

## FENAMIPHOS 400 EC

## SAFETY DATA SHEET

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product name:** Fenamiphos 400 EC  
**Other identifier:** Fenamiphos 400 g/l  
**Recommended use:** Insecticide / Acaricide  
**Restrictions on use:** Agriculture

**Supplier:** 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 Tox. 2	H300
Aspiration hazard	Asp Tox. 1	H304
Dermal	Acute Tox. 2	H310
Eye	Eye irrit. 2	H319
Inhalation	Acute Tox.2	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 (Acute Tox. 2).  
May be fatal if swallowed and enters airways (Asp. Tox. 1).  
Causes serious eye irritation (Eye Irrit. 2).  
Fatal if inhaled (Acute Tox. 2).

Fatal in contact with skin (Acute Tox. 2).  
Very toxic to aquatic life (Aquatic Acute 1).  
Very toxic to aquatic life with long lasting effects (Aquatic Chronic 1).

**Label elements:**



**Signal word:** Danger

**Hazard statements:**

H300: Fatal if swallowed.  
H304: May be fatal if swallowed and enters airways.  
H310: Fatal in contact with skin.  
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 fume, mist, 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 to 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+P316: IF SWALLOWED: Get emergency medical help immediately.  
P302+P352: IF ON SKIN: Wash with plenty of water and non-abrasive soap.  
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
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+P331: Rinse mouth. Do NOT induce vomiting.  
P337+P317: If eye irritation persists: Get medical help.  
P361+P364: Take off immediately all contaminated clothing and wash before reuse.  
P391: Collect spillage.

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

P405: Store locked up.

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

### Other hazards:

None known.

### Toxicity:

Classification according to GHS: Category 2

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance / Mixture: Mixture

#### Composition:

Chemical name	CAS	Conc. (m/v %)	Classification EC 1272/2008
Fenamiphos	22224-92-6	40.91 %	Acute Tox. 2 (H300) Acute Tox. 2 (H310) Eye irrit. 2 (H319) Acute Tox.2 (H330) Aquatic Acute 1 (H400) Aquatic chronic 1 (H410)
HeavyAromatic Solvent	64742-95-5	<30%	Asp. Tox. 1 (H304)

### 4. FIRST AID MEASURES

Remove the victim from the area of exposure. Wash off remaining material with plenty of water. In the event of any complaints or symptoms, avoid further exposure.

**Inhalation:** Remove person from contaminated area to fresh air and assist breathing as needed. Seek medical attention if irritation occurs. **Seek medical attention if you feel unwell after inhalation.**

**Skin:** Remove contaminated clothing and shoes. Gently wipe off excess chemical. Wash skin gently and thoroughly with water and non-abrasive soap.

**FENAMIPHOS 400 EC** is fatal in contact with skin. Obtain medical attention if irritation persists.

**Eyes:** Flush eyes with clean water for at least 15 – 20 minutes. Lift eyelids to facilitate irrigation. If present, remove contact lenses after 5 minutes and continue rinsing. **Seek medical attention.**

**Ingestion: Seek medical attention or call a poison control centre for treatment advice.** Do not induce vomiting unless instructed to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person. If the person is alert, rinse mouth thoroughly with water.

**Anticipated acute effects:** Fata if swallowed, contact with skin and if inhaled. Causes 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.

**Advice to physician:** To prevent gastrointestinal absorption in unconscious that have swallowed this product, perform stomach lavage using bicarbonate solution and activated charcoal.

### 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.

**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. Remain upwind of fire. Avoid inhaling hazardous mists/vapours or 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.

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

### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions:** Avoid contact with skin and eyes. Do not breathe in spray mist/ fumes or vapours. 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 spilt 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, vermiculite, earth or other appropriate material. Vacuum, scoop, or sweep up material and place the material into a clean, dry, sealable container. Label containers with the contents and dispose of according to local regulations. Do not place spilt material back in original container. Do not re-use spilt material. Collect washings and add to the drums already collected. Do not flush spilt material or washings into drains or waterways. To decontaminate the spill area, tools and equipment, wash with water and suitable detergent. See section 13 for disposal considerations.

### 7. HANDLING AND STORAGE

#### Handling:

**Precautions for safe handling:** Fatal if swallowed, contact with skin and if inhaled. Avoid contact with eyes and skin. Ensure adequate ventilation during handling and use. Do not inhale spray mist or vapours. Do not handle broken packages without protective equipment. Immediately clean up spills that occur

during handling. Keep containers 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. Do not store near heat, open flame, sources of ignition or hot surfaces. 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.

### 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

**Permissible concentration:** No occupational exposure limits have been determined for the significant ingredients in this product.

#### 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. Local Exhaust: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OELs 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:** For most well-ventilated conditions, no respiratory protection should be needed. If used in a poorly ventilated area (airborne concentrations exceed exposure limits), use a NIOSH approved, air-purifying respirator with cartridges / canisters approved for organic vapours.

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**Hand Protection:** The use of chemically protective impervious gloves is recommended to prevent against skin contact.

**Eye Protection:** The use of chemical safety goggles is recommended to prevent against eye contact. Contact lenses are not protective eye devices.

**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 product. Do not wear leather clothing.

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

### 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** Light green liquid.

**Odour:** Aromatic solvent odour.

**Odour threshold:** Not available.

**pH (1% aqueous dilution):** Not available.

**Melting point:** Not available.

**Freezing Point:** Not available.

**Boiling Point:** Not available.

**Flash Point:** Not available.

**Flammability:** Not available.

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

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

**Relative Vapour Density:** Not available.

**Density / Relative density:** 1.04 ± 0.05 g/l @ 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.

**Reactivity:** None known.

**Possibility of hazardous reactions:** None known.

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

**Incompatible materials:** The product is incompatible with strong oxidizers and alkaline materials.

**Hazardous decomposition products:** The product undergoes decomposition at high temperatures and will cause emission of acrid smoke and toxic fumes of phosphorous oxides, carbon oxides and amines.

### 11. TOXICOLOGICAL INFORMATION

**ACUTE TOXICITY:** Calculated according to GHS.

**Oral LD<sub>50</sub> (24h)** 14.67 mg/kg (rat)

**Dermal LD<sub>50</sub>** 175.98 mg/kg (rat)

**Inhalation LC<sub>50</sub> (4h)** 0.15 mg/l (rat)

**Skin Irritation / Corrosion:** Fatal in contact with skin.

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

**Skin Sensitization:** Not available.

**Respiratory Sensitization:** Anticipated to be toxic by ingestion and inhalation.

**Reproductive cell mutagenicity:** Not available.

**Carcinogenicity:** Not available.

**Reproductive toxicity:** Not available.

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

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

**Aspiration hazard:** May be fatal if swallowed and enters airways.

**Chronic Effects:** Not available.

**POTENTIAL ADVERSE EFFECTS:**

**Inhalation:** Fatal if inhaled.

**Ingestion:** Fatal if swallowed. May be fatal if swallowed and enters airways.

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

**Other information:** None known.

### 12. ECOLOGICAL INFORMATION

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

**ECOTOXICITY DATA:**

**Fenamiphos**

**Fish:**

LC <sub>50</sub> (96 h)	Bluegill sunfish	0.0093 mg/l
	Rainbow trout	0.0721 mg/l
		0.017 mg/l



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Sheepshead  
minnows

### Daphnia:

EC<sub>50</sub> (48 h) 0.00106 mg/l

### Algae:

ErC50 (96 h) *Scenedesmus subspicatus* 11 mg/l

### Birds:

Acute oral LD<sub>50</sub> Bobwhite quail 0.7-1.6 mg/kg

Mallard ducks 0.9-1.2 mg/kg

Dietary LC<sub>50</sub> (5d) Mallard ducks 316 mg/kg diet

Bobwhite quail 38 mg/kg diet

### Bees:

LD<sub>50</sub> oral 0.45 µg/bee

Contact 0.28 µg/bee

### Worms:

LC<sub>50</sub> *Eisenia fetida* 888 mg/kg soil

### Plants:

Studies in a range of crops, representing fruit, root and tuber crops, leafy crops, oilseeds and pulses, with different kinds of application, all show a similar metabolic pathway in the plants. Fenamiphos is only found directly following application. A short period after treatment, fenamiphos-sulfoxide is the dominant metabolite (*EFSA Sci. Rep.*).

### **ENVIRONMENTAL EFFECTS**

**Persistence and degradability:** No effect on soil bacteria. Readily degradable in water, degradable on soil surfaces. Duration of activity in soil is c. 4 months. Based on Koc values and leaching studies, fenamiphos can be classified as a compound with low mobility. Soil DT<sub>50</sub> (aerobic and anaerobic) is several weeks. The major degradation products are fenamiphos sulfoxide and fenamiphos sulfone and their phenols.

**Bio-accumulative potential:** Not determined.

**Mobility in soil:** Not determined. Low mobility.

**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. Invert the empty container over the spray or mixing tank and drain for at least 30 seconds after the flow has slowed down to dripping. Thereafter rinse the empty container three times in succession with one quarter of the container volume fresh water and decant the rinsate into the spray or mixing tank. 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

**UN Number:** 3018

**Road Transport ADR / ORD:**

Class: 6.1

Packaging group: I

UN Proper Shipping Name: Organophosphorus pesticide, liquid, toxic (**Fenamiphos 400g/l**)

**Maritime Transport IMDG / IMO:**

Class: 6.1

Packaging group: I

UN Proper Shipping Name: Organophosphorus pesticide, liquid, toxic (**Fenamiphos 400g/l**)

**Marine pollutant (Y/N):** Yes

**Air Transport IATA / ICAO:**

Class: 6.1

Packaging group: I

UN Proper Shipping Name: Organophosphorus pesticide, liquid, toxic (**Fenamiphos 400g/l**)

**Special / Environmental Precautions:** Wedge drums tightly to avoid movement

**Transport in bulk:** Refer to MARPOL 73/78, Annex II and the IBC code.

### 15. REGULATORY INFORMATION

**Safety, health and environmental regulations / legislation for the mixture:**

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OHSA 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 1, 5, 10, 20 and 25 litres fluorinated plastic containers and labelled according to South African regulations and guidelines.

**Other hazard statements, abbreviations, and explanations:**

**IATA:** International Air Transport Association.

**IBC:** International Bulk Chemical.

**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.

**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.

### END OF DOCUMENT

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For detailed information on revisions, contact the Registration holder.