

# HARRIER 500 EC

# SAFETY DATA SHEET

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** HARRIER 500 EC  
**Other identifier:** Mercaptothion / Malathion 500 EC  
**Recommended use:** Insecticide  
**Restrictions on use:** Agriculture & Home & Garden  
**Supplier:** Villa Crop Protection (Pty) Ltd.  
**Co. Reg. No.:** 1992/002474/07  
PO Box 10413  
Aston Manor, 1630, 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
Aspiration hazard	Aspiration Toxicity 1	H304
Dermal	Acute Toxicity 5 Skin Irritation 3 Skin Sensitisation 1	H313 H316 H317
Eye	Eye Irritation 2/2A	H319
Inhalation	Acute Toxicity 4	H332
<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:**  
May be harmful if swallowed or in contact with skin.  
May be fatal if swallowed and enters airways.  
Causes mild skin irritation.  
May cause an allergic skin reaction.  
Causes serious eye irritation.  
Harmful if inhaled.

## Label elements:



**Signal word:** Danger.

## Hazard statements:

H303: May be harmful if swallowed.  
H304: May be fatal if swallowed and enters airways.  
H313: May be harmful in contact with skin.  
H316: Causes mild skin irritation.  
H317: May cause an allergic skin reaction.  
H319: Causes serious eye irritation.  
H332: Harmful if inhaled.  
H400: Very toxic to aquatic life.  
H410: Very toxic to aquatic life with long lasting effects.

## Precautionary statements:

P261: Avoid breathing fumes, mists, vapours or spray.  
P264+P265: Wash hands thoroughly after handling. Do not touch eyes.  
P271: Use only outdoors or in a well-ventilated area.  
P272: Contaminated work clothing should not be allowed out of the workplace.  
P273: Avoid release into the environment.  
P280: Wear impervious rubber gloves and boots, protective clothing and chemical safety goggles.  
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+P317: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical help.  
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P331: Do NOT induce vomiting.  
P333+P317: If skin irritation or rash occurs: Get medical help.  
P337+P317: If eye irritation persists: Get medical help.  
P391: Collect spillage.  
P405: Store locked up.  
P501: Dispose of contents/container to suitable landfill in accordance with local regulations.

## Special labelling of certain mixtures:

None known.

## Other hazards:

None known.

## Toxicity:

Classification according to GHS: Category 4

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

**Substance/Mixture:** Mixture.

## Composition:

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Chemical Name	CAS	Conc. (m/v %)	Classification EC 1272/2008
Malathion	121-75-5	50 %	Acute Toxicity 4 (H302) Skin Sensitisation 1 (H317) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)
Calcium dodecylbenzene sulfonate	26264-06-2	<5 %	Acute Toxicity 4 (H302) Skin Irritation 2 (H315) Eye Damage 1 (H318) Aquatic Chronic 4 (H413)
Solvent naphtha (petroleum), heavy aromatic	64742-94-5	<50 %	Aspiration Toxicity 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 and consult a doctor.

**Inhalation:** If vapours or mists have been inhaled, move victim to fresh air and remove source of contamination if safe to do so. The patient should be kept under observation. **Obtain medical attention.**

**Skin:** Remove contaminated clothing, shoes and leather goods. Wash skin gently and thoroughly with cold water and non-abrasive soap. **Obtain medical attention if irritation or rash occurs.**

**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:** **Seek medical attention immediately** or call a poison control centre for treatment advice. **Do not induce vomiting due to the aromatic solvent.** Do not give anything by mouth to an unconscious person. If the person is alert, rinse mouth thoroughly with water.

**Anticipated acute effects:**

May be harmful if swallowed or in contact with skin.  
May be fatal if swallowed and enters airways.  
Causes mild skin irritation.  
May cause an allergic skin reaction.  
Causes serious eye irritation.  
Harmful if inhaled.

**Anticipated delayed effects:** None known.

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

**Advice to physician:** There is no specific antidote available. Treat symptomatically and supportively.

### 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media:** Carbon dioxide, dry chemical and foam.

**Unsuitable Extinguishing Media:** High volume water jet. Use a water jet only to cool heated containers.

**Specific hazards:** In case of fire and/or explosion do not breathe fumes.

**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 bunker gear.

### 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Avoid contact with eyes and skin. **Do not breathe in fumes, spray mist 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 to be very toxic to aquatic organisms with long-term adverse effects in the aquatic environment. Any spillages or uncontrolled discharges into water courses 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, earth or silica gel.

**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 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

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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 eyes and skin. Do not inhale spray mist or vapours. 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.

### 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

#### Permissible concentration:

Components	Exposure limits	Type of exposure limit	Source
Malathion	-	10 mg/m <sup>3</sup>	8-hour TWA
Total dust	-	10 mg/m <sup>3</sup>	OSHA PEL

#### 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 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:** For most well-ventilated conditions, no respiratory protection should be needed. If used in a poorly ventilated area (airborne concentrations

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exceed exposure limits), use a NIOSH approved, air-purifying respirator with cartridges / canisters approved for organic vapours.

**Hand Protection:** Employees must wear appropriate chemically resistant gloves e.g. nitrile rubber gloves to prevent contact with this mixture.

**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 eye wash fountain or appropriate alternative within the immediate work area for emergency use.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** Clear yellow liquid.

**Odour:** Solvent odour.

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

**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:** 1.054 g/ml (20°C).

**Solubility:** Emulsifies 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 2 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:** Avoid extreme heat and oxidizing materials.

**Incompatible Materials:** Avoid contact with alkali materials.

**Hazardous Decomposition Products:** Will evolve toxic and irritant vapours.

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### 11. TOXICOLOGICAL INFORMATION

#### ACUTE TOXICITY:

Calculated according to GHS.

Oral LD<sub>50</sub> (24 h) >3400 mg/kg (rat).

Dermal LD<sub>50</sub> (24 h) > 4200 mg/kg (rat).

Inhalation LC<sub>50</sub> (4 h) > 1,2 mg/l (rat).

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

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

**Skin Sensitization:** May cause an allergic skin reaction.

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

**Chronic Effects:** Not available.

#### POTENTIAL ADVERSE EFFECTS:

**Inhalation:** Harmful if inhaled.

**Skin contact:** May be harmful in contact with skin.

**Ingestion:** May be harmful if swallowed.

### 12. ECOLOGICAL INFORMATION

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

#### ECOTOXICITY DATA:

##### Malathion

##### Fish:

LC <sub>50</sub> (96 h)	Bluegill sunfish	54 µg/l
	Rainbow trout	180 µg/l
	Sheepshead minnows	40 µg/l
	Three-spined stickleback	22 µg/l

##### Daphnia:

EC <sub>50</sub> (48 h)	0.72 µg/l
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##### Algae:

EC <sub>50</sub> (72 h)	4.1 mg/l
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##### Birds:

Acute oral LD <sub>50</sub>	Bobwhite quail	359 mg/kg
Dietary LC <sub>50</sub> (5 d)	Bobwhite quail	3500 mg/kg diet
	Ring-necked Pheasants	4320 mg/kg diet

##### Bees:

LD <sub>50</sub> contact	0.16 µg/bee
LD <sub>50</sub> oral	0.4 µg/bee

##### Worms:

LC <sub>50</sub> (14 d)	Earthworms	306 mg/kg soil
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### ENVIRONMENTAL EFFECTS:

**Plants:** De-esterified to its mono- and dicarboxylic acids, which are cleaved to yield succinic acid, which is subsequently incorporated into plant constituents.

**Persistence and degradability:** Under normal conditions, it is 99% degraded by hydrolysis within 7 days. Soil DT<sub>50</sub> c. 1 day (6 soils); main metabolites are malathion monocarboxylic acid and malathion dicarboxylic acid, which degrade in turn with DT<sub>50</sub> <3 days.

**Bio-accumulative Potential:** Log K<sub>ow</sub> 2.75. In mammals, following oral administration, the major part of the dose is excreted in the urine and faeces within 24 hours.

**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. 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/IRD:**

Class: 9

Packaging group: III

UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Malathion 500 g/l)

**Maritime Transport IMDG/IMO:**

Class: 9

Packaging group: III

UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Malathion 500 g/l)



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**Marine Pollutant (Y/N):** Yes, Considered a marine pollutant.

**Air transport IATA/ICAO:**

Class: 9

Packaging group: III

UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Malathion 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.

guarantee in respect of accuracy, and no responsibility is accepted for errors and omissions or the consequence thereof.

### END OF DOCUMENT

**Compiled:** April 2017

**Reviewed:** July 2022

**Revision no.:** (4)

**Next revision date:** July 2027

For detailed information on revisions, contact the Registration holder.

### 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 fluorinated 200, 250 and 500 millilitres and 1, 2, 5, 10, 20, 25 and 50 litres plastic containers and labelled according to South African regulations and guidelines.

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

**H302:** Harmful if swallowed.

**H315:** Causes skin irritation.

**H318:** Causes serious eye damage.

**H413:** May cause long lasting harmful effects 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.

**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