Main panel label 340 g

DANGEROUS POISON

KEEP OUT OF REACH OF CHILDREN
READ SAFETY DIRECTIONS BEFORE OPENING OR USING

QuickPhos*

FUMIGATION BAGS (CHAIN)

ACTIVE CONSTITUENT: 334 g/kg PHOSPHINE (PH_3) present as ALUMINIUM PHOSPHIDE

Each 34 g Bag liberates 11.4 g PHOSPHINE (PH_3)
(Each 340 g 10-bag Chain liberates 114 g PHOSPHINE (PH_3))

GROUP	8B	INSECTICIDE

For control of insect pests of stored products in certain situations as per the Directions for Use Table

Important: Read the attached leaflet before use.

NET CONTENTS 340 g
THIS PACK CONTAINS A CHAIN OF 10 BAGS

APVMA Approval No. 49743/340g/1108

UPL AUSTRALIA LIMITED Suite 416, 14-16 Lexington Drive, Norwest Business Park, Bella Vista, NSW 2153 AUSTRALIA
ABN 76 066 391 384

TELEPHONE 02 8824 7277 FACSIMILE 02 8814 6469

Ancillary panel label

SAFETY DIRECTIONS: Very dangerous. Product releases dangerous phosphine gas slowly in moist air and immediately if wet. Can kill if inhaled or swallowed. DO NOT inhale dust or vapour. Avoid contact with eyes and skin. Open container in the open air. Keep away from water and liquids. Keep away from naked flames. Forms toxic gas. Use entire contents in one operation. Wash hands after use. When opening the container and using the product wear elbow-length PVC gloves and full face piece respirator with combined dust and gas cartridge (canister) or supplied air respirator. After each days use wash gloves and respirator (if rubber wash with detergent and warm water).

FIRST AID: If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 131126. Do not give direct mouth-to-mouth resuscitation if swallowed. To protect rescuer, use air-viva, oxy-viva or one-way mask. Resuscitate in a well ventilated area.

UN 1397 ALUMINIUM PHOSPHIDE





IN A TRANSPORT EMERGENCY DIAL
000 POLICE OR FIRE BRIGADE

*Trade Mark of UPL Australia Limited

Batch No. DOM: Bar Code

Main panel leaflet 340 g

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Leaflet ancillary panel

DIRECTIONS FOR USE

BEFORE using QuickPhos Fumigation Bags (Chain) you should consider the following:

Timing of treatment – If it will be necessary to move grain/commodity before the Total Fumigation Period has expired, then fumigation should NOT be commenced. Movement of treated commodities or empty containers during application, fumigation exposure or ventilation risks exposure of transport and handling workers and the public to harmful levels of phosphine and is contrary to label instruction.

The Total Fumigation Period is the sum of the time required for Exposure to phosphine and the time needed to ventilate the grain. A shortened Exposure Period will not be effective for storage pest control and a reduced Ventilation Period poses a serious risk of phosphine gas poisoning to workers and bystanders. In addition a Withholding Period of two days is required after completion of ventilation before the grain is allowed to be used for human consumption or for animal feed. See Notes 4 & 5 for a detailed description of the Minimum Exposure Period and the Ventilation Period.

Safety and handling of Phosphine Products – Phosphine is a highly dangerous fumigant and fumigation should only be undertaken in situations where the safety of workers and the public can be ensured. Observe all RESTRAINTS, PRECAUTIONS and instructions on the label.

RESTRAINTS:

DO NOT fumigate inhabited buildings.
DO NOT fumigate in work situations where there is a risk that phosphine gas could leak from fumigation enclosures into working areas.
DO NOT use on commodities, or in empty containers, railcars or vessels that are in transit or likely to be in transit during the Exposure and/or Ventilation periods.
DO NOT use in road transport vehicles (including a truck or road hauled container).
DO NOT heap bags. Heaped bags limit gas release.
DO NOT add water to the bags.
DO NOT use when commodity temperature is less than 15°C or the relative humidity within the structure is less than 25% or with raw cereal grains when the moisture content is less than 9%.
DO NOT apply in structures that are not well sealed*.
DO NOT apply as a surface-only treatment in a structure whose height exceeds twice its width, unless the structure/enclosure has a gas recirculation device fitted. **DO NOT** use this product if the headspace of a structure whose height exceeds twice the width is less than 10% of the internal volume and its temperature will exceed 45°C.

Leaflet ancillary panel continued

PESTS/ STRUCTURES/ SITUATIONS/ See Note 1 for description of well sealed* and Note 2 for storage pests controlled	**COMMODITY**	**APPLICATION (see note 3)**		**FUMIGATION PERIOD#** #[TOTAL OF THE MINIMUM EXPOSURE PERIOD PLUS VENTILATION PERIOD]		**WITHHOLDING PERIOD**	**TOTAL OF (Exposure+ Ventilation+ Withholding)**
		BASIC RATE (g phosphine per m^3)	**VOLUME treated per chain**	**MINIMUM EXPOSURE PERIOD** See Note 4	**VENTILATION PERIOD** See Note 5		
Storage pests in: All well sealed* structures	Raw cereal grains (such as barley, maize, millet, oats, rice, rye, sorghum, triticale, wheat) and other food commodities (such as flour and other milled cereal products, breakfast cereals, dried fruits, dried vegetables, other dried foods, peanuts, oilseeds, cocoa and coffee beans); and seeds for propagation and bulk stockfeeds.	1.5	75 m^3 or 60 tonne wheat	7 days when temperature is above 25°C 10 days when temperature is 15°C to 25°C 20 days for surface only application to bulk commodities in well sealed* structures greater than 375 m^3 capacity (e.g. greater than 300 tonnes wheat)	1-5 days	2 days	10-14 days 13-17 days 23-27 days
Well sealed* plasticcovered bunker storages of not less than 1000 tonnes capacity.		0.6	166 m^3 or 150 tonne wheat				23 days
Bales, cases, hogsheads in well sealed* fumigation enclosures.	Tobacco	1.5	75 m^3	7 days	2-3 days	NIL	9-10 days
Well sealed* empty warehouses, elevators, stores, structures and fumigation enclosures.	Nil		75 m^3	7 days when temperature is above 25°C 10 days when temperature is 15°C to 25°C	1-5 days		8-12 days 11-15 days

Label ancillary panel continued

NOTE

1) FUMIGATION WILL CONTROL ALL STAGES OF INSECTS ONLY IN STRUCTURES/ENCLOSURES THAT ARE **WELL SEALED***. Well sealed structures/enclosures are fumigation chambers, well sealed silos, sheds and buildings, and other fumigation enclosures made gas-tight with gas-proof sheeting. Well sealed means permanent sealing of porous surfaces, seams and cracks and temporary sealing of intake and/or outlet valves, doors, fan housings, windows and hatches. For further information see appropriate industry advisory documents such as Grains Research and Development Corporation 'Advice' sheet '$ealed $ilos $ave', available from State Departments of Agriculture or Primary Industries. Increasing the application rate will not compensate for gas loss from an unsealed enclosure.

NOTE: STRUCTURES MUST BE WELL SEALED. IF THEY ARE NOT, FUMIGATION WILL NOT GIVE ADEQUATE CONTROL, AND WOULD BE CONTRARY TO LABEL DIRECTIONS.

2) STORAGE PESTS include: lesser grain borer, cadelle, cigarette beetle, confused flour beetle, dried fruit beetle, flat grain beetle, merchant grain beetle, red-legged ham beetle, rust-red flour beetle, sawtoothed grain beetle, skin and hide beetle, spider beetles, warehouse beetle, Angoumois grain moth, Indian meal moth, Mediterranean flour moth, mottled grain moth, raisin moth, tobacco moth, tropical warehouse moth, psocids, stored products mites, bean weevil, coffee bean weevil, granary weevil, maize weevil, pea weevil and rice weevil. Such treatment doses will also kill any cockroaches, rats and mice present.

3) PHOSPHINE APPLICATION RATES are based on the internal volume of the structures to be fumigated; they apply equally to full or partly filled or empty structures and they apply to all commodities. The commodity equivalent rates (g/tonne) should only be used when the commodity stowage factor is known, they apply only when the storage structures are full or nearly full or when part-filled structures are dosed on the tonnage equivalents of their internal volumes. The calculated commodity equivalent dosage must be based on the rate per volume. The application rate of 1.5 g phosphine per 1 metre^3 is equivalent to:

Capacity of fumigation enclosure			Number of 10-bag chains
Tonnes wheat	Bushels	Cubic metres	
60	2200	75	1
120	4400	150	2
240	8800	300	4
300	11000	375	5
600	22000	750	10
1200	44000	1500	20

4) MINIMUM EXPOSURE PERIODS are needed to allow products to react to completion and to expose insects for long enough to kill all stages. A SHORTENED EXPOSURE PERIOD CANNOT BE COMPENSATED FOR BY INCREASED DOSAGE. Insect death and reaction of the tablets are both slower at lower temperatures. Temperatures specified are those within the commodity to be fumigated. The minimum exposure period should start from time of completion of application of product.

5) VENTILATION PERIOD – ON COMPLETION OF EXPOSURE PERIOD:

Ventilation of structures is complete only when phosphine concentrations measured at appropriate locations in the enclosure and work area are below the Time Weighted Average (TWA) exposure standard of 0.3 ppm. The following are minimum ventilation periods required and may need to be increased to ensure the exposure standard is not exceeded.

Minimum Ventilation Periods:

Structures, including bunker storages, containing treated commodities:

a) Without throughflow (i.e. access only through the headspace): not less than 5 days
b) With throughflow and natural draught (wind): For structures of 300 tonnes or greater capacity: 2 to 5 days depending on size. For structures of less than 300 tonnes capacity: 2 days.
c) With throughflow and forced draught (flash-proof fan) operated 2 hours on and 2 hours off: not less than 1 day.

Tobacco: In bales: not less than two days. In cases and hogsheads: not less than 3 days.

Empty Buildings and Enclosures:

a) Without throughflow: 5 days
b) With throughflow and natural draught (wind): For structures of 300 tonnes or greater capacity: not less than 2 days, depending on structure size, openings and prevailing wind speed. For structures of less than 300 tonnes capacity: 2 days.
c) With throughflow and forced draught (flash-proof fan) operated 2 hours on and 2 hours off: 1 to 2 days depending on size of structure.

NOT TO BE USED FOR ANY PURPOSE, OR IN ANY MANNER, CONTRARY TO THIS LABEL UNLESS AUTHORISED UNDER APPROPRIATE LEGISLATION.

WITHHOLDING PERIOD: DO NOT USE TREATED PRODUCT FOR HUMAN CONSUMPTION OR FOR STOCK FOOD FOR 2 DAYS AFTER COMPLETION OF FUMIGATION (MINIMUM EXPOSURE PERIOD PLUS VENTILATION PERIOD).
TOBACCO: NOT REQUIRED WHEN USED AS DIRECTED.

TREATED COMMODITIES MAY BE SHIPPED AFTER COMPLETION OF THE MINIMUM EXPOSURE PERIOD PLUS VENTILATION PERIOD.

GENERAL INSTRUCTIONS:

QuickPhos Fumigation Bags (Chain) releases phosphine gas when exposed to air. Phosphine penetrates through the commodity to kill eggs, larvae, pupae and adult stages of storage pests in sealed enclosures, but some eggs, pupae and adults will survive in unsealed enclosures (see Note 1 above).

Protect by sealing or otherwise, sensitive electrical and electronic equipment (computers, meters, switches, fire alarm system etc.) containing copper/copper alloy components, photographic film or copy paper. Phosphine corrodes copper based materials.

Application

- Open product container in the open air, remove chain and roll out on top of grain or commodity, or lay on floor in space to be fumigated.
- DO NOT reseal individual containers. Use entire contents in one operation (i.e. whole chains). DO NOT separate bags.
- Vacate all personnel as quickly as possible and seal off the treatment area.
- When treating temporary bunker storages of bulk grains make a longitudinal slit of 35 cm down to 2 metres below and parallel to the crest and probe the chain, using a rod or extensible shaft, to its full extension below the tarpaulin. When completed attach near end for retrieval purposes and reseal the slit. Avoid walking over the positioned chain.
- Calculate use rate eg. One bag will liberate 11.4 g phosphine which will fumigate 7.7 m^3 (=11.4÷1.5) of bulk commodities in a well sealed storage (see Directions for Use Table).
- When fumigation chains are used in large temporary bunker type storages of several thousand tonnes they should be placed down slopes with upper end to the equivalent of about 2 metres vertically below the crest.

INSECTICIDE RESISTANCE WARNING

GROUP	8B	INSECTICIDE

For insecticide resistance management, QuickPhos Fumigation Bags (Chain) are a group 8B insecticide.
Some naturally occurring insect biotypes resistant to QuickPhos Fumigation Bags (Chain) and other Group 8B insecticides may exist through normal genetic variability in any insect population. The resistant individuals can eventually dominate the insect population if QuickPhos Fumigation Bags (Chain) or other Group 8B insecticides are used repeatedly. The effectiveness of QuickPhos Fumigation Bags (Chain) on resistant individuals could be significantly reduced. Since occurrence of resistant individuals is difficult to detect prior to use, UPL Australia Limited accepts no liability for any losses that may result from the failure of QuickPhos Fumigation Bags (Chain) to control resistant insects.

Application of QuickPhos Fumigation Bags (Chain) in unsealed storages/enclosures and use of low dose rates and shortened exposure periods is contrary to label instruction and will contribute to development of resistance.

FLAMMABLE: Keep away from naked flame.

PRECAUTIONS:
Show the following warning sign prominently at all approaches to every fumigation site.
"DANGER – POISON GAS – KEEP AWAY"

Keep animals, children and unauthorised persons away from the area under treatment until the area is shown to be free from phosphine as indicated by a gas measuring device.

WARNING: Containers must be opened in the open air. Whilst opening containers take care and point containers away from the face and body, as under certain conditions possible build-up of gas may result in flash flame upon exposure to air.

Application rates higher than label directions and contrary to label instruction could cause gas concentrations to reach the lower flammability level which is 1.79% by volume (17,900 parts per million). When used according to the label directions, the amount of gas produced remains far below the lower flammability level.
DO NOT confine the product in small gas-proof enclosures such as a plastic bag. Such confinement could cause the gas concentrations to reach the lower flammability level, and may result in fire or explosion.

RE-ENTRY PERIODS:
After application, wait until the Exposure Period has passed, then thoroughly ventilate for the required Ventilation Period and to the required Standard. Re-entry to fumigation areas is not recommended until measuring device(s) indicate that they are free of phosphine. The use of gas detection tubes or other measuring devices is recommended for monitoring gas levels in fumigation areas as phosphine gas may still be present even after the treated commodities have been removed and fumigation areas ventilated.

DO NOT re-enter a storage after application has commenced or once treated grain/commodity has been emptied without wearing a full face respirator with particulate (P1) and phosphine gas filter cartridge (canister) or self-contained breathing apparatus, until a measuring device indicates that it is free of phosphine or the Total fumigation period (minimum exposure period plus ventilation period) has elapsed.

PROTECTION OF LIVESTOCK:
Disturbance of unreacted phosphide powder residue results in release of more phosphine gas. Residues of phosphine gas or unreacted phosphide powder in treated grain/commodity will be harmful if fed to animals, including poultry. Ensure feed is well mixed and that such residues are not present before feeding. DO NOT feed treated grain/commodity to animals, including poultry, until the Total Fumigation Period (Exposure plus Ventilation) plus the Withholding Period has expired.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT: This product is highly toxic to wildlife. Dangerous to fish. DO NOT contaminate streams, rivers or waterways with the chemical or used containers.

STORAGE AND DISPOSAL: Store in the closed, original container in a cool, dry, well ventilated locked area, out of the reach of children and unauthorised persons and away from all dwelling, animals, food, feedstuffs, seed and fertilisers.

DO NOT store or carry container in vehicle cabins (this includes glove compartments, luggage compartments or other common air-spaces).

Keep away from water and liquids. Water and many liquids cause immediate release of phosphine from product. Uncontrolled release of phosphine may result in fire and explosion and release of gas will pose a serious risk of injury to workers and bystanders.

After fumigation with product remove the spent bag chain and ensure residual phosphide is destroyed before disposal e.g. by swamping with dilute acid or soapy water in open air until bubbling ceases. Dispose of deactivated residues below 500 mm in an approved disposal pit specifically marked and set up for this purpose, clear of waterways, desirable vegetation and tree roots.
Triple rinse containers with soapy water to ensure residual phosphide is destroyed. Dispose of rinsings in an approved disposal pit. Destroy containers by breaking, crushing or puncturing them. Dispose of the containers at a local authority landfill. If no local authority landfill is available, bury the containers below 500 mm in an approved disposal pit.
DO NOT burn empty containers or product.

SAFETY DIRECTIONS: Very dangerous. Product releases dangerous phosphine gas slowly in moist air and immediately if wet. Can kill if inhaled or swallowed. DO NOT inhale dust or vapour. Avoid contact with eyes and skin. Open container in the open air. Keep away from water and liquids. Keep away from naked flames. Forms toxic gas. Use entire contents in one operation. Wash hands after use. When opening the container and using the product wear elbow-length PVC gloves and full face piece respirator with combined dust and gas cartridge (canister) or supplied air respirator. After each days use wash gloves and respirator (if rubber wash with detergent and warm water).

FIRST AID: If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 131126. Do not give direct mouth-to-mouth resuscitation if swallowed. To protect rescuer, use airviva, oxy-viva or one-way mask. Resuscitate in a well ventilated area.

MSDS: Additional information is listed in the Material Safety Data Sheet.

CONDITIONS OF SALE: UPL Australia accepts responsibility for the consistent quality of the product; however since the use and application of the product is beyond control, the company accepts no responsibility whatsoever for any loss, damage or other result following the use of the product whether used in accordance with directions or not; other than those mandatorily imposed by statutes, the liability is limited to the replacement of the goods and is conditional upon a claim made in writing and, where necessary, a sufficient part of the goods being returned for proper examination by the company within thirty days of sale.

Outer panel leaflet (overlays top of main label ancillary panel)

QuickPhos Fumigation Bags (Chain)

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FIRST AID: If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 131126. Do not give direct mouth-to-mouth resuscitation if swallowed. To protect rescuer, use air-viva, oxy-viva or one-way mask. Resuscitate in a well ventilated area.

UN 1397 ALUMINIUM PHOSPHIDE





IN A TRANSPORT EMERGENCY DIAL 000 POLICE OR FIRE BRIGADE

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Batch No. DOM: Bar Code