

## VILLA FENVALERATE EC

## MATERIAL SAFETY DATA SHEET

### 1. IDENTIFICATION OF PRODUCT AND COMPANY

**Product Name:** FENVALERATE EC  
Insecticide & Acaricide  
**UN No.** 3351  
**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 Hospital: 021 931 6129  
Griffon Poison Information Centre: 082 446 8946

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

**Common Name:** fenvalerate  
**Chemical Name:** (RS)- $\alpha$ -cyano-3-phenoxybenzyl  
chlorophenyl)-3-methylbutyrate  
(IUPAC)  
**CAS N°:** 51630-58-1  
**Chemical family:** pyrethroid  
**Chemical formula:**  $C_{25}H_{22}ClNO_3$   
**Molecular weight:** 419.9  
**Use:** Non-systemic insecticide and  
acaricide with stomach and contact  
action.  
**Formulation:** fenvalerate 200 g/l  
Emulsifiable Concentrate  
**Hazardous ingredients:** fenvalerate  
**Symbol:** Xn, Xi, F  
**Indication of danger:** Harmful if swallowed, Irritant,  
Pyrethroid Pesticide, Liquid,  
Toxic, Flammable  
**Risk Phrases:** R10, R20/22, R36/37/38, R41,  
R43, R50, R57

### 3. HAZARD IDENTIFICATION

**Toxicity class:**  
WHO II; EPA II.  
A moderately toxic insecticide.  
**Likely routes of exposure:**  
Skin and eye contact, ingestion and inhalation.  
**Eye contact:**  
Minimally toxic. The product may cause mild irritation.  
**Skin contact:**  
Minimally toxic. The product is not irritating.  
**Ingestion:**  
Moderately toxic if ingested. See point 4 for symptoms.  
**Inhalation:**

Highly toxic by inhalation. See point 4 for symptoms.

### 4. FIRST AID MEASURES AND PRECAUTIONS

Symptoms of exposure to the product include: mucous membrane irritation from inhalation, itching and burning of the skin, nausea, vomiting, gastro-enteritis with diarrhoea, nervousness, anxiety, salivation, incoordination, tremors, muscular paralysis, convulsions, coma, and death through respiratory failure.

#### Inhalation:

Remove source of contamination or move victim to fresh air. Keep affected person warm and at rest. Supply oxygen if necessary. Treat symptomatically and supportively. Seek medical advice immediately.

#### Skin contact:

Remove contaminated clothing, shoes and leather goods. Gently wipe off excess chemical. Wash skin gently and thoroughly with water and non-abrasive soap followed by alcohol. Seek medical advice if necessary. The product is not considered to be a dermal sensitizer, but persons who become sensitised may require specialised medical management with anti-inflammatory agents.

#### Eye contact:

Immediately flush eyes with gently flowing lukewarm water or saline solution for 20 minutes, holding the eyelid(s) open. Seek medical attention if necessary.

#### Ingestion:

Remove by gastric lavage and catharsis. Supply oxygen if respiration is depressed. Do not perform gastric lavage if victim is unconscious. Seek medical advice immediately. Qualified medical personnel should perform administration of lavage or oxygen. Do not administer milk, cream, or other substances containing vegetable or animal fats which enhance absorption of pyrethroids.

#### Advice to physician:

There is no specific antidote. Treat symptomatically and supportively. Gastric lavage may be required and must be administered by qualified medical personnel, followed by ingestion of activated charcoal with water. If bowel movement has not occurred within 4 hours and patient is fully conscious, give sodium or magnesium sulphate as a cathartic.

### 5. FIRE FIGHTING MEASURES

#### Fire and explosion hazard:

Product is highly flammable and explosive due to formulant (xylene) content.

#### Extinguishing agents:

Extinguish small 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. Contain water used for fire fighting for later disposal.

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### Fire fighting:

Remove spectators from surrounding area. Remove container from fire area if possible. Contain fire control agents for later disposal. Use a recommended extinguishing agent for the type of surrounding fire. Water can be used to cool unaffected containers but must be contained for later disposal. Avoid inhaling hazardous vapours. Keep upwind.

### 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. When the product contaminates public waters, inform appropriate authorities immediately in accordance with local regulations.

### Occupational spill:

Remove all sources of flames and sparks. 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. 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:

Harmful by inhalation or if swallowed. Avoid contact with eyes and skin, and inhalation of fumes. 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:

Keep under lock and key and out of reach of unauthorised persons, children and animals. Store in its original labelled

container in isolated, dry, cool and well-ventilated area. Not to be stored next to foodstuffs and water supplies. Local regulations should be complied with.

## 8. EXPOSURE CONTROL / PERSONAL PROTECTION

It is essential to provide adequate ventilation. 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 dusts and mists of pesticides is required. Limitations of respirator use specified by the approving agency and the manufacturer must be observed.

### Clothing:

Employee must wear appropriate protective (impervious) clothing and equipment to prevent skin contact with the substance.

### Gloves:

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:

Yellow to brown liquid.

### Odour:

Mild alcohol odour.

### Flammability:

Flammable.

### Flash point:

23 °C (Pensky-marten closed cup).

### Storage stability:

Stable for up to 2 years under normal warehouse conditions. Stable to light, heat and moisture.

### Persistent foaming:

No data available.

### Solubility in water: Technical material data

1.07 µg/l at 20 °C (pH 7.0 - 7.8).

### Specific Gravity:

0.937 ± 0.05 g/cm<sup>3</sup> at 20 °C.

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### 10. STABILITY AND REACTIVITY

#### Stability:

Stable in neutral and acidic media (optimum is pH 4), but hydrolysed by alkalis. The product is stable to heat and moisture.

#### Incompatibility:

Compatible with many insecticides, fungicides and acaricides, but incompatible with alkaline substances and alcohols. A compatibility test is required before using with other products. Do not physically mix concentrate directly with other pesticide concentrates; always dilute first. Alkaline substances may reduce the activity of the product.

#### Thermal decomposition:

Toxic fumes of hydrogen cyanide, chlorine, and toxic oxides of nitrogen and carbon are produced when the product decomposes on heating.

### 11. TOXICOLOGICAL INFORMATION

*Data for technical material*

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

1500 - 3150 mg/kg in rats.

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

> 5000 mg/kg in rats.

#### Acute inhalation LC<sub>50</sub>:

> 0.101 mg/l of air over 4 hours (rats).

#### Acute skin irritation:

The product was found to be slightly irritating to skin (rabbits).

#### Acute eye irritation:

The product may cause mild eye irritation (rabbits).

### 12. ECOLOGICAL INFORMATION

#### Mobility:

The product is not mobile in soil.

#### ECOTOXICOLOGY:

##### Birds:

|                               |                |              |
|-------------------------------|----------------|--------------|
| Acute oral LD <sub>50</sub> : | domestic fowl: | > 1600 mg/kg |
|                               | mallard duck:  | > 9932 mg/kg |

##### Fish: Toxic to fish.

|                           |                |             |
|---------------------------|----------------|-------------|
| LC <sub>50</sub> (96 hr): | rainbow trout: | 0.0036 mg/l |
|---------------------------|----------------|-------------|

##### Bees: Toxic to bees.

Contact LD<sub>50</sub>: 0.23 µg/bee.

### 13. DISPOSAL CONSIDERATION

#### Pesticide disposal:

Contaminated absorbents, surplus product, etc., should be burned in a high- temperature incinerator (> 1000 °C) with effluent gas scrubbing. Never pour untreated waste or surplus products into public sewers or where there is any

danger of run-off or seepage into water systems. 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 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 rinsings 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:** 3351

**ADR/IRD:** 6.1 Subsidiary Risk 3

**IMDG/IMO:** 6.1 Subsidiary Risk 3

**ICAO/IATA:** 6.1 Subsidiary Risk 3

**PACKING GROUP:** III

**ROAD/RAIL:** Pyrethroid pesticide, liquid, toxic, flammable

**AIR/IATA :** 611, Y 611

Pyrethroid pesticide, liquid, toxic, flammable

**SEA :** Pyrethroid pesticide, liquid, toxic, flammable

**Considered a marine pollutant.**

### 15. REGULATORY INFORMATION

**Symbol:** Xn, Xi

**Indication of danger:** Harmful; Irritant.

#### Risk phrase(s):

**R 10** Flammable.

**R 20/22** Harmful by inhalation and if swallowed.

**R 36/37/38** Irritating to eyes, respiratory system and skin.

**R 41** Risk of serious damage to eyes.

**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 23** Do not breathe vapour/spray.

**S 24/25** Avoid contact with skin and eyes.



Member of:   
Co Reg No 1992/002474/07

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**S 36/37/39** Wear suitable protective clothing, gloves and eye/face protection.

### 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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