



RESTRICTED USE AGRICULTURAL REMEDY

THIS REMEDY IS RESTRICTED DUE TO ACUTE TOXICITY. THIS REMEDY MAY ONLY BE SOLD TO AND USED BY A REGISTERED PEST CONTROL OPERATOR, OR BY SOMEONE UNDER THE SUPERVISION OF A REGISTERED PEST CONTROL OPERATOR, AND ONLY FOR THOSE USES COVERED BY THE PEST CONTROL OPERATOR'S SCOPE OF REGISTRATION, AND ONLY AS DIRECTED ON THIS LABEL.

AL PHOS TABLETS

Reg. No. / Nr. L11662 Act No. / Wet Nr. 36 of / van 1947 | Namibia N-AR 2345

READ THE LABEL BEFORE USE

KEEP OUT OF REACH OF CHILDREN AND ANIMALS

IRAC GROUP

24A

INSECTICIDE

'n Berokingsmiddel vir die gebruik in landbou om insekplae wat algemeen voorkom in gestoorde graan en ander produkte, en in verpakte kommoditeite en verwerkte voedsel te beheer. Kan ook gebruik word vir die beheer van knaagdier plae soos aangedui.

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



DANGER

Hazard Statements:

- In contact with water releases flammable gases which may ignite spontaneously.
- Fatal if swallowed.
- Toxic in contact with skin.
- Fatal if inhaled.
- Very toxic to aquatic life.

Precautionary Statements:

- Do not eat, drink or smoke when using this product.
- Wash hands thoroughly after handling.
- Collect spillage.

Active Ingredient / Aktiewe Bestanddeel:

Aluminium Phosphide... 560 g/kg ... Aluminiumfosfied

In case of poisoning, call:

National Poison Centre: +27 861 555 777 (24 hours)

GriFFon Poison Information Centre: +27 82 446 8946 (24 hours)



DISTRIBUTED BY / VERSPREI DEUR:

AVIMA (Pty.) Ltd.

Reg. No. 1961/001744/07

18 Aschenberg Street | Chamdor | Krugersdorp

+27 11 769 1300

REGISTERED BY / GEREISTREER DEUR:

Pathogen & Environmental Solutions (Pty.) Ltd.

Co. Reg. No. 2011/006448/07

Unit 37 Silver Park | Silver Street | Brackenfell Industria |

Cape Town | 7560

+27 (0) 21 982 8689

Content
Inhoud



Batch No. / Lot Nr and Date of Manufacture /

Datum van Vervaardiging:

See printed information on container.

UN No. / VN Nr. 1397

WARNINGS

- In contact with water releases flammable gases which may ignite spontaneously.
- Fatal if swallowed.
- Toxic in contact with skin.
- Fatal if inhaled.
- Very toxic to aquatic life.
- **AL PHOS 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 highly 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.**

PRECAUTIONS

- Keep away from any possible contact with water, because of violent reaction and possible flash fire.
- Protect from moisture.
- Keep only in original container.
- In case of fire: Use CO₂, sand, extinguishing powder for extinction.
- Store in a dry place. Store in a closed container.
- Wear protective gloves/protective clothing/eye protection/face protection.
- Do not eat, drink or smoke when using this product.
- Wash hands thoroughly after handling.
- Avoid released to the environment.
- Collect spillage.
- Call a POISON CENTER/doctor if you feel unwell.
- Store locked up.
- Dispose of contents/container to local and national regulations.
- 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.
- **AL PHOS 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

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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.

RELEVANT SUBSTANCE:

Ingredient	CAS Number	Concentration (%)
Aluminium phosphide	20859-73-8	≤ 56 %

ALTHOUGH AL PHOS TABLETS HAS BEEN EXTENSIVELY TESTED UNDER A LARGE VARIETY OF CONDITIONS, THE REGISTRATION HOLDER DOES NOT WARRANT THAT IT WILL BE EFFECTIVE UNDER ALL CONDITIONS BECAUSE ITS ACTION AND EFFECT CAN BE AFFECTED BY FACTORS SUCH AS ABNORMAL CLIMATE AND STORAGE CONDITIONS, COMPATIBILITY WITH OTHER SUBSTANCES NOT INDICATED ON THE LABEL AND THE OCCURRENCE OF RESISTANCE OF THE PEST AGAINST THE REMEDY. THE METHOD TIME AND ACCURACY OF APPLICATION CAN ALSO HAVE AN EFFECT. THE REGISTRATION HOLDER FURTHERMORE DOES NOT ACCEPT RESPONSIBILITY FOR DAMAGE TO CROPS, VEGETATION, THE ENVIRONMENT OR HARM TO MAN OR ANIMALS OR FOR LACK OF PERFORMANCE OF AL PHOS TABLETS DUE TO FAILURE OF THE USER TO FOLLOW THE LABEL INSTRUCTIONS OR THE OCCURRENCE OF CONDITIONS WHICH SHOULD NOT HAVE BEEN FORESEEN IN TERMS OF REGISTRATION. CONTACT THE SUPPLIER IN THE EVENT OF ANY UNCERTAINTY.

SYMPTOMS OF POISONING

- Depending on the amount of **Phosphine** inhaled, symptoms may occur immediately, or late in a lag phase of hours.
- A few uncharacteristic 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

Call a POISON CENTER/doctor if you feel unwell.

General information:

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered.

Following inhalation:

Remove person to fresh air and keep comfortable for breathing.

Following skin contact:

Remove contaminated, saturated clothing immediately. After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing.

Following eye contact:

Remove contact lenses, if present and easy to do. Continue rinsing. In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect unharmed eye.

Following ingestion:

Never give anything by mouth to an unconscious person or a person with cramps. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF SWALLOWED: Immediately call a POISON CENTER or doctor.

NOTE TO PHYSICIAN

- Treat symptomatically. In case of swallowing, perform gastric lavage.
- Should hypotension develop, consider cardiac tonic, Dopamine 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, electro cardiac 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

AL PHOS TABLETS is a group code 24A insecticide. Any insect population may contain individuals naturally resistant to **AL PHOS 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 **AL PHOS 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.
- **AL PHOS TABLETS** develop into the highly effective **Phosphine** gas (PH_3) 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 and 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 **AL PHOS 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

- **AL PHOS 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.

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PRODUCTS TO BE FUMIGATED WITH AL PHOS 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.

Never enter a fumigated area when the gas concentration exceeds 1 ppm without a gas mask (Use an appropriate effective gas detector).

After the required period of fumigation air thoroughly for 2-3 hours by removing all coverings and opening of hatches, windows etc. before entering and handling the commodity.

ONLY FOR USE BY REGISTERED AND QUALIFIED CIRCULATION FUMIGATION OPERATORS					
METHOD OF STORAGE AND DIRECTIONS FOR APPLICATION	MINIMUM EXPOSURE PERIOD	DOSAGES OF DIFFERENT PRODUCTS			
GRAIN AND OILSEED IN BULK STORAGE	See applicable below	Maize, wheat, sorghum, rice, shelled ground nuts and other cereal grains	Barley, oats, rye, buckwheat	Sunflower seed	Unshelled groundnuts
		Bulk storage mass: 700 to 800 kg/m ³	Bulk storage mass: 600 to 700 kg/m ³	Bulk storage mass: 400 kg/m ³	Bulk storage mass: 300 kg/m ³
Grain in absolutely gas tight silo bins* 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
GRAIN IN reasonably gastight silo-bins ** Applications as for absolute gastight silo-bins	5 days	6 tablets per ton	7 tablets per ton	11 tablets per ton	15 tablets per ton

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Circulation fumigation of grain in silo-bins 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 day	2.7 tablets per ton	4.3 tablets per ton	5.7 tablets per ton
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- * - 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			
Grain in horizontal bulk storage 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.	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
Empty silo-bin fumigation 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 tablet per 110 m ³ Spread tablets evenly over bin floors.			

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METHOD OF STORAGE AND DIRECTIONS FOR APPLICATION	MINIMUM EXPOSURE PERIOD	DOSAGES & REMARKS	
Grain in transit in FGD and FZ railway trucks 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.	5 days	210 tablets per truck	IMPORTANT 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.
Grain, oilseeds, other foods, feeds, and seeds packed in gas permeable bags or boxes and stacked	5 days	4 tablets per m ³	IMPORTANT Accurately determine the stack volume. Calculate the number of tablets required. Evenly spread tablets over the stack. Seal gastight with tarpaulins.
Tobacco Raw and processed tobacco in stacks, bales, cases and hogsheads	5 days preferably 8 to 10 days	1 tablet per m ³	IMPORTANT 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.
Space fumigation in flour mills, warehouses and sheds	5 days preferably 8 to 10 days	1 tablet per m ³	IMPORTANT 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.

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 **DRÄGER** gas detector.

PEST	DOSAGE	REMARKS
Gerbils	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.

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PEST	DOSAGE	REMARKS
Field rats & mice	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.
Moles	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.