

# FORBIT 500 SC

# SAFETY DATA SHEET

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** FORBIT 500 SC  
**Other identifier:** Fluopyram 500 SC  
**Recommended use:** Insecticide/Fungicide  
**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 Toxicity 5	H303
Dermal	Acute Toxicity 5	H313
Inhalation	Acute Toxicity 5	H333
<b>Environment</b>		
Aquatic chronic	Aquatic chronic 2	H411

**The most important adverse effects:**  
**Physiochemical effects:** None known  
**Human health effects:** None known  
**Label elements:**



**Signal word:** Warning

### Hazard statements:

H303: May be harmful if swallowed.  
 H313: May be harmful in contact with skin.  
 H333: May be harmful if inhaled.  
 H411: Toxic to aquatic life with long lasting effects.

### Precautionary statements:

P273: Avoid release to the environment.  
 P391: Collect spillage.  
 P501: Dispose of content/container to suitable landfill in accordance with local regulations.  
**Other hazards:** None known.  
**Toxicity:**  
 Classification according to GHS: Category 5  
 Classification according to GPIC: Category III

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

**Substance / Mixture:** Mixture  
**Composition:**

Chemical name	CAS	Conc. (m/v %)	Classification EC 1272/2008
Fluopyram	658066-35-4	42 %	Aquatic Chronic 2 (H411)
Propan-2-ol	67-63-0	<1%	Flammable liquid 2 (H225) Eye irritation 2 (H319) Specific Target Organ Toxicity Single Exposure 3 (H336)
Organic silicon	27306-78-1	<1%	Eye irritation 2 (H319) Acute Toxicity 4 (H332) Aquatic Chronic 2 (H411)
1,2-Benzisothiazoli ne-3-one	2634-33-5	<1%	Acute Toxicity 4 (H302) Skin Irritation 2 (H315) Eye Damage 1 (H318) Skin Sensitization 1 (H317) Aquatic Acute 1 (H400)

## 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.  
**Skin:** Remove contaminated clothing and shoes. Gently wipe off excess chemical. Wash skin gently and

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thoroughly with water and non-abrasive soap. 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. Obtain medical attention if irritation persists.

**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:** None known.

**Anticipated delayed effects:** None known.

**Most important symptoms / effects:** None known.

**Advice to physician:** Treat symptomatically and supportively. No specific antidote known. If large amounts have been ingested administer activated charcoal and sodium sulphate.

### 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media:** Use carbon dioxide, sand 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:** In the event of a fire Hydrogen chloride (HCl), Hydrogen cyanamide/hydrocyanic acid, Hydrogen fluoride (HF), carbon monoxide (CO) and nitrogen oxides (NO<sub>x</sub>) may be released.

**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 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 protective gear.

### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions:** Avoid contact with eyes and skin. Do not breathe in spray mist. 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 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, vermiculite, earth, universal binder 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 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. See section 13 for disposal considerations.

### 7. HANDLING AND STORAGE

**Handling:**

**Precautions for safe handling:** May be harmful if swallowed. Avoid contact with skin and eyes. Ensure adequate ventilation during handling and use. 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. Avoid excess heat. Keep out of direct sunlight. 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:** Plastic containers.

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## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

### Permissible concentration

Components	Exposure limits	Type of exposure limit	Source
Fluopyram	0.34 mg/m <sup>3</sup>	TWA	OES
Propan-2-ol	400 ppm 500 ppm	8-hour TWA STEL	"www.osha.gov"
Glycerine	Respirable fraction 5 mg/m <sup>3</sup>	8-hour TWA	"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. 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.

**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 clothing, boots, hat and equipment to prevent repeated or prolonged skin contact with this substance.

**Emergency eyewash:** Where there is any possibility that an employee's eyes may be exposed to this substance, 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:** Brown liquid, suspension concentrate.

**Odour:** Characteristic odour.

**Odour threshold:** Not available.

**pH:** 7.2 @ 20 °C.

**Melting point:** Not available.

**Freezing Point:** Not available.

**Boiling Point:** Not available.

**Flash Point:** Not available.

**Flammability:** Not flammable.

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

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

**Relative Vapour Density:** Not available.

**Density / Relative density:** 1.190 g/ml @ 20 °C.

**Solubility:** Suspends in water.

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

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

**Decomposition temperature:** Not available.

**Viscosity:** 890 CPS.

## 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:** Unlikely to occur.

**Conditions to avoid:** Extreme heat or exposure to flames and direct sunlight.

**Incompatible materials:** Strong oxidizers, strong bases, strong reducing agents.

**Hazardous decomposition products:** None known.

## 11. TOXICOLOGICAL INFORMATION

### ACUTE TOXICITY:

Calculated according to GHS:

**Oral LD<sub>50</sub>** > 3000 mg/kg (rat)

**Dermal LD<sub>50</sub>** > 4700 mg/kg (rat)

**Inhalation LC<sub>50</sub>** (4h) > 5.022 mg/l (rat)

**Skin Irritation / Corrosion:** May be harmful in contact with skin.

**Eye Damage / Irritation:** Product is not an irritant.

**Skin Sensitization:** Product is not a skin sensitizer.

**Respiratory Sensitization:** Not available.

**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:** Not available.

**Chronic Effects:** Not available.

### POTENTIAL ADVERSE EFFECTS:

May be harmful if swallowed.

May be harmful in contact with skin.

May be harmful if inhaled.

## 12. ECOLOGICAL INFORMATION

This product is considered a marine pollutant.

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### ECOTOXICITY DATA:

Based on information for active ingredient:

#### Fluopyram

##### Fish:

LC <sub>50</sub>	Sheepshead minnows	>0.98 mg/l
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##### Daphnia:

LC <sub>50</sub>		>17 mg/l
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##### Algae:

E <sub>b</sub> C <sub>50</sub> and ErC <sub>50</sub>	<i>Skeletonema costatum</i>	>1.13 mg/l
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##### Birds:

Acute oral LD <sub>50</sub>	Bobwhite quail	3120 mg/kg
Dietary LC <sub>50</sub>	Mallard ducks	>5000 mg/kg diet

##### Bees:

LD <sub>50</sub> contact (48h)		>100 µg/bee
LD <sub>50</sub> oral (48h)		>102 µg/bee

##### Worms:

LC <sub>50</sub> (14d)	<i>Eisenia fetida</i>	>1000 mg/kg
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### ENVIRONMENTAL EFFECTS

Based on information for active ingredient

**Plants:** The parent molecule constitutes the majority of the residues. Fluopyram is partly translocated in the plants, mainly through the xylem.

**Persistence and degradability:** Mean soil DT<sub>50</sub> 119 days. Not rapidly biodegradable.

**Bio-accumulative potential:** Low potential.

**Mobility in soil:** Mean K<sub>oc</sub> 279 ml/g. Moderately mobile in soils.

**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: 3082**

**Road Transport ADR / ORD:**

Class:	9
Packaging group:	III
UN Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Fluopyram 500 g/l)

**Maritime Transport IMDG / IMO:**

Class:	9
Packaging group:	III
UN Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Fluopyram 500 g/l)

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

**Air Transport IATA / ICAO:**

Class:	9
Packaging group:	III
UN Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Fluopyram 500 g/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:**

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 10, 15, 20, 35, 50, 100, 150, 200, 250, 350, 500 mL and 1, 2, 5, 10, 20, 25 and 50 litres plastic containers, labelled according to South African regulations and guidelines.

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

**H225:** Highly flammable liquid and vapour.

**H302:** Harmful if swallowed.

**H315:** Causes skin irritation.

**H317:** May cause an allergic reaction.

**H318:** Causes serious eye damage.

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**H319:** Causes serious eye irritation.  
**H332:** Harmful if inhaled.  
**H336:** May cause drowsiness or dizziness.  
**H400:** Very toxic to aquatic life.  
**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.  
**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.  
**OES:** Occupational exposure standard.  
**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**

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For detailed information on revisions, contact the Registration holder.