas. Wear gloves when handling tablets. Piling of tablets or the dust from their decomposition may cause a temperature increase and a flash could occur. PHOS-KILL is to be used only by experienced adult personnel. Do not open container except for short term use. ALWAYS OPEN IN OPEN AIR. Store only in cool, dry, locked ventilated room. Protect from moisture, open flames or heat. Keep available a gas mask and canister approved by the U.S. Department of Interior, Bureau of Mines for PHOS-KILL protection.

**SYMPTOMS OF PHOS-KILL POISONING:** Sensation of cold, diarrhea, gastric pains, acute indigestion, dizziness, dry cough, loss of appetite, intense thirst, vomiting, enlarged pupils, choking attacks, reeling.

**ENVIRONMENTAL HAZARDS:** This product is toxic to fish. Keep out of lakes, streams and other aquatic environments. Do not contaminate water by cleaning equipment or disposal of wastes. It may react with certain metals such as copper, brass, silver, and gold, and cause corrosion especially at high temperatures and humidity. Precautions should be taken to protect materials made from such compounds including some types of copying paper and undeveloped film.

**DIRECTIONS FOR USE:** It is a violation of Federal law to use this product inconsistent with its labeling.

STORAGE AND DISPOSAL

**STORAGE:** Store in cool, dry, locked ventilated room or building. Protect from moisture, open flames, heat, acids and other chemicals. Never store near homes or living quarters.

**DISPOSAL OF EMPTY FLASKS:** Flush several times with water, crush and bury. Bury stoppers.

**EFFICACY:** PHOS-KILL has been found effective against the following stored products, insects and their pre-adult stages that is eggs, larvae, and pupae: Grainary and rice weevils, saw-toothed grain beetle, flat grain beetle, rusty grain beetle, lesser grain borer, confused flour beetle, red flour beetle, Cadella, dried fruit moth, Mediterranean flour moth, Indian meal moth, almond moth, Angoumois grain moth, European grain moth, bean weevil, raisin moth, pink bollworm, dried fruit beetle, dermestid beetles, and tobacco pests, the cigarette and tobacco moth. Also controls cereal leaf beetle (a stored product contaminant), and greater wax moth.

**BARGE:** FUMIGATION IS REGULATED BY U.S. COAST GUARD REGULATION 46 CFR 14.14

Unmanned barges are fumigated as follows: For listed raw commodities and animal feeds transported in bulk, PHOS-KILL tablets may be fed into the commodity as the barge is being loaded, or may be inserted below the surface of the commodity after loading is completed. For listed commodities not transported in bulk and for listed processed foods, PHOS-KILL tablets must be placed in and fastened to a substantial supply of the commodity in the hold or in the hold not connected with the processing area. The fumigation of barge and export containers, unmanned barges is identical to that of the listed commodities. PHOS-KILL is fumigated in land-based structures or in the hold of a ship.

Following application of the fumigant, the barge must be sealed and warning placards attached.

Prior to unloading of unmanned barges, make appropriate tests to ascertain safety of cargo area.

RESTRICTED USE PESTICIDE

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

Phos-Kill  
TABLETS

A Fumigant For Use Against Listed  
Insects Which Infest Listed Raw Agricultural  
Commodities, Specified Processed Foods  
And Animal Feeds

Active Ingredient: Aluminum Phosphide .. 60.0%  
Inert Ingredients: ..... 40.0%  
TOTAL ..... 100.0%

KEEP OUT OF REACH OF CHILDREN



DANGER - POISON



Statement of Practical Treatment

Upon exposure to atmospheric moisture PHOS-KILL releases hydrogen phosphide (phosphine)

**If swallowed:** CALL A PHYSICIAN OR POISON CONTROL CENTER. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

**If inhaled:** Remove victim to open air. Make them lie down and keep them warm. Call a physician immediately.

**If on skin:** Wash affected area with soap and water.

**If in eyes:** Flush thoroughly with water.

SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS.

Manufactured for: PHOS-FUME CHEMICAL COMPANY INC.

112211 James Ct. Chaska, MN. 55318

EPA REGISTRATION NO. 43568-3

EPA ESTABLISHMENT NO. 41876 -1Y-1

Contains 500 Tablets - Net Weight 1,500 gr. (3 lbs. 4.8 ozs.)

FOR FUMIGATION OF LISTED BULK ANIMAL FEEDS: Application procedures for each can.

Commodities approved for fumigation: processed food products and stored tobacco.

**RAW AGRICULTURAL COMMODITIES:** sorghum, millet, rye, corn, alfalfa, pecans, pistachio, peanuts, sunflower seeds, vegetables, adzuki, red beans, green split peas, lentils, beans, mung beans, pinto beans, stored in bulk. PHOS-KILL commodity flows into a bin or the individual tablets. For use, place in PHOS-KILL moist proceeds as for with process.

Fumigated areas must be posted with crossbones, and the words "Fumigation" and the name of the fumigant until the fumigation is complete.

**FOR FUMIGATION OF SPECIFIED ANIMAL FEEDS:** cereal flour, fractions, wheat bran, poultry macaroni, spaghetti, noodle mixes, packaged cereals, prepack cream of wheat, bulgar, brown wheat shorts, processed corn, Dried/Processed meal, fish-dried crackers, snack foods, herbs, dairy creamers, pastry mixes, processed almonds, brazil nuts, nuts, walnuts, dehydrated potato, pears, dried spinach, dried carrot, prunes, raisins and saltanas, relatively gas-tight structures, hopper cars (static or rolling). Must be placarded during fumigation.

**FOR FUMIGATION OF SPECIFIED ANIMAL FEEDS:** These commodities are fumigated in gas-proof bags or rolling. Sealed box and hopper during fumigation as per DOT moisture-permeable envelope. Envelopes must be fastened to a residue shall be disposed of by a small amount of wetting agent. See label instructions.

Under no condition shall any PHOS-KILL or with PHOS-KILL residue be attached to packages intended for use. Aerate finished food two days before use.

Dosage for cereal mills and feed stores: Fumigation of such areas must be preceded by such as sealing of entrances, notifying police and fire must be adhered to.

Dosage for control of the greater other bee keeping equipment.

Exposure time required for all commodities: Commodity at 54-59° F. 14 days; Commodity at 60-65° F. 10 days; Commodity at 66° F. 7 days.

Do not fumigate when commodity is wet.

**WARRANTY:** Seller warrants that description and when used under conditions of use, it is reasonably safe. It makes no other warranty, either express or implied, and the user assumes the risk should the product be used.

ACCEPTED

MAR 1 0 1981

U.S. DEPARTMENT OF AGRICULTURE  
Forest Pest Control Service  
Forest Protection and Quarantine Act  
Approved under  
EPA Reg. No. 43568-3

#### PRECAUTIONARY STATEMENTS

##### HAZARDS TO HUMANS (& DOMESTIC ANIMALS)

PHOS-KILL releases phosphine gas when moist. Do not drink or smoke while handling. KEEP AWAY FROM FIRE as this causes immediate release of gas. Wear gloves. Putting of tablets or the dust from them on a decomposing material increases and a fire could occur. PHOS-KILL is only for short term usage. ALWAYS OPEN IN OPEN AIR or dry, locked ventilated room. Protect from moisture. Keep available a gas mask and a respirator approved for use in interior. Bureau of Mines for PHOS-KILL.

**PHOS-KILL POISONING:** Sensation of cold, diarrhea, vomiting, indigestion, dizziness, dry cough, loss of appetite, fainting, enlarged pupils, choking attacks, swelling.

**HAZARDS:** This product is toxic to fish. Keep out of and other aquatic environments. Do not contaminate water. Proper disposal of wastes. It may react with certain copper, brass, silver, and gold, and cause corrosion on high temperatures and humidity. Precautions should be taken with materials made from such compounds including some paper and undeveloped film.

**USE:** It is a violation of Federal law to use this product in labeling.

##### STORAGE AND DISPOSAL

Store in cool, dry, locked ventilated room or building. Protect from open flames, heat, acids and other chemicals. Never store in living quarters.

**EMPTY FLASKS:** Flush several times with water, crush and dispose.

PHOS-KILL has been found effective against the following stored pests and their pre-adult stages that is eggs, larvae, and pupae: weevils, saw-toothed grain beetle, flat grain beetle, rusty lesser grain beetle, confused flour beetle, red flour beetle, fruit moth, Mediterranean flour moth, Indian meal moth, almond moth, European grain moth, bean weevil, raisin moth, dried fruit beetle, domestic beetles, and tobacco pests. The tobacco moth. Also controls cerealized beetle (a stored product) and greater wax moth.

##### FUMIGATION IS REGULATED BY QUARANTINE REGULATION 46 CFR 1.74

PHOS-KILL is a fumigant as follows: For listed raw and animal feeds transported in bulk, PHOS-KILL tablets may be immediately as the barges are being loaded, or may be on the surface of the commodity after loading is completed. For cases not transported in bulk and for listed processed food, the tablets must be contained and fastened to a substantial support, or their residual dust must not come into contact with the food or its packaging. Dosage and exposure time on unattended fumigation is identical to that used for fumigation of commodities in bulk based structures or storage areas.

Application of the fumigant, the fumigator, and the fumigation warning placards attached.

Loading of unattended barges, make appropriate tests for safety of cargo area.

#### RESTRICTED USE PESTICIDE

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

## Phos-Kill TABLETS

A Fumigant For Use Against Listed  
Insects Which Infest Listed Raw Agricultural  
Commodities, Specified Processed Foods  
And Animal Feeds.

Active Ingredient, Aluminum Phosphide 60.0%  
Inert Ingredients 40.0%  
TOTAL 100.0%

#### KEEP OUT OF REACH OF CHILDREN



### ANGER - POISON



#### Statement of Practical Treatment

Upon exposure to atmospheric moisture PHOS-KILL releases hydrogen phosphide (phosphine).

**If swallowed:** CALL A PHYSICIAN OR POISON CONTROL CENTER. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

**If inhaled:** Remove victim to open air. Make them lie down and keep them warm. Call a physician immediately.

**If on skin:** Wash affected area with soap and water.

**If in eyes:** Flush thoroughly with water.

SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS.

Manufactured for: PHOS-FUME CHEMICAL COMPANY INC.  
14221 James Ct. Chaska, MN 55318  
EPA REGISTRATION NO. 43568-3  
EPA ESTABLISHMENT NO. 41876 -1Y-1

Contents: 520 Tablets - Net Weight: 1,500 gr (3 lbs 4.8 ozs)

#### USE PATTERN

FOR FUMIGATION OF LISTED RAW AGRICULTURAL COMMODITIES  
BULK ANIMAL FEEDS: See the fumigation instructions for PHOS-KILL.  
Applicable to commodities for PHOS-KILL Tablets & Tablets instruction booklet.

Commodities approved for post harvest fumigation of listed raw agricultural commodities: processed foods, animal feeds, feed ingredients, non-food products and stored tobacco.

**RAW AGRICULTURAL COMMODITIES:** rice, wheat, barley, corn, oats, sorghum, millet, rye, popcorn, soybeans, cocoa beans, coffee beans (raw), fliberts, pecans, pistachio nuts, walnuts, cashews, brazil nuts, almonds, peanuts, sunflower seeds, cotton seed, safflower seeds, seed and pod vegetable, artichoke, red beans, blackeye peas, garbanzo beans, great northern beans, green split peas, lentils, peas, lima beans, Michigan navy beans, moth beans, mung beans, pinto beans, split urds, sesame seed. For commodities stored in bulk, PHOS-KILL tablets may be fed into the stream as the commodity flows into a bin in a manner to provide a uniform spacing between the individual tablets. For listed commodities not stored in bulk, tablets may be placed in PHOS-KILL moisture permeable envelopes and the fumigation proceeds as for with processed foods.

Fumigated areas must be placarded with signs containing at least skull and crossbones, and the words: Area under fumigation, do not enter, the date of fumigation, and the name and address of the fumigator. Do not remove warning signs until the fumigated area is completely airtight and safe for entry.

**FOR FUMIGATION OF SPECIFIED PROCESSED FOODS, PACKAGED ANIMAL FEEDS:** cereal flours and milled fractions, soybean flour and milled fractions, wheat bran, polished rice, brewers rice, corn grits, flour, macaroni, spaghetti, noodles, pasta, malt (processed grain), bakery mixes, packaged cereals, pretzels, oatmeal, cake flour, spices, whole wheat cream of wheat, bulgur, brewers malt, barley malt, wheat germ, potato flour, wheat shorts, processed coffee, tea (roasted-dried), prepared cocoa, dried processed meat, fish, cheese, seasoning, condiments (grain), cookies, crackers, snack foods, herbs, dried fruits, eggs, sugar, candy bars, candy, non-dairy creamers, pastry mixes, dried powdered milk, nuts (processed), processed almonds, brazil nuts, cashews, fliberts, peanuts, pecans, pistachio nuts, walnuts, dehydrated potato products, dried apples, dried peaches, dried pears, dried spinach, dried carrots, apricot kernels, primary yeast, dates, figs, prunes, raisins and saltanats. These commodities may be fumigated in relatively gas-tight structures, under gas-proof tarpaulins or in sealed box or hooper cars (static or rolling). Sealed box and hooper cars (static or rolling) must be placarded during fumigation as per DOT requirements.

**FOR FUMIGATION OF SPECIFIED PROCESSED FOODS, PACKAGED ANIMAL FEEDS:** These commodities may be fumigated in relatively gas-tight structures, under gas-proof tarpaulins, or in sealed box or hooper cars (static or rolling). Sealed box and hooper cars (static or rolling) must be placarded during fumigation as per DOT requirements. Two tablets may be placed in moisture-permeable envelopes - not more than two tablets per envelope. Envelopes must be fastened to a substantial support. After fumigation, tablet residue shall be disposed of by burying or saturating with water to which a small amount of wetting agent has been added. Do not dispose of dust in toilet. See label instructions.

Under no condition shall any processed food come in contact with PHOS-KILL or with PHOS-KILL residue. PHOS-KILL shall not be placed in or attached to packages intended for consumers or cartons delivered to retailers. Aerate finished food two days before it is offered to consumer.

Dosage for cereal mills and feed mills is 20 - 30 tablets per 1000 cubic feet. Fumigation of such areas must be conducted by trained fumigators. All safety precautions such as sealing of building, padlocking and placarding of entrances, notifying police and fire officials and posting of guards if required must be adhered to.

Dosage for control of the greater wax moth is stored beehives, supers and other bee keeping equipment is 30 - 45 tablets per 1000 cubic feet.

Exposure time required for all commodities are approximated in the following guide:  
Commodity at 54-59° F (12-15° C) - at least four days  
Commodity at 60-68° F (15-20° C) - at least three days  
Commodity at 68° F (20° C) - not less than two days

Do not fumigate when commodity temperature is below 40° F (5° C).

**WARRANTY:** Seller warrants that the product conforms to its commercial description and when used according to its label direction under normal conditions of use it is reasonably fit for the purposes stated on the label. Seller makes no other warranty, either express or implied, and Buyer assumes all risk should the product be used contrary to label instructions.