



## QuickPhos Bags / Sakke

REG. NO. L7499 Act 36/1947  
Namibian Reg. No. N-AR 0765

REG. NR. L7499 Wet 36/1947  
Namibiese Reg. Nr. N-AR 0765

QuickPhos is a fumigant for the control of stored-product insect pests in stored maize, wheat, sorghum, groundnuts, dried beans, sunflower seed, barley, oats, rye, dried fruit, tobacco, farinaceous products of the mentioned agricultural products and the storage premises.

QuickPhos is 'n berokingsmiddel vir die beheer van insekplae in opgebergde mielies, sorghum, koring, grondbone, droebone, sonneblomsaad, gars, hawer, rog, droëvrugte, tabak asook gemaalde produkte van bogemelde landbouprodukte, en opbergngpersele.

### ACTIVE INGREDIENTS: / AKTIEWE BESTANDELE:

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

NETTO CONTENTS: / NETTO INHOUD: 34g bags

### REGISTRATION HOLDER: / REGISTRASIEHOUER:

Coopers Environmental Science (Pty.) Ltd. / (Edms.) Bpk.  
Reg. No. / Nr. 2000/023667/07  
P.O. Box / Posbus 14374, Bredell, 1623  
SOUTH AFRICA / SUID-AFRIKA  
TEL: (011) 979 4246

### DISTRIBUTED BY/ VERSPREIDER:

**Coopers Environmental Science (Pty) Ltd**  
Reg. No. 2000/023667/07  
P.O. Box 14374  
Bredell, 1623  
SOUTH AFRICA TEL: (011) 979- 4246/7

Batch no: / Lotnommer:

Date manufactured / Datum vervaardig:



**VERY TOXIC  
UITERS GIFTIG**



**WARNINGS:**

Handle with extreme care. Phosphine gas released by these bags is toxic to all forms of animals and human life on inhalation. Well-instructed personnel familiar with the potential hazards of fumigation and all necessary precautionary measures only may apply bags. Recently fumigated grain may, upon removal, liberate harmful concentrations of gas. Bags are poisonous when swallowed. Store under lock and key and out of reach of children, uninformed persons and animals in a cool, dry and well ventilated place. PROTECT THE PREPARATION AGAINST WATER OR ANY OTHER LIQUID. Phosphine is inflammable. Keep away from sparks and flame. Keep away from in habitat areas.

Phosphine reacts with copper, copper compounds, gold and silver. Pay special attention to electrical equipment and protect adequately, by covering with plastic or molten wax. Container should be resealed immediately and not be left open for any length of time. In case of poisoning, call a doctor and make label available to him.

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 climatic and storage conditions, and the occurrence of resistance of the pest against the remedy concerned as well by the method, time and accuracy of application. The registration holder furthermore 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 or the user to follow the label instructions or to the occurrence or conditions, which could not have been foreseen in terms of the registration. Consult the supplier in event of any uncertainty.

**PRECAUTIONS:**

Remove top of container in the open air - do not smoke or eat when handling bags. Use rubber gloves when handling the bags. Do not inhale fumes. Wear a suitable gas mask. Phosphine has a strong carbide odour which acts as a warning of the presence of the gas. Wash with soap and water after accidental skin contact with bags. Destroy empty containers and do not re-use for any other purpose.

Wear a gas mask when handling recently treated grain. Use a gas detector to determine the level of gas present.

Inhabited buildings must not be fumigated. If warehouse are attached to inhabited buildings the latter must be evacuated before fumigation takes place.

Fumigation with Quickphos Bags 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 must 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.

Where possible, use total contents of immediate container in one operation. When contents are not fully used, reseal the flask and store in a cool dry place.

**SYMPTOMS OF PHOSPHINE POISONING:**

Small quantities-	Fatigue, headache, nausea, tight chest, tinnitus, uneasiness.
Large quantities-	the above symptoms as well as vomiting, stomach pain, diarrhoea, vertigo, chest pains and dyspnea. Further exposure will result in cyanosis, ataxia, anoxemia, convulsions, unconsciousness and death.

**FIRST AID TREATMENT:**

Poisoning by inhalation of gas: Remove patient from source to a well-ventilated area. Keep him quiet and reassured. Administer manual cardio-pulmonary resuscitation if necessary (not mouth to mouth). The patient must be taken to hospital. Give physician this container.

Skin and eye contamination: Wash affected parts with a gentle flowing copious stream of water. Do not use other chemicals

Poisoning by swallowing: Induce vomiting and repeat until vomit ceases to smell of carbide.

**ANTIDOTE:**

*No specific antidote is known.*

Give gastric lavage with 1: 5000 potassium permanganate solution. In case of pulmonary oedema give hypertonic glucose solution intravenously. Symptomatic treatment.

**NOTE TO PHYSICIAN:**

Treat symptomatically. In case of swallowing, perform gastric lavage.

Should hypotension develop, consider cardiac tonic Dopamine 5 to 10 g/kg/min.

Complications are:

Incipient pulmonary oedema (Consider glucocorticoids e.g. 500 to 1000 µmg 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 hemodialysis

Watch for hepatic failure, electrocardiac and electrolyte disturbances.

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.

**DIRECTIONS FOR USE: USE ONLY AS INDICATED**

Bags develop into a highly effective phosphine gas (Ph<sub>3</sub>) when coming into contact with humidity. Phosphine is a gas with a high penetrating properties, which kills the adult insects as well as their pre-adult stages (eggs, larvae and pupae), in the grain kernels. Phosphine kills 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 decomposition of the bags and therewith the formation of large quantities of phosphine does not begin before 2 to 3 hours after exposure. The generation of gas is completed after approximately 3 to 14 days.

Aluminium phosphide is for the fumigation of agricultural commodities, specific processed food and animal feeds in silos, railway trucks, road trucks, space fumigation of flour mills and warehouses and rodents. With its high penetration properties it kills rodents, adult and pre-adult stages of insects.

**INSECTS:**

Angoumois grain moth	<i>Sitotroga cerealella</i>
Cadella	<i>Tenebroides mauritanicus</i>
Flour beetle	<i>Tribulium spp.</i>
Tobacco beetle	<i>Lasioderma serricornis</i>
Lesser grain borer	<i>Rhizopertha dominica</i>
Saw-toothed grain beetle	<i>Oryzaephilus surinamensis</i>
Bean weevil	<i>Acanthoscelides obtectus</i>
Pea weevil	<i>Bruchus pisorum</i>
Granary weevil	<i>Sitophilus granarius</i>
Rice weevil	<i>Sitophilus oryzae</i>
Indian meal moth	<i>Plodia interpunctella</i>
Tropical warehouse moth	<i>Ephestia cautella</i>
Mediterranean flour moth	<i>Ephestia kühniella</i>
Flat beetle	<i>Cryptolestes spp</i>
Maize weevil	<i>Sitophilus zeamais</i>
Tobacco moth	<i>Ephestia cautella</i>

**APPLICATION:**

QuickPhos bags can be added mechanically or by hand to grain as it tumbles into silos or bins.

For flat storage, bags are inserted by means of a special probe to push them deep 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 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.

1. CEREAL GRAINS AND OILSEEDS – BULK STORAGE					
	DOSAGE				
Method of storing and directions for application	Minimum exposure time	Maize, wheat, sorghum, rice and other cereal grains shelled groundnuts with bulk density of approx. 730-780kg/m <sup>3</sup>	Rye, oats, barley and buck wheat with a bulk density of approx. 598-667kg/m <sup>3</sup>	Sunflower seed with a bulk density of approx. 400kg/m <sup>3</sup>	Unshelled groundnuts with a bulk density of approx. 300kg/m <sup>3</sup>
a) Absolutely gas tight silo bins*. Apply on the conveyor belt while grain is being fed into silo bin. Silo bins must be filled completely in shortest possible time.	14 days	0,5 bags per ton	0,6 bags per ton	0,9 bags per ton	1.25 bags per ton
b) Reasonably gas tight silo bins**. Apply on the conveyor belt while grain is being fed into the silo bin. Silo bin must be filled completely in shortest possible time.	5 days	0,5 bags per ton	0,6 bags per ton	0,9 bags per ton	1.25 bags per ton
c) Horizontal Loose Bulk. By using probes penetrate into the grain then cover with fumigation sheets	5 days	0,5 bags per ton	0,6 bags per ton	0,9 bags per ton	1.25 bags per ton
d) FGD and FZ Railway trucks. Trucks to be made gas proof.	5 days	20 bags per truck (66m <sup>3</sup> ) for all commodities	The fumigation may only be done in collaboration with the control board concerned and Spoornet.		

2. CEREAL GRAINS, OILSEEDS AND OTHER FOOD COMMODITIES IN BAGS			
		DOSAGE	REMARKS
Method of storing and directions for application	Minimum exposure time		
Grain Bag Stacks. Distribute bags evenly throughout the stack	5 days	0,36 bags per m <sup>3</sup>	Ensure that the bagged commodity is sealed in gas tight fumigation sheets
3. CEREALS (PROCESSED & UNPROCESSED) LEGUMES, DRIED FRUIT & OTHER PACKED FOOD COMMODITIES			
Small scale storage. Commodities to be treated must be exposed to the gas in a gas tight area or under gas tight tarpaulins.	5 – 8 days	1 bag per 3 m <sup>3</sup>	Dosage depends on gas tightness of space of containing commodities.
Pests in empty storage areas Seal premises thoroughly before application.	30 days	1bag/22-44m <sup>3</sup>	Dosage depends on gas tightness of premises.
Empty bags under gass tight tarpauline or in gastight chambers.	5 days	1 bag per 3 – 4 m <sup>3</sup>	
Tobacco ONLY for fumigation of raw and processed tobacco, in stacks, bales, cases or hogsheads.	1 days but preferably 8-10 days	1 bag per 7.33 m <sup>3</sup>	Do not exceed dosage.
* Silos that can retain a pressure of 50mm paraffin in an open arm manometer for longer than 22 seconds (Gas tight).			
* Silos that can retain a pressure of 50mm in an open arm manometer for from 10-22 seconds (Semi-gas tight).			

**DOSAGE FOR CIRCULATION FUMIGATION.**

TYPE OF GRAIN	DOSAGE	MINIMUM EXPOSURE TIME
Maize, Wheat and Grainsorghum	2,2g phosphine gas per ton	14 days
Barley and Rye	2,7g phosphine gas per ton	14 days
Sunflower	4,3g phosphine gas per ton	14 days
Unshelled Groundnuts	5,7 g phosphine gas per ton	14 days

Or 1,8g Phosphine gas per m<sup>3</sup>

## **WAARSKUWINGS:**

Hanteer uiters versigtig Giftig indien ingesluk word. Hou buite bereik van kinders, oningeligte persone en diere. Stoor agter slot en grendel in 'n koel, droë, goed belugte plek van voedsel en voer. Graan wat kort gelede behandel is, mag met verwydering, skadelike konsentrasies van fosfiengas vrylaat. Die fosfiengas deur die sakke vrygestel, is uiters giftig vir alle vorms van dierlike en menslike lewe met inaseming. Aluminiumfosfied sake moet alleen toegedien word deur volwasse personeel wat deeglik opgelei is en wat met al die voorsorgmaatreëls daaraan verbonde, vertrou is.

Fosfien reageer met koper, kopersamestellings, silwer en goud. Aandag moet aan elektriese toerusting gegee word. Beskerm elektriese toebehore deur dit met plastiek of 'n laag gesmelte paraffienwas te bedek. Fosfien is VLAMBAAR - Moenie naby vlamme of vonke bêre of hanteer nie. Sakke mag nie direk met water of enige vloeistof in aanraking kom nie. Hou weg van bewoonde gebiede. In geval van vergiftiging ONTBIED ONMIDDELIK 'N GENEESHEER EN TOON DIE ETIKET AAN HOM.

Alhoewel hierdie middel omvattend onder 'n groot verskeidenheid toestande getoets is waarborg die registrasiehouer nie dat dit onder alle toestande doeltreffend sal wees nie aangesien die werking en effek daarvan beïnvloed kan word deur faktore soos abnormale klimaat en bergingtoestande, verenigbaarheid met ander stowwe wat nie op die etiket aangedui is nie en die voorkoms van weerstand van die plaag teen die betrokke middel, asook die metode, tyd en akkuraatheid van toediening. Verder aanvaar die registrasiehouer nie verantwoordelikheid vir skade aan gewasse, plantegroei, die omgewing of vir nadelige uitwerking op mens of dier of vir 'n gebrek aan prestasie as gevolg van die versuim van die gebruiker om etiketaanwysing na te kom of as gevolg van die ontstaan van toestande wat nie kragtens die registrasie voorsien kon word nie. Raadpleeg die verskaffer in die geval van enige onsekerheid.

## **VOORSORGMATREËLS:**

Verwyder deksel van die houer in ope lug en moet nie rook of eet tydens hantering nie. Dra rubberhandskoene wanneer sakke hanteer word. Moet nie die dampe inasem nie. Dra 'n geskikte masker. Fosfien het 'n sterk karsinogeen reuk wat as 'n waarskuwing dien vir die teenwoordigheid van gas. Was met seep en water na aanraking met vel. Vernietig houer en moet vir geen ander doel gebruik nie.

Bewoonde geboue moet nie berook word nie. Indien store grens aan bewoonde geboue moet laasgenoemde ontruim word voor beroking. Beroking met QuickPhos Sakke kan sonder die gebruik van 'n gasmasker uitgevoer word en operateurs sal nie aan gevaarlike konsentrasies van fosfien blootgestel word as in struksies gevolg word nie. Gasmaskers moet egter gereedelik byderhand wees en moet met 'n spesiale suiwerinshouer vir fosfien toegerus wees. Indien 'n sterk reuk van fosfien waargeneem word, voor die berokingsoperasie afgehandel is, moet 'n gasmasker gebruik word.

Gebruik 'n respirator wanneer onlangs behandelde graan gehanteer word. Die afwesigheid/aanwesigheid van as moet met 'n gasverklikker bepaal word.

Gebruik totale inhoud van blik/fles met een operasie, indien moontlik. Indien daar nog produk in blik/fles oorbly moet die deeglik geseël word en in 'n koel droë plek gestoor word. Vernietig leë houer en moet nie vir enige ander doel gebruik nie.

## **SIMPTOME VAN FOSFIEN VERGIFTING:**

Klein hoeveelhede-	Moegheid, tinnitus, hoofpyn, naarheid, toe bors, ongemak.
Groot hoeveelhede-	bogemelde simptome asook braking, maagpyn, diaree, balans-versteuring, borspyn en dyspnea. Verdere blootstelling sal aanleiding gee tot sianose, atakesia, anoksemia, stuiptrekkings, bewusteloosheid en die dood.

## **NOODHULPBEHANDELING:**

Inaseming-	Verwyder persoon na vars lug. Hou pasiënt stil en stel hom gerus. verwyder besmette klere en dien kunsmatige asemhaling toe as asemhaling ophou. (Nie mond-tot-mond nie). Neem pasiënt na 'n hospital en toon etiket aan geneesheer.
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Inname-ö-	Veroorsaak braking, behalwe as die pasiënt bewusteloos is. Spoel deeglik met water.
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## NOTA AAN GENEESHEER:

Teenmiddel- Spuit hipertoniëse 50% glukose of isotoniese sout (Ringer se sout) oplossing in vir naarde en braking. Behandel simptome en let op na pulmonêre godeem.

Steroideterapie mag help.

## GEBRUIKSAANWYSINGS – GEBRUIK SLEGS SOOS AANGEDUI.

Die poeier in die sakkies ontwikkel 'n hoogs effektiewe fosfiengas (PH<sub>3</sub>) wanneer dit in aanraking met vog kom. Fosfien is 'n gas met hoë indringingsvermoë wat die volwasse insek en die onvolwasse stadia daarvan (eiers, larwes en papies) in die graankorrels dood. Fosfiengas dood insekplae in gestoorde produkte. Sulke insekete is, die Franse graanmot, ryskalanders, saagtandgraankewer, kleingraanboorder, Khapra-kewer, Kadelle, Indiese meelmot, Mediterreense meelmot, en mieliekalanders. Die vorming van groot hoeveelhede fosfien begin eers 2 - 3 ure na blootstelling. Die vrystelling van gas is voltooi na ongeveer 3 - 14 dae.

Vir beroking van onverwerkte landboukommoditeite, spesifiseerde verwerkte voedsel, asook voedsel vir diere in silos, spoorwegtrekke, motorvervoerwaens, ruimteberoking van graanmeulens en loodse en knaagdiere. Aluminiumfosfied ontwikkel 'n gas met 'n hoë penetrasievermoë wat knaagdiere die volwasse as die onvolwasse stadia van die volgende insekte dood:

### INSEKTE:

Franse graanmot	<i>Sitotroga cerealella</i>
Kadella	<i>Tenebroides mauritanicus</i>
Meelkewers	<i>Tribulium spp.</i>
Tabakkewers	<i>Lasioderma serricornis</i>
Kleingraanboorder	<i>Rhizopertha dominica</i>
Saagtandgraankewer	<i>Oryzaephilus surinamensis</i>
Boonsnuitkewer	<i>Acanthoscelides obtectus</i>
Ertjiekalanders	<i>Bruchus pisorum</i>
Graanskuurkalanders	<i>Sitophilus granarius</i>
Ryskalanders	<i>Sitophilus oryzae</i>
Indiese meelmot	<i>Plodia interpunctella</i>
Tropiese skuurmot	<i>Ephestia cautella</i>
Mediterreense meelmot	<i>Ephestia kühniella</i>
Platkewers	<i>Cryptolestes spp</i>
Mieliekalanders	<i>Sitophilus zeamais</i>
Tabakmot	<i>Ephestia cautella</i>

### AANWENDINGSG:

Aluminiumfosfied tablette word meganies of met die hand by die graan gevoeg terwyl dit in die silo gevoer word. In platberging word sakke met hulp van 'n spesiale sonde diep in die graan ingesit.

In geval van alle berokings is dit nodig om alle moontlike lekkasies te seël of om die kommoditeite met 'n gasdigte politileen seil te verseël.

Gasmaskers is normaalweg nie nodig nie maar moet nogtans byderhand wees en met 'n suiweringskan toegerus wees vir beskerming teen Fosfiengas, in geval van nood.

Moot nooit 'n berookte area binnegaan sonder gasmaskers indien die gaskonsentrasie bo 1dpm is nie (dit kan deur 'n Auer of Dreger gasverklikker bepaal word).

Na die voorgeskrewe duur van beroking deurlug deeglik vir 2-3 uur deur alle dekseile te verwyder en luikgate en vensters eers oop te maak voordat binnegaan word en die kommoditeit hanteer word.

1. GRAAN EN OLIESADE – MASSA OPBERGING					
	DOSIS				
Opbergingsmetode en wyse van toediening	Minimum blootstellingstyd	Mielies, koring, sorghum, rys, gedopte grondbone en ander graansoorte met losmaatmassa van ongeveer 730- 780kg/m <sup>3</sup>	Gars, rog, hawer en bokwiet met 'n losmaatmassa van ongeveer 598-667kg/m <sup>3</sup>	Sonneblom-saad met 'n losmaatmassa van ongeveer 400 kg/m <sup>3</sup>	Ongedopte grondbone met 'n losmaatmassa van ongeveer 300kg/m <sup>3</sup>
a) Absoluut gasdigte silobuise*. Dien toe op die vervoerband terwyl graan in silobuis ingelaai word. Silobuis moet heeltemal gevul word in korste moontlik tyd.	14 days	0,5 sakke per ton	0,6 sakke per ton	0,9 sakke per ton	1.25 sakke per ton
b) Redelik gasdigte silobuise**. Dien toe op die vervoerband terwyl graan in silobuis ingelaai word. Silobuis moet heeltemal gevul word in korste moontlik tyd.	5 dae	0,5 sakke per ton	0,6 sakke per ton	0,9 sakke per ton	1.25 sakke per ton
c) Horisontale losmaat. Druk in graan met behulp van 'n toediener (probes). Bedek graan gasdig met plastiekseile.	5 dae	0,5 sakke per ton	0,6 sakke per ton	0,9 sakke per ton	1.25 sakke per ton
d) FGD en FZ spoortrokke. Trokke moet vooraf gasdig gemaak word.	5 dae	20 sakke per trok (66m <sup>3</sup> ) vir alle kommoditeite.	Die beroking mag slegs onderneem word in samewerking met die betrokke beheerraad en Spoornet.		
2. GRAAN, OLIESADE EN ANDER VOEDSELKOMMODITEITE - IN SAKKE					
	DOSIS		OPMERKINGS		
Opbergingsmetode en wyse van toediening	Minimum blootstellingstyd				



Sakstapels. Versprei erweredig op en om stapels.	5 dae	0,36 sakke per m <sup>3</sup>	Stapels moet gasdig bedek word met plastiekseile.
<b>3. GRAAN (VERWERKTE EN ONVERWERKTE) PEULGEWASSE, GEDROOGTE VRUGTE EN ANDER VERPAKTE VOEDSEL COMMODITEITE.</b>			
Kleinmaat opberging. Kommoditeite vir behandeling moet aan die gas blootgestel word in 'n gasdigte area of onder gasdigte plastiese seile.	5 – 8 dae	1 sak per 3 m <sup>3</sup>	Dosis hang af van gasdigtheid van ruimte waarin kommoditeite is.
Plae in leë stoorkamers. Seël kamers deeglik voor behandeling.	30 dae	1 sak/22-44m <sup>3</sup>	Dosis hang af van gasdigtheid van ruimte waarin kommoditeite is.
Leë sake onder gasdigte seile of in gasdigte vertrekke	5 dae	1 sak per 3 – 4 m <sup>3</sup>	
Tabak SLEGS vir beroking van onverwerkte en verwerkte tabak in stapels, bale, kratte of okshoofde.	5 dae maar verkieslike 8-10 dae	1 sak per 7.33 m <sup>3</sup>	Moet nie dosis oorskry nie.
* Buisie wat 'n druk van 50mm paraffien in 'n ooparm manometer vir langer as 22 sekondes kan behou (Gasdig).			
* Buisie wat 'n druk van 50mm paraffien in 'n ooparm manometer vir tussen 10 tot 22 sekondes kan behou (Redelik gasdig).			

#### DOSIS VIR SIRKULASIE BEROKING.

TIPE GRAAN	DOSIS	MINIMUM BLOOTSTELLING TYDPERK
Mielies, Koring en Graansorghum	2,2g fosfien gas per ton	14 dae
Gars en Rog	2,7g fosfien gas per ton	14 dae
Sonneblom	4,3g fosfien gas per ton	14 dae
Ongedopte Grondboontjies	5,7 g fosfien gas per ton	14 dae

of 1,8g Fosfien gas per m<sup>3</sup>