

BEFORE USING THIS PRODUCT READ THE LABEL CAREFULLY!

Insecticide



ALUPHOS 560 SACHETS

Reg. No. L 10192 Act/Wet No. 36 of/van 1947

1: 15/1/2017 – Feb2017

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 in grain mills, warehouses and other storage premises.

'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 in graanmeulens en ander opbergingspersele.

ACTIVE INGREDIENT / AKTIEWE BESTANDDEEL

aluminium phosphide **560 g/kg** aluminiumfosfied

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



Registration holder / Registrasiehouer:

Universal Crop Protection (Pty) Ltd.

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

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UN Number: 1397

Willow Set & Print 011 394-4486



TOXIC
GIFTIG



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:

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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 SACHETS** 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 sachets is toxic to all forms of animal and human life upon inhalation.**
- **Never** bring sachets in direct contact with water or any other liquid.
- If sachets are wetted, phosphine may be generated more rapidly than the gas can dissipate and spontaneous combustion may occur. **Under no circumstances** may the sachets be exposed in a gas permeable outer container as this will also restrict dissipation of the phosphine.
- **Phosphine** reacts with metals such as copper, copper compounds, gold and silver.
- Poisonous when inhaled or swallowed.
- Causes moderate skin and mild eye irritation.
- Highly toxic to fish, birds and wildlife.
- 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.
- Do not inhale fumes.
- Avoid eye and skin contact.
- Wear protective overalls, rubber gloves, rubber boots and facemask or suitable respirator when handling the sachets.
- **ALUPHOS 560 SACHETS** 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 patient from source of poisoning to a well-ventilated area and keep him/her calm and reassured.
- **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 and 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 SACHETS is a group code 24A insecticide. Any insect population may contain individuals naturally resistant to **ALUPHOS 560 SACHETS** 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 SACHETS** 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 SACHETS** is effective in killing insects in all four life cycles: adult, egg, pupae and larvae.
- **ALUPHOS 560 SACHETS** develop into the highly effective **Phosphine** gas (PH₃) when encountering 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 SACHETS** 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.
- The formation of large quantities of Phosphine starts several hours after the **ALUPHOS 560 SACHETS** have been put out. After termination of fumigation the spent **ALUPHOS 560 SACHETS** can be left within the grain. **NO RESIDUE WILL REMAIN WITHIN THE FUMIGATED GOODS AFTER PROPER AIRING.**
- When removing the grain, the fumigant bags should be removed. This can be achieved by surrounding the screw conveyor (feeding screw) with a coarse meshed sieve (30 x 30 mm) which will trap the bags. If there is no convenient sieve available, a person should stand beside the intake stack of the feeding screw and pick up the bags as they fall. The collected **ALUPHOS 560 SACHETS** used for treatment of empty rooms, bagged goods or tobacco should also be collected and disposed of. Besides the fumigation sachets, the can contains a protectant to keep the contents of the can dry and uncontaminated by the gas. As the gas protectant is incorporated into the bottom end of the can, it will be automatically disposed of together with the can.
- Aeration:
 - Phosphine is a gas with a high volatility and it therefore disappears within a relatively short time. 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.
 - Aeration must commence for at least 3 hours before people are allowed within the structure.

PRODUCTS TO BE FUMIGATED WITH ALUPHOS 560 SACHETS

- 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 and chicory.

RECOMMENDATION FOR THE USE OF ALUPHOS 560 SACHETS FOR THE CONTROL OF INSECT PESTS IN STORED PRODUCTS

TYPE OF STORAGE AND METHOD OF FUMIGATION	MINIMUM EXPOSURE PERIOD	DOSAGES OF DIFFERENT PRODUCTS			
GRAIN AND OILSEEDS IN BULK STORAGE	See applicable below	Maize, wheat, sorghum, rice, shelled groundnuts and other cereal grains (mass bulk approximately: 730 to 780 kg per m ³)	Barley, oats, rye, buck-wheat (mass bulk approximately: 598 to 667 kg per m ³)	Sunflower seed (mass bulk approximately: 400 kg per m ³)	Unshelled groundnuts mass bulk approximately: 300 kg per m ³)
REASONABLY GASTIGHT SILOS* Administer on the conveyor belt while grain is being loaded into the silo. Silo must be filled in the shortest possible time. * Reasonably gastight silo-bins can retain a pressure of 50 mm paraffin in an open-arm manometer for 10 to 22 seconds	5 days	0.5 sachets per ton	0.6 sachets per ton	0.9 sachets per ton	1.25 sachets per ton
CIRCULATION FUMIGATION OF SILOS Administer full dose on top of grain. Switch motor on and run for 24 to 40 hours. For further information, contact local representative	14 days	1 sachet per 5 tons	1 sachet per 4 tons	1 sachet per 2.6 tons	1 sachet per 2 tons
ONLY FOR USE BY REGISTERED AND QUALIFIED CIRCULATION FUMIGATION OPERATORS					
HORIZONTAL BULK STORAGE Insert into commodity with the help of probes. Cover commodity with gastight plastic sheets	5 days	0.5 sachets per ton	0.6 sachets per ton	0.9 sachets per ton	1.25 sachets per ton

TYPE OF STORAGE AND METHOD OF FUMIGATION	MINIMUM EXPOSURE PERIOD	DOSAGES OF DIFFERENT PRODUCTS	
<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	Minimum 30 days	1 sachet per 110 m ³	Apply sachets evenly on the bottom of the bin.
<u>FGD & FZ RAILWAY TRUCKS</u> Doors and hatches must be sealed with tape or plastic prior to loading. Apply sachets uniformly during loading or distribute them over the floor of the truck	5 days	20 sachets per truck (66 m ³) for all commodities	<u>IMPORTANT</u> 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.
1. <u>CEREAL GRAINS, OIL SEEDS AND OTHER FOOD COMMODITIES - BAGGED</u>			
<u>BAGSTACKS</u> Spread evenly over and around stack. Stacks must be made gas-tight with plastic sheets	5 days	0.36 sachets per m ³ (Equals 1 sachet per 2.7 m ³)	
2. <u>TOBACCO - RAW AND PROCESSED</u>			
Only for fumigation in stacks, bales, cases and hogshead under gastight tarpaulins	4 days preferably 8 to 10 days	1 sachet per 11 m ³ Do not exceed dosage	
3. <u>EMPTY STOREROOMS, SILO-BINS, ETC.</u>			
Spread evenly over floor of room or silo	5 days	1 sachet per 3 to 4 m ³	
4. <u>EMPTY BAGS UNDER GASTIGHT TARPAULINS OR IN GASTIGHT CHAMBERS</u>			
Spread evenly over and around empty bags	5 days	1 sachet per 3 to 4 m ³	

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 (2 to 3) 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 **DRAEGER** gas detector.