

# PHOSDRIN® 500 SL

# SAFETY DATA SHEET

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** PHOSDRIN® 500 SL  
**Other identifier:** Mevinphos 500 SL  
**Recommended use:** Nematicide / Insecticide  
**Restrictions on use:** Agriculture

**Company:** Universal Crop Protection (Pty) Ltd.

**Co. Reg. No.:** 1983/008184/07  
PO Box 801,  
Kempton Park, 1620, South Africa

**Telephone:** (011) 396 2233

**Fax:** (011) 396 4666

**Website:** [www.villacrop.co.za](http://www.villacrop.co.za)

### Emergency telephone numbers:

#### 24 Hr Transport / Spill emergency no:

(Hazcall24) +27 86 044 4411

(Client: Villa Crop Protection)

Griffon Poison Information Centre +27 82 446 8946

(Client: Villa Crop Protection)

#### Poisoning Emergency telephone numbers:

Griffon Poison Information Centre +27 82 446 8946

Poisons Information Centre +27 861 555 777

## 2. HAZARDS IDENTIFICATION

UN GHS, Regulation EC 1272/2008 [EU-GHS/CLP] EU & SANS 10234:2008		
Hazard classes	Hazard categories	H-statements
<b>Health</b>		
Oral	Acute Toxicity 1	H300
Dermal	Acute Toxicity 1 Skin Irritation 2	H310 H315
Eye	Eye Irritation 2	H319
Inhalation	Acute Toxicity 1	H330
<b>Environment</b>		
Aquatic acute	Aquatic acute 1	H400
Aquatic chronic	Aquatic chronic 1	H410

### The most important adverse effects:

**Physiochemical effects:** None known.

#### Human health effects:

Fatal if swallowed, inhaled or in contact with skin.

Causes skin irritation.

Causes serious eye irritation.

### Label elements:



**Signal word:** Danger.

#### Hazard statements:

H300: Fatal if swallowed.

H310: Fatal in contact with skin.

H315: Causes skin irritation.

H319: Causes serious eye irritation.

H330: Fatal if inhaled.

H400: Very toxic to aquatic life.

H410: Very toxic to aquatic life with long lasting effects.

#### Precautionary statements:

P260: Do not breathe fumes, mists, vapours, or spray.

P262: Do not get in eyes, on skin, or on clothing.

P264+P265: Wash hands thoroughly after handling. Do not touch eyes.

P270: Do not eat, drink or smoke when using this product.

P271: Use only outdoors or in a well-ventilated area.

P273: Avoid release into the environment.

P280: Wear impervious rubber gloves and boots, protective clothing and chemical safety goggles.

P284: In case of inadequate ventilation wear respiratory protection.

P301+P310: IF SWALLOWED: Immediately call a POISON CENTER.

P302+P352+P316: IF ON SKIN: Wash with plenty of water and non-abrasive soap. Get emergency medical help immediately.

P304+P340+P316: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get emergency medical help immediately.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P330: Rinse mouth.

P337+P317: If eye irritation persists: Get medical help.

P361+P364: Take off immediately all contaminated clothing and wash before reuse.

P391: Collect spillage.

P403+P233: Store in a well-ventilated place. Keep container tightly closed.

P405: Store locked up.

P501: Dispose of content/container to suitable landfill in accordance with local regulations.

#### Special labelling of certain mixtures:

None known.

#### Other hazards:

None known.

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**Toxicity:**

Classification according to GHS: Category 1.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance/Mixture: Mixture.

**Composition:**

Chemical Name	CAS	Conc. (m/v %)	Classification EC 1272/2008
Mevinphos	7786-34-7	50 %	Acute Toxicity 2 (H300) Acute Toxicity 1 (H310) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)
Rhodamne Dye	989-38-8	< 1 %	Acute Toxicity 4 (H302) Eye Damage 1 (H318)
Hexalene glycol	107-41-5	< 40 %	Skin Irritation 2 (H315) Eye Irritation 2 (H319)

### 4. FIRST AID MEASURES

Remove the victim from the area of exposure. Wash off remaining material with plenty of water. The airway should be kept clear to maintain respiration, particularly when the patient is unconscious or has vomited. The mouth and pharynx should be cleared and dentures removed. The jaw should be supported and the patient placed in a face down position with the head down and turned to one side, with the tongue drawn forward. First aid should include, if necessary, mouth-to-nose respiration, cardiac massage and avoidance of injury in patients with trauma.

**Immediately consult a doctor.**

**Inhalation:** Remove victim to fresh air. If breathing has ceased, clear the victim's airway and start mouth-to-mouth artificial respiration. If breathing is difficult, give oxygen. **Seek medical attention immediately.**

**Skin:** Remove contaminated clothing, shoes and leather goods. Wash skin gently and thoroughly with cold water and non-abrasive soap. **Seek medical attention immediately.**

**Eyes:** Flush eyes with clean water for at least 15 minutes. Lift eyelids to facilitate irrigation. If present, remove contact lenses after 5 minutes and continue rinsing. **Seek medical attention if irritation persists.**

**Ingestion:** If the product has been swallowed, have the person to rinse mouth thoroughly with water. **Do not induce vomiting.** Do not give any saltwater or any other emetic. **Seek medical attention immediately or contact**

**a poison centre.** Administer artificial respiration or closed chest cardiac massage if necessary. Do not apply mouth-to-mouth respiration. Never give anything by mouth to an unconscious person. **Take the patient immediately to the nearest physician.**

**Anticipated acute effects:** Fatal if swallowed, inhaled or in contact with skin. Causes skin irritation and serious eye irritation.

**Anticipated delayed effects:** None known.

**Most important symptoms/effects:** nausea, headache, tiredness, giddiness, faintness, fatigue, and tightness of the chest, anxiety, blurred vision, pupillary constriction and muscle twitching. Depending on severity of poisoning these symptoms become worse with the onset of vomiting, abdominal pain, diarrhoea, sweating and salivation. Confusion, ataxia, slurred speech, loss of reflexes are some of the central nervous system effects that may lead to misdiagnosis of acute alcoholism.

In extreme cases unconsciousness, convulsions, severe respiratory depression and death may occur.

**Advice to physician:**

**THIS IS A HIGHLY TOXIC ORGANOPHOSPHATE (OP) INSECTICIDE.**

Do not wait for laboratory confirmation to treat patients with strong clinical evidence of poisoning.

**Do Not** handle the patient without the following protective equipment in place: chemical resistant gloves and apron (preferably PVC). Remove contaminated clothing and do not reuse without thorough cleaning with detergent and hot water. Dispose of heavily contaminated clothing, including shoes, as a hazardous waste.

Establish airway and oxygenation. IV Atropine sulfate is the antidote of choice against parasympathetic nervous stimulation. If there are signs of parasympathetic stimulation, Atropine Sulfate should be injected at 10 minute intervals in doses of 1 to 2 milligrams until complete atropinization has occurred. Pralidoxime chloride (2-PAM chloride) may also be used as an effective antidote in addition to and while maintaining full atropinization. In adults, an initial dose of 1 gram of 2-PAM should be injected, preferably as an infusion, in 250 cc of saline over a 15 to 20 minute period. If this is not practical, 2-PAM may be administered slowly by intravenous injection as a 5% solution in water over not less than 2 minutes. After about an hour, a second dose of 1 gram of 2-PAM will be indicated if muscle weakness has not been relieved. For infants and children, the dose of 2-PAM is 0.25 grams.

**NOTE**

Avoid morphine, aminophylline, phenothiazine, reserpine, furosemide and ethacrynic acid. Clear chest by postural drainage. Oxygen administration may be necessary. Observe patient continuously for 48 hours. Repeated exposure to cholinesterase inhibitors may

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without warning cause prolonged susceptibility to very small doses of any cholinesterase inhibitor.

contents and dispose of according to local regulations. Do not place spilled material back in original container. Do not re-use spilled material. Collect washings and add to the drums already collected. Do not flush spilled material or washings into drains or waterways. To decontaminate the spill area, tools and equipment, wash with water and suitable detergent (i.e. organic solvent, detergent bleach or caustic). Add the solution to the drums already collected. Open burning or dumping of this material is prohibited. See section 13 for disposal considerations.

## 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media:** Use carbon dioxide or dry chemical for small fires and water fog or foam for large fires.

**Unsuitable Extinguishing Media:** High volume water jet. Use a water jet only to cool heated containers. Avoid water coming into contact with product.

**Specific hazards:** This product will emit toxic fumes when burned, including carbon monoxide. May produce irritating or poisonous mists or other products of combustion.

**Special Fire Fighting Procedures:** Remove spectators from surrounding area. Isolate the fire area and evacuate all personnel downwind of the fire. Fight fire from maximum distance and use unmanned hose holder or monitor nozzles. Keep upwind. Avoid inhaling hazardous vapours and fumes from burning materials. Remove container from fire area if possible and without risk. Do not use high volume water jet, due to contamination risk. Do not scatter the burning material. Water can be used to cool unaffected containers but must be contained for later disposal. Contain fire control agents for later disposal. Avoid pollution of waterways by run-off from the site.

**Personal protective equipment:** Wear NIOSH/MSHA approved self-contained breathing apparatus and full bunker gear.

## 7. HANDLING AND STORAGE

### Handling:

**Precautions for safe handling:** Operator should not be alone during handling and application of product. Fatal if swallowed or inhaled. Avoid contact with eyes and skin. Ensure adequate ventilation during handling and use. Do not handle broken containers without protective equipment. Immediately clean up spills that occur during handling. Keep containers tightly closed when not in use. In the case of contact with the product refer to First Aid Measures – Section 4.

**General occupational hygiene:** Practice good hygiene when using this material. Wash hands before eating, drinking, chewing gum, smoking, using the toilet or applying cosmetics. Worker should shower at the end of each workday. Launder all clothing before it is re-used.

### Storage:

**Conditions for safe storage:** Keep under lock and key and out of reach of unauthorised persons, children and animals. Store in its original labelled container tightly closed, in an isolated, dry, cool and well-ventilated area. Avoid excess heat. Not to be stored next to foodstuffs, feed and water supplies. Avoid cross contamination with other pesticides and fertilisers.

**Incompatible substances and mixtures:** Refer to product label.

**Packaging material:** Fluorinated plastic containers.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Avoid contact with skin, eyes and clothes. **Do not breathe in vapours, spray mist or fumes.** Ventilate area of spill or leak, especially in contained areas.

**Protective equipment:** Refer to Section 8 for personal protective equipment to be worn during containment and clean-up of a spill involving this product.

**Emergency procedures:** Alert firefighting personnel, evacuate unprotected personnel and animals.

**Environmental Precautions:** Prevent spilled product from entering sewers, waterways or ground water. This product is classified as very toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment. Any spillages or uncontrolled discharges into watercourses should be reported immediately to the police and the Department of Water/Environmental Affairs.

**Methods and Materials for Containment:** Contain spilled product by diking area with sand or earth.

**Methods and Materials for Clean-up:** Cover contained spill with an inert absorbent material such as sand, earth or other appropriate non-combustible material. Vacuum, scoop, or sweep up material and place the material into a clean, dry, sealable container. Label containers with the

## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

### Permissible concentration

Components	Exposure limits	Type of exposure limit	Source
Mevinphos	0.03 ppm	TWA (10 hours), STEL	"www.osha.gov"

### Engineering Controls:

It is essential to provide adequate ventilation. The measures appropriate for a particular worksite depend on how this material is used and on the extent of exposure.

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**Local Exhaust:** Provide general or local exhaust ventilation systems to maintain airborne concentrations below OSHA PELs or other specified exposure limits. Local exhaust ventilation is preferred. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire, and other applicable regulations.

**Personal Protective Equipment:**

**Respiratory Protection:** An approved full-face air-purifying respirator, equipped with organic vapour cartridges or canisters, suitable for protection from mists of pesticides is required. Limitations of respirator use specified by the approving agency and the manufacturer must be observed.

**Hand Protection:** Employee must wear appropriate chemical resistant protective gloves (PVC or neoprene gloves) to prevent contact with this substance.

**Eye Protection:** Wear a face shield when handling the concentrate and when applying the product. The use of safety goggles is recommended if a face shield is not used.

**Skin and Body Protection:** Employees must wear appropriate protective impervious clothing, rubber boots, hat and equipment to prevent repeated or prolonged skin contact with this substance. Do not wear leather clothing.

**Emergency eyewash:** Where there is any possibility that an employee's eyes may be exposed to this mixture; the employer should provide an eyewash fountain or appropriate alternative within the immediate work area for emergency use.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** Clear red coloured liquid.

**Odour:** Solvent odour.

**pH (1% aqueous dilution):** 6.5.

**Melting point:** Not available.

**Freezing Point:** Not available.

**Boiling Point:** Not available.

**Flash Point:** 93 °C.

**Flammability:** Non-flammable.

**Upper/lower explosion limits:** Not available.

**Vapour Pressure (mm Hg):** Not available.

**Relative Vapour Density:** Not available.

**Density:** 1.1026 ± 0.05 g/ml @ 20 °C.

**Solubility:** Forms an emulsion in water.

**n-octanol/water partition coefficient:** Not available.

**Auto-ignition temperature:** Not available.

**Decomposition temperature:** Not available.

**Viscosity:** Not available.

## 10. STABILITY AND REACTIVITY

**Chemical Stability:** The product is stable for two years at ambient temperature and pressure, under normal storage and handling conditions. Avoid storage under extreme

temperatures and conditions. Store below 50 °C, preferably below 30 °C, and not for prolonged periods in direct sunlight. **PHOSDRIN® SL** decomposes at elevated temperatures and is hydrolysed in aqueous solution.

**Reactivity:** None known.

**Possibility of Hazardous Reactions:** None known.

**Conditions to Avoid:** Extreme heat or exposure to flames.

**Incompatible Materials:** The product is compatible with most other common pesticides.

The product is incompatible with strong oxidizers, strong acids, and alkaline materials such as Bordeaux mixture or Lime Sulphur.

Do not physically mix concentrate directly with other herbicides or pesticide concentrates; always dilute first.

Do not store in plain mild steel, tinsplate or plastic containers. May be stored in glass, approved lacquer-lined steel or aluminium (99% purity).

**Hazardous Decomposition Products:** Product undergoes decomposition at high temperatures and will cause emission of acrid smoke and toxic fumes of phosphorous oxides and carbon oxides.

## 11. TOXICOLOGICAL INFORMATION

**ACUTE TOXICITY:**

**Calculated according to GHS.**

**Oral LD<sub>50</sub> (24 h)** >4 mg/kg (rat).

**Dermal LD<sub>50</sub> (24 h)** > 6 mg/kg (rat).

**Inhalation LC<sub>50</sub> (4 h)** 0,05 mg/l (rat).

**Skin Irritation/Corrosion:** Causes skin irritation.

**Eye Damage/Irritation:** Causes serious eye irritation.

**Skin Sensitization:** Not classified.

**Respiratory Sensitization:** Not classified.

**Reproductive cell mutagenicity:** Not classified.

**Carcinogenicity:** Not classified.

**Reproductive toxicity:** Not classified.

**Specific target organ toxicity – single exposure:** Not classified.

**Specific target organ toxicity – repeated exposure:** Not classified.

**Aspiration hazard:** Not classified.

**Chronic Effects:** Not classified.

**POTENTIAL ADVERSE EFFECTS:**

**Inhalation:** Fatal if inhaled.

**Skin contact:** Fatal in contact with skin. Causes skin irritation.

**Eye contact:** Causes serious eye irritation.

**Ingestion:** Fatal if swallowed or ingested.

## 12. ECOLOGICAL INFORMATION

This product is very toxic to aquatic life with long lasting effects.

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## ECOTOXICITY DATA:

**Fish:**

LC <sub>50</sub> (48 h)	Bluegill sunfish	0.037 mg/l
	Rainbow trout	0.017 mg/l

**Birds:**

Acute oral LD <sub>50</sub>	Mallard ducks	4.63 mg/kg
	Chickens	7.52 mg/kg
	Pheasants	1.37 mg/kg

**Bees:**

LD <sub>50</sub>		0.027 µg/bee
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## ENVIRONMENTAL EFFECTS:

### Based on information for the active ingredient

**Plants:** In plants, it is rapidly hydrolysed to less toxic products, including phosphoric acid dimethyl ester and phosphoric acid.

**Persistence and degradability:** Readily biodegradable. Hydrolysed in aqueous solution. This product is an organophosphate insecticide that is widely applied to soil to control insect pests. The pathway of degradation in soil involves both chemical and microbial processes. Environmental factors can greatly influence the degradation rate in soil; the most important being moisture, pH, organic content, and pesticide formulation.

This product in formulation can be classified as non-persistent and does not accumulate. No harmful residue remains in the soil.

**Bio-accumulative Potential:** Log K<sub>ow</sub> 0.13. In mammals, following oral administration, elimination occurs in 3 – 4 days in the form of metabolites in the urine and faeces.

**Mobility in soil:** Not determined.

**Other adverse effects:** Not determined.

## 13. DISPOSAL CONSIDERATIONS

**Waste:** Open dumping or burning of this pesticide is prohibited. Waste resulting from the use of this product cannot be reused or re-processed. Never pour untreated waste or surplus product into public sewers or where there is any danger of run-off or seepage into water systems. Do not contaminate rivers, dams or any other water sources with the product or used containers. Comply with local legislation applying to waste disposal. The product may be taken to a registered waste disposal site or incineration plant.

**Container:** Emptied containers retain product residues. Do not re-use the empty container for any other purpose. Triple rinse empty containers by inverting the empty container over the spray or mixing tank and allow draining for at least 30 seconds after the flow has slowed down to a drip. Thereafter, rinse the container three times with a volume of water equal to a third of that of the container. Add the rinsings to the contents of the spray tank before destroying the container in the prescribed manner. Puncture the triple rinsed container and dispose of via an

approved collector or recycler ([www.croplife.co.za](http://www.croplife.co.za)). Do not bury, burn, or donate the container to any other parties that may use it as a container for food or beverages. Observe all labelled safeguards until container is destroyed.

## 14. TRANSPORT INFORMATION

<b>UN Number:</b>	<b>3018</b>
<b>Road Transport ADR/IRD:</b>	
Class:	6.1
Packaging group:	I
UN Proper Shipping Name:	ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC (mevinphos 500 g/l)
<b>Maritime Transport IMDG/IMO:</b>	
Class:	6.1
Packaging group:	I
UN Proper Shipping Name:	ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC (mevinphos 500 g/l)
<b>Marine Pollutant (Y/N):</b>	<b>Yes</b>
<b>Air transport IATA/ICAO:</b>	
Class:	6.1
Packaging group:	I
UN Proper Shipping Name:	ORGANOPHOSPHORUS PESTICIDE, LIQUID, TOXIC (mevinphos 500 g/l)
<b>Special/Environmental Precautions:</b>	Wedge drums tightly to avoid movement.
<b>Transport in bulk:</b>	Refer to MARPOL 73/78, Annex II and the IBC code.

## 15. REGULATORY INFORMATION

**Safety, health and environmental regulations/legislation for the mixture:**  
 OSHA 1993 Regulations for Hazardous Chemical Substances.  
**Relevant information regarding restrictions:** None.  
**EU regulation:** Regulation EC1272/2008 (EU-GHS/CLP)  
**Other national regulations:** None.  
**Chemical Safety Assessment carried out?** No

## 16. OTHER INFORMATION

**Packaging:** Packed in 5, 10, 20 and 25 litres fluorinated plastic containers, labelled according to South African regulations and guidelines.  
**Other hazard statements, abbreviations and explanations:**  
**H302:** Harmful if swallowed.  
**H318:** Causes serious eye damage.  
**IATA:** International Air Transport Association.  
**IBC:** International Bulk Chemical.

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**ICAO:** International Civil Aviation Organization.

**IMDG:** International Maritime Dangerous Goods

**IMO:** International Maritime Organization.

**LD<sub>50</sub> value:** The median lethal dose or the amount of a toxic agent that is sufficient to kill 50 percent of a population within a certain period of time.

**OEL/RL:** Occupational exposure limit-recommended limit.

**TWA:** Time-weighted average – The average exposure over a specified period, usually a nominal eight hours.

**ST/STEL:** Short-term exposure limits.

**Disclaimer:** The information on this sheet is not a specification; it does not guarantee specific properties.

The information is intended to provide general guidance as to health and safety based upon our knowledge of the handling, storage and use of the product. It is not applicable to unusual or non-standard uses of the product nor where instructions or recommendations are not followed. All information is given in good faith but without guarantee in respect of accuracy, and no responsibility is accepted for errors and omissions or the consequence thereof.

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### **END OF DOCUMENT**

**Compiled:** June 2022

**Reviewed:** June 2022

**Revision no.:** (1)

**Next revision:** June 2027

For detailed information on revisions, contact the Registration holder.