

## VILLA ALPHA-THRIN 100 SC

## MATERIAL SAFETY DATA SHEET

### 1. IDENTIFICATION OF PRODUCT AND COMPANY

**Product Name:** ALPHA-THRIN 100 SC  
Insecticide

**UN No.** 3352

**Supplier:** Villa Crop Protection (Pty) Ltd.  
PO Box 10413  
Aston Manor, 1630, South Africa

**Telephone:** (011) 3962233

**Fax:** (011) 3964666

**Website:** www.villacrop.co.za

**24 Hour Emergency response:**  
Bateleur: 083 1233 911 or 0860 333 911

**In case of Poisoning:**  
Tygerberg Poisoning Information Centre: (021) 931 6127  
Red Cross Poisoning Information Centre: (021) 689 5227  
Griffon Poison Information Centre: (082 446 8946)

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

**Common Name:** Alpha-cypermethrin

**Chemical Name:** A racemate comprising:  
(S)-alpha-cyano-3-phenoxybenzyl  
(1R, 3R)-3-(2,2-dichlorovinyl)-2,2-  
dimethylcyclopropanecarboxylate  
**and** (R)-alpha-cyano-3-  
phenoxybenzyl (1S, 3S)-3-(2,2-  
dichlorovinyl)-2,2-dimethyl-  
cyclopropane-carboxylate (IUPAC)

**CAS N<sup>o</sup>:** 67375-30-8

**Chemical family:** pyrethroid

**Chemical formula:** C<sub>22</sub>H<sub>19</sub>Cl<sub>2</sub>NO<sub>3</sub>

**Molecular weight:** 416.3

**Use:** Non-systemic insecticide with  
stomach and contact action. Acts on  
the central and peripheral nervous  
system in very low doses.

**Formulation:** Alpha-cypermethrin 100 g/l  
Suspension Concentrate

**Hazardous ingredients:** Alpha-cypermethrin

**Symbol:** Xn

**Indication of danger:** Harmful if swallowed

**Risk Phrases:** R20/22, R36/37, R43, R50, R57

### 3. HAZARD IDENTIFICATION

**Likely routes of exposure:**

**Skin:** May cause abnormal sensations in the skin.

**Eye:** May irritate the eyes.

**Inhalation:** Not a hazard under normal use conditions.  
May be irritating if inhaled.

**Swallowed:** Data suggests the product is harmful if  
swallowed.

### 4. FIRST AID MEASURES AND PRECAUTIONS

Pyrethroids can induce burning, itching or tingling sensations, typically in the face, and less frequently in other regions of the skin and readily disappear within several hours or 1 day after exposure. Nasal discharge and a scratchy throat from inhalation, ataxia, urinary incontinence, convulsions, nervous irritability and tremors may also appear.

Sweating and washing with warm water can exacerbate these abnormal sensations. Transient red papules, congestion and edema of the skin are occasionally seen. The systemic symptoms in mild cases include dizziness, headache, nausea, anorexia and fatigue, or with signs of listlessness, vomiting and increased stomach secretion, usually resulting in sick leave for more than 1 day.

**Inhalation:**

If vapours or mists have been inhaled, and irritation has developed, remove the source of contamination or move victim to fresh air. The patient should be kept under observation and obtain medical attention if irritation persists.

**Skin contact:**

Remove contaminated clothing, shoes and leather goods. Wash skin gently and thoroughly with cold water and non-abrasive soap. Application of olive oil to the affected area will afford prompt relief. After the affected area is washed with soap and water, dry off and apply olive oil.

**Eye contact:**

Immediately flush eyes with a stream of clean water for at least 20 minutes, holding the eyelid(s) open. Obtain medical attention if irritation persists.

**Ingestion:**

**Do not induce vomiting.** Do not give anything by mouth. Obtain medical attention. If the person is alert, rinse mouth thoroughly with water.

**Advice on treatment:**

There is no specific antidote available. In cases of ingestion, consider gastric lavage with water, or 5% sodium bicarbonate solution. Treatment should be symptomatic. Convulsions should be treated with anti-convulsants. Vomiting may be induced by using Ipecac Syrup.

Over-exposure may cause local irritation of the skin (burning sensation on the face and elsewhere) and irritation of the respiratory tract causing rhinorrhea, chest tightness or dyspnea.

### 5. FIRE FIGHTING MEASURES

**Fire and explosion hazard:**

**Flash point:** None – water based.  
This material is not flammable.

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### **Hazardous products of combustion:**

Fire may produce irritating or poisonous vapours (toxic fumes of hydrogen cyanide, chlorine, and oxides of nitrogen and carbon), mists or other products of combustion.

### **Extinguishing agents:**

Extinguish fires with carbon dioxide, dry powder, or alcohol-resistant foam. Water spray can be used for cooling of unaffected stock, but avoid water coming in contact with the product. Use as little water as possible. Use spray or fog. Solid stream may cause spreading. Contain water used for fire fighting for later disposal. Avoid the accumulation of polluted run-off from the site.

### **Fire fighting:**

Remove spectators from surrounding area. Isolate the fire area and evacuate downwind. Use a recommended extinguishing agent for the type of surrounding fire.

Fight fire from maximum distance and use unmanned hose holder or monitor nozzles. Contain fire control agents for later disposal. Avoid inhaling hazardous vapours and fumes from burning materials. Keep upwind. Remove container from fire area if possible and without risk. Water can be used to cool unaffected containers but must be contained for later disposal.

Dyke fire control water for later disposal. Do not scatter the material. Avoid pollution of waterways.

Do not use high volume water jet, due to contamination risk. Contain water used for fire fighting for later disposal. Avoid the accumulation of polluted run-off from the site.

### **Personal protective equipment:**

Fire may produce irritating or poisonous vapours (toxic fumes of hydrogen cyanide, chlorine, and oxides of nitrogen and carbon), mists or other products of combustion. Fire fighters and others that may be exposed should wear full protective clothing and self-contained breathing apparatus.

## **6. ACCIDENTAL RELEASE MEASURES (SPILLAGE)**

### **Personal precautions:**

Avoid contact with skin and eyes. Do not breathe in spray or fumes. For personal protection see Section 8.

### **Environmental precautions:**

Do not allow entering drains or watercourses. Spillage or uncontrolled discharges into water courses (or public waters) to be reported immediately to the Police and to the Department of Water/Environmental Affairs.

### **Occupational spill:**

For small liquid spills, soak up with lime, damp earth or sand, or other non-combustible absorbent material and place into containers for later disposal. For large liquid spills, contain the liquid for later disposal.

Place the material into a clean, dry container and cover for subsequent disposal. All contaminated cleaning materials should be placed in closable receptacles with clear label.

In situations where product comes in contact with water, contain contaminated water for later disposal. Do not flush spilled material into drains. Keep spectators away.

## **7. HANDLING AND STORAGE REQUIREMENTS**

### **Handling:**

Handle with care. Harmful in contact with skin and if swallowed. Avoid contact with eyes and skin, and inhalation of spray and vapour. Use with adequate ventilation. Wash hands before eating, drinking, chewing gum, smoking, or using the toilet. Operators should change and wash clothing daily. Remove clothing immediately if the insecticide gets inside. Then wash skin thoroughly using a non-abrasive soap and put on clean clothing.

Do not apply directly to areas where surface water is present, or to intertidal areas below the mean high water mark. Water used to clean equipment must be disposed of correctly to avoid contamination.

### **Storage:**

Store in its original container in isolated, dry, cool and well-ventilated area. Keep from contact with other pesticide, fertilizers and seeds during storage. Store away from incompatible substances. Product is incompatible with strong acids, oxidizers and copper. Not to be stored next to foodstuffs and water supplies. Keep out of reach of unauthorized persons, children and animals. Local regulations should be complied with.

## **8. EXPOSURE CONTROL / PERSONAL PROTECTION**

It is essential to provide adequate ventilation. The measures appropriate for a particular work site depend on how this material is used and on the extent of exposure. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire, and other applicable regulations.

### **PERSONAL PROTECTIVE EQUIPMENT:**

If engineering controls and work practices are not effective in controlling exposure to this material, then wear suitable personal protective equipment including approved respiratory protection.

### **Respirator:**

An approved respirator suitable for protection from mists of pesticides is adequate. Limitations of respirator use specified by the approved agency and the manufacturer must be observed.

### **Clothing:**

Employee must wear appropriate protective (impervious) clothing and equipment to prevent repeated or prolonged skin contact with this substance.

### **Gloves:**

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Employee must wear appropriate synthetic protective gloves to prevent contact with this substance.

### Eye protection:

The use of safety goggles is recommended.

**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:

White homogeneous flowable liquid suspension with weak aromatic odour.

#### Flammability:

Not flammable

#### Oxidizing properties:

None.

#### Flash point:

None.

#### Solubility:

Forms a suspension with water.

#### pH:

6.3 (1% m/v solution).

#### Density:

1,031 g/ml @ 20°C

#### Materials to Avoid:

Plain mild steel, tinplate or other metal packaging.

### 10. STABILITY AND REACTIVITY

#### Stability:

Chemically and thermally stable. Can be decomposed in strong alkaline solution.

### 11. TOXICOLOGICAL INFORMATION

#### Acute oral LD<sub>50</sub>:

> 4989 mg/kg in rats

#### Acute dermal LD<sub>50</sub>:

> 19 000 mg/kg in rats

#### Acute skin irritation:

Non-irritant, may cause sensations.

#### Acute eye irritation:

Moderate irritant.

#### Dermal sensitisation:

Sensitizer.

#### Chromosomal aberration:

Studies indicate that **Alpha-cypermethrin** does not induce chromosomal aberration in mice at 40 mg/kg b.w.

#### Mutagenicity:

Studies indicate that **Alpha-cypermethrin** is non-mutagenic.

### 12. ECOLOGICAL INFORMATION

#### Degradability:

Not readily bio-degradable, but can be decomposed chemically.

**Alpha-cypermethrin** is rapidly degraded in soil. It is rapidly hydrolysed under basic conditions (pH = 9), but under acidic and neutral conditions, hydrolysis half-life can be 20 to 29 days. It has a high affinity for organic matter, yet, because of the ease with which the material undergoes degradation, it has a very low potential for bioaccumulation. It is not mobile in soil.

#### ECOTOXICOLOGY:

Very toxic to fish and aquatic invertebrates and toxic to bees in laboratory tests. But not harmful at normal rate under field conditions.

#### Birds:

Oral LD <sub>50</sub> :	quail:	8030 mg/kg
	pheasants:	3515 mg/kg
LC <sub>50</sub> (8 day diet):	pheasants:	> 5000 mg/kg diet
	quail:	> 5000 mg/kg diet

#### Fish:

LC <sub>50</sub> (96 hours):	carp:	0.028 mg/l
	grass carp:	0.035 mg/l
	catfish:	0.015 mg/l

#### Daphnia:

LC <sub>50</sub> (96 hours):	<i>Daphnia magna</i> :	0.00026 mg/l
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#### Bees:

LD <sub>50</sub> (oral, 48 hours):	0.0018 mg/bee
LD <sub>50</sub> (contact, 24 hours):	0.059 g/bee or 0.085 l/ha

#### Earthworm:

LC <sub>50</sub> :	57,4 mg/kg soil
LD <sub>50</sub> :	> 100 mg/kg

### 13. DISPOSAL CONSIDERATION

#### Pesticide disposal:

Open dumping or burning of this pesticide is prohibited. Waste resulting from the use of this product cannot be reused or reprocessed. Never pour untreated waste or surplus products 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.

#### Container disposal:

Emptied containers retain vapour and product residues. Observe all labelled safeguards until container is destroyed.

**TRIPLE RINSE** empty containers in the following manner: Invert the empty container over the spray or mixing tank

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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 minimum of 10 % of that of the container. Add the rinsing to the contents of the spray tank before destroying the container in the prescribed manner.

Do not re-use the empty container for any other purpose but destroy it by perforation and flattening and bury in an approved dumpsite. Prevent contamination of food, feedstuffs, drinking water and eating utensils. Comply with local legislation applying to waste disposal.

### 14. TRANSPORT INFORMATION

**UN NUMBER:** 3352  
**Road Transport ADR/RID:**  
Class: 9  
Packaging group: III  
Shipping name: Pyrethroid Pesticide, Liquid, Toxic  
(Alpha-cypermethrin 100 g/l)  
**Maritime Transport IMDG/IMO:**  
Class: 9  
Packing group: III  
Shipping name: Pyrethroid Pesticide, Liquid, Toxic  
(Alpha-cypermethrin 100 g/l)

Considered a marine pollutant.

### 15. REGULATORY INFORMATION

**Symbol:** Xn,  
**Indication of danger:** Harmful

**Risk phrase(s):**  
**R 20/22** Harmful by inhalation and if swallowed.  
**R 36/37** Irritating to eyes and respiratory system.  
**R 43** May cause sensitisation by skin contact.  
**R 50** Very toxic to aquatic organisms.  
**R 57** Toxic to bees.

**Safety phrases:**  
**S 2** Keep out of reach children.  
**S 13** Keep away from food, drink and animal feeding stuffs.  
**S 23** Do not breathe vapour/spray.  
**S 24/25** Avoid contact with skin and eyes.  
**S 36/37/39** Wear suitable protective clothing, gloves and eye/face protection.  
**S 61** Avoid release to the environment.

### 16. OTHER INFORMATION

**Packaging:**

Packed in 1, 5, 10, 20 and 25 ℓ fluorinated plastic containers and labelled according to South African regulations and guidelines.

### 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 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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