

BEFORE USING THIS PRODUCT READ THE LABEL CAREFULLY!

Insecticide



ALUPHOS 560 TABLETS

Reg. No. L 10201 Act/Wet No. 36 of/van 1947

1: 19/1/2017 – Feb/2017

A fumigant for agricultural use for control of commonly occurring insect pests in stored cereals and other products and also in packed commodities and processed foods. Can also be used for control of rodent pests as indicated.

'n Berokingsmiddel vir landboukundige gebruik vir die beheer van insekplae wat algemeen voorkom in opgebergte graan- en ander produkte, asook verpakte en verwerkte voedsel. Kan ook gebruik word vir beheer van knaaagdierplae soos aangedui.

ACTIVE INGREDIENT / AKTIEWE BESTANDEEL

aluminium phosphide **560 g/kg** aluminiumfosfied

IRAC INSECTICIDE GROUP CODE **24A** IRAC INSEKDODER GROEPKODE



villa 
PUBLIC HEALTH

Registration holder / Registrasiehouer:
Universal Crop Protection (Pty) Ltd.
Co. Reg. No. / Mpy. Reg. Nr. 1983/008184/07
PO Box / Posbus 801, Kempton Park, 1620
Tel: 011 396 2233
Website / Webblad: www.villacrop.co.za

UN Number: 1397

Willow Set & Print 011 394-4486

GEBRUIKSAANWYSINGS INGESLUIT

VERWYS NA BESONDERHEDE
GEDRUK OP HOUER/SAK

Date formulated:

Formuleringsdatum:

DIRECTIONS FOR USE ENCLOSED

REFER TO DETAILS PRINTED
ON CONTAINER/BAG

Batch number:

Lotnummer:



TOXIC
GIFTIG



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UNIVERSAL CROP PROTECTION (PTY) LTD.

Co. Reg. No. 1983/008184/07 Mpy. Reg. Nr.

P.O. Box / Posbus 801

KEMPTON PARK, 1620 Tel. (011) 396 2233

**TOXIC****GIFTIG****WARNINGS**

- **ALUPHOS 560 TABLETS** should only be handled by adult personnel, who have been well instructed in its use and are familiar with all the precautionary measures.
- **Handle with extreme care. Phosphine gas released by these tablets is toxic to all forms of animal and human life upon inhalation.**
- **Never** bring tablets in direct contact with water or any other liquid.
- Poisonous when inhaled or swallowed.
- Causes moderate skin and mild eye irritation.
- Highly toxic to fish, birds and wildlife.
- **Phosphine** reacts with metals such as copper, copper compounds, gold and silver.
- Store under lock and key in a cool dry, well-ventilated place, away from food and feedstuffs.
- Keep out of reach of children, uninformed persons and animals.
- **Flammable:** Not Flammable (but forms flammable gas when in contact with water).
- **In case of poisoning, immediately call a doctor and make this label available to him/her or transfer the patient to a hospital.**

Although this remedy has been extensively tested under a large variety of conditions, the registration holder does not warrant that it will be efficacious under all conditions, because the action and effect thereof may be affected by factors such as abnormal soil, climatic and storage conditions, quality of dilution water, compatibility with other substances not indicated on the label and the occurrence of resistance of the pests to the remedy concerned, as well as by the method, time and accuracy of application. The registration holder further does not accept responsibility for damage to crops, vegetation, the environment or harm to man or animal or for lack of performance of the remedy concerned, due to failure of the user to follow the label instructions or to the occurrence of conditions which could not have been foreseen in terms of the registration. Consult the supplier in the event of any uncertainty.

PRECAUTIONS

- Remove the top of the container in the open air and do not smoke or eat when handling.
- Do not inhale fumes.
- Avoid eye and skin contact.
- Wear protective overalls, rubber gloves, rubber boots and facemask, or suitable respirator when handling the tablets.
- **ALUPHOS 560 TABLETS** fumigations may be carried out without the use of a gas mask and operators will not be exposed to any dangerous concentrations of **Phosphine**, if instructions are followed. Nevertheless, gas masks should always be readily available and should be equipped with a special canister for **Phosphine**. If a strong smell of **Phosphine** is noticed before the charging operation is completed, a gas mask **must** be used.
- **Inhabited buildings should never be fumigated.** If a warehouse is to be fumigated and it is directly connected to an inhabited building, the latter **must** also be evacuated.
- Use a gas mask when handling recently treated grain. The presence of gas can be determined with a gas detector.

- As **Phosphine** reacts with copper, copper compounds, gold and silver, attention should be paid to electrical equipment. It is therefore advisable to protect electric boxes, switches by covering them with plastic or a coating of melted paraffin wax.
- Wash with soap and water immediately after use or in the event of accidental skin contact.
- Use total contents of immediate container in one operation if possible. When contents are not fully used, reseal the container and store in a cool dry place.
- Destroy the empty container and **never** re-use for any other purpose.

SYMPTOMS OF HUMAN POISONING

Depending on the amount of phosphine inhaled, symptoms may occur immediately, or late in a lag phase of hours.

A few uncharacteristic symptoms of poisoning by a small quantity would be: Fatigue, buzzing in the ears, pressure in the chest and uneasiness, which might pass in fresh air.

Greater quantities will quickly lead to general fatigue, nausea, stomach-intestine symptoms, with vomiting, stomach ache, diarrhoea ('food poisoning'), further to disturbance of the equilibrium, strong pains in the chest, and dyspnoea.

Very high concentrations rapidly result in strong dyspnoea, cyanosis, agitation, ataxia, anoxemia, unconsciousness, and death.

FIRST AID TREATMENT

Remove the patient from the source of poisoning to a well-ventilated area and keep him/her calm and reassured. Administer manual cardio-pulmonary resuscitation if necessary (not mouth to mouth).

- **Skin contact:** Remove contaminated clothing and rinse contaminated body area gently and thoroughly with non-abrasive soap and cold water. Do not rub the skin.
- **Eye contact:** Flush contamination out of eyes with clean water for at least 15 to 20 minutes, holding the eyelid(s) open. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes.
- **Swallowed:** If the product has been swallowed, empty the stomach by self-induced vomiting until the carbide smell is not detected in the vomit. **Seek medical attention immediately.** Administer manual cardio-pulmonary resuscitation if necessary (not mouth to mouth). Never give anything by mouth to an unconscious person.

- **TAKE THE PATIENT IMMEDIATELY TO THE NEAREST PHYSICIAN.**

NOTE TO PHYSICIAN

- Treat symptomatically. In case of swallowing, perform gastric lavage.
- Should hypotension develop, consider the cardiac tonic, Dopamine at 5 to 10 µg/kg/min.
- Complications include:
 - Incipient pulmonary oedema - consider glucocorticoids e.g. 500 to 1000 mg Prednisolone on first day.
 - Progressive lung oedema - give oxygen and by intubation, continuous fluid removal. Counter enzyme-blockage oxygen deficiency by exchange blood transfusion.
 - Renal failure - consider haemodialysis.
 - Watch for hepatic failure, electrocardiac and electrolyte disturbances.
 - Twenty (20) ml of 20 % Calcium gluconate plus 1 to 2 g of 10 % Sodium thiosulphate I.V. in an adult may also be considered in severe cases.

RESISTANCE WARNING

ALUPHOS 560 TABLETS is a group code 24A insecticide. Any insect population may contain individuals naturally resistant to **ALUPHOS 560 TABLETS** and other group code 24A insecticides. The resistant individuals can eventually dominate the insect population if these insecticides are used repeatedly. These resistant insects may not be controlled by **ALUPHOS 560 TABLETS** or any other group code 24A insecticide.

To delay insecticide resistance:

- avoid exclusive repeated use of insecticides from the same insecticide group code. Alternate or tank mix with products from different insecticide group codes,
- integrate other control methods (chemical, cultural, biological) into insect control programmes.

For specific information on resistance management, contact the registration holder of this product.

DIRECTIONS FOR USE: Use only as directed.

- Contact a local representative for specialized assistance.
- **ALUPHOS 560 TABLETS** is effective in killing insects in all four life cycles: adult, egg, pupae and larvae.
- **ALUPHOS 560 TABLETS** develop into the highly effective phosphine gas (PH₃) when coming into contact with humidity. **Phosphine** is a gas with a high penetrating power. Phosphine kills all kinds of stored-product pests, which are normally found, for example, Grain Weevil, Rice Weevil, Saw-toothed Grain Beetle, Lesser Grain Borer, Khapra Beetle, Cadelle, Indian Meal Moth, Mediterranean Flour Moth and Angoumois Grain Moth.
- The effectiveness of fumigation with **ALUPHOS 560 TABLETS** depends on temperature, humidity, dose and exposure time and gas tightness of fumigated area.
- Temperature:
Fumigation of grain at temperatures below 5 °C is **NOT** recommended.
- Humidity and Grain Moisture:
If the humidity around the commodity or the moisture level inside the commodity is low, it is recommended to extend the exposure period.
- Gas tightness and Sealing:
 - Phosphine gas must be present for a certain time in the fumigated space in order to be efficient. Therefore, gastight sealing is of absolute importance.
 - Tarpaulin covers must be sealed off properly to the floor with sand snakes.
 - In the case of structural space fumigation, all doors, windows, ventilation shafts and any other opening must be sealed off properly, prior to fumigation.
- Exposure time:
 - The prescribed minimum exposure period should not be reduced. Longer exposure periods will have no detrimental effect.
 - On the contrary, it can only be advantageous to the result of the fumigation.
- Aeration:
 - Remove all material used for sealing after fumigation period has expired. Open all doors, windows and or related structures to aerate the structure under fumigation.
 - **Phosphine** disperses rapidly, therefore the gas will disperse in a relative short period of time. Aeration must commence for at least 3 hours before people are allowed within the structure.

APPLICATION INSTRUCTIONS

- **ALUPHOS 560 TABLETS** can be added mechanically or by hand to grain as it tumbles into silos or bins.
- For flat storage, tablets are inserted by means of a special probe to push them into the grain.
- For all fumigations it is necessary to seal all possible leaks or cover the commodity with gastight polyethylene tarpaulins.
- Gas masks are not normally required but should be on hand, fitted with a canister against **Phosphine** gas in case of an emergency.
- Never enter a fumigated area when the gas concentration exceeds one (1) ppm without gas mask (use an appropriate effective gas detector).
- After the required period of fumigation air thoroughly for 2 to 3 hours by removing all coverings and opening of hatches, windows, etc.

PRODUCTS TO BE FUMIGATED WITH ALUPHOS 560 TABLETS

- All stored grain commodities, all oilseeds including canola, dried fruit, dried vegetables, dry beans, peas and lentils, dried legumes, seeds, cacao beans, tapioca, cake flour, wheat meal, maize meal, maize grits, rice, pastas, dried animal feed, candy and chocolates, chicory, herbs and spices, macaroni, semolina and other farinaceous products granulated or powdered, all types of seeds for planting and animal feeds, skins and hides.

RECOMMENDED DOSAGE RATES AND EXPOSURE TIMES**Important: Refer to “DIRECTIONS FOR USE” above.**

ONLY FOR USE BY REGISTERED AND QUALIFIED CIRCULATION FUMIGATION OPERATORS					
METHOD OF STORAGE AND DIRECTIONS FOR APPLICATION	MINIMUM EXPOSURE PERIOD	DOSAGES OF DIFFERENT PRODUCTS			
<u>GRAIN AND OILSEEDS IN BULK STORAGE</u>	See applicable below	<u>Maize, wheat, sorghum, rice, shelled ground nuts and other cereal grains</u>	<u>Barley, oats, rye, buck-wheat</u>	<u>Sunflower seed</u>	<u>Unshelled groundnuts</u>
		Bulk storage mass: 700 to 800 kg per m ³	Bulk storage mass: 600 to 700 kg per m ³	Bulk storage mass: 400 kg per m ³	Bulk storage mass: 300 kg per m ³
<u>Grain in absolutely gas tight silo-bins*</u> Administer on the conveyor during intake. Apply by hand or with an automatic tablet dispenser . Bins should be filled to capacity in as short a time as possible.	14 days	2.2 tablets per ton	2.7 tablets per ton	4.3 tablets per ton	5.7 tablets per ton
<u>GRAIN IN reasonably gastight silo-bins**</u> Application as for absolute gastight silo-bins.	5 days	6 tablets per ton	7 tablets per ton	11 tablets per ton	15 tablets per ton
<u>Circulation fumigation of grain in silo-bins</u> Apply full dosage tablets on top of the grain. Switch the fan motor on and let it run for 24 to 40 hours. Contact the local representative for full information.	14 days	2.2 tablets per ton	2.7 tablets per ton	4.3 tablets per ton	5.7 tablets per ton

* - Absolute gastight silo-bins can retain a pressure of 50 mm paraffin in an open-arm manometer of 22 seconds.

** - Reasonably gastight silo-bins can retain a pressure of 50 mm paraffin in an open-arm manometer for 10 to 22 seconds.

METHOD OF STORAGE AND DIRECTIONS FOR APPLICATION	MINIMUM EXPOSURE PERIOD	DOSAGES OF DIFFERENT PRODUCTS			
<p><u>Grain in horizontal bulk storage</u> Apply tablets to the grain bulk by means of steel probes. Uniform distribution of tablets throughout the grain bulk should be attempted. Seal the bulk gastight with fumigation tarpaulins within two (2) hours after application of tablets has begun</p>	5 days	6 tablets per ton or 4 tablets per m ³	7 tablets per ton or 4 tablets per m ³	11 tablets per ton or 4 tablets per m ³	15 tablets per ton or 4 tablets per m ³
<p><u>Empty silo-bin fumigation</u> Only silo-bins in which a pressure of at least 1 kPa which will not decrease to half this pressure in less than 30 seconds. Seal in- and outlet valves as well as inspection holes</p>	Minimum 30 days	1 tablet per 110 m ³ Spread tables evenly over bin floors.			
<p><u>Grain in transit in FGD and FZ railway trucks</u> Doors and hatches must be sealed with tape or plastic prior to loading. Apply tablets uniformly during loading or distribute them over the floor of the truck</p>	5 days	210 tablets per truck	<p style="text-align: center;">IMPORTANT</p> <p style="text-align: center;">Truck fumigations must be carried out in conjunction with the relevant control board and Transnet in accordance with the Code of Practice laid down by them.</p>		

ONLY FOR USE BY REGISTERED AND QUALIFIED CIRCULATION FUMIGATION OPERATORS			
METHOD OF STORAGE AND DIRECTIONS FOR APPLICATION	MINIMUM EXPOSURE PERIOD	DOSAGE & REMARKS	
<u>Grain, oilseeds, other foods, feeds, and seeds packed in gas permeable bags or boxes and stacked</u>	5 days	4 tablets per m ³	<p>IMPORTANT</p> <p>Accurately determine the stack volume. Calculate the number of tablets required. Evenly spread tablets over the stack. Seal gastight with tarpaulins.</p>
<u>Tobacco</u> Raw and processed tobacco in stacks, bales, cases and hogsheads	5 days preferably 8 to 10 days	1 tablet per m ³	<p>IMPORTANT</p> <p>Accurately determine the stack volume. Calculate the number of tablets required. (Do NOT exceed the prescribed dosage rate). Evenly spread tablets over the stack. Seal gastight with tarpaulins.</p>
<u>Space fumigation in flour mills, warehouses and sheds</u>	5 days preferably 8 to 10 days	1 tablet per m ³	<p>IMPORTANT</p> <p>Seal all doors, windows and other openings gastight. Protect electrical equipment against the gas. Accurately determine the volume to be fumigated. Calculate the number of tablets required. Evenly spread tablets throughout the building. Contact the local representatives for full information.</p>

VERY IMPORTANT – POST TREATMENT SAFETY

- After fumigation, all commodities intended for immediate handling, especially packed processed food commodities, should be **aerated** thoroughly for a minimum period of two to three hours.
- **Never** enter a fumigated area without a gasmask where a concentration of more than one (1) ppm gas is present. Gas concentration can be measured with an **AUER** or **DRAËGER** gas detector.

PEST	DOSAGE	REMARKS
<u>Gerbils</u>	1 tablet per tunnel	Shallow disc the area to block all holes. Treat only “active holes” by placing 1 tablet as deep as possible into each burrow (about 1 m) and repeat the next day if new holes are detected. It is recommended to apply tablets in the afternoon before Gerbils become active in the evening.
<u>Field rats & mice</u>	1 or more tablets per tunnel depending on burrow size	Application method to be adapted to suit the conditions in each case, but in general place tablets as deep into the rodent burrow as possible. Repeat after a week if more activity is detected.
<u>Moles</u>	1 tablet as far into the tunnel as possible	Apply in the morning when Moles are generally less active. Avoid unnecessary noise and movement as Moles are easily alerted and the smell of gas causes them to block the tunnels and escape death. All burrows in an area must be treated simultaneously. Treat new mounds by carefully removing soil to expose burrow entrance. Ensure tunnels are not blocked with soil.