

# VILLA DELTA-THRIN 25EC

# SAFETY DATA SHEET

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** DELTA-THRIN 25 EC  
**Other identifier:** Deltamethrin 25 EC  
**Recommended use:** Insecticide  
**Restrictions on use:** Agriculture

**Supplier:** Villa Crop Protection (Pty) Ltd  
**Co. Reg. No.:** 1992/002474/07  
 PO Box 10413  
 Aston Manor, 1630, South Africa

**Telephone:** (011) 3962233  
**Fax:** (011) 3964666  
**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>Physical</b>		
Flammability	Flammable liquid 4	H227
<b>Health</b>		
Oral	Acute Toxicity 5	H303
Aspiration Toxicity	Aspiration Toxicity 1	H304
Dermal	Skin Irritation 3	H316
Eye	Eye Damage 1	H318
Inhalation	Acute Toxicity 3	H331
<b>Environment</b>		
Aquatic Acute	Aquatic Acute 1	H400
Aquatic Chronic	Aquatic Chronic 1	H410

**The most important adverse effects:**  
**Physiochemical effects:** Combustible liquid.  
**Human health effects:**  
 Toxic if inhaled.  
 May be fatal if swallowed and enters airways.  
 Causes serious eye damage.  
 Causes mild skin irritation.  
 May be harmful if swallowed.

### Label elements:



**Signal word:** Danger

### Hazard statements:

H227: Combustible liquid.  
 H303: May be harmful if swallowed.  
 H304: May be fatal if swallowed and enters airways.  
 H316: Causes mild skin irritation.  
 H318: Causes serious eye damage.  
 H331: Toxic if inhaled.  
 H400: Very toxic to aquatic life.  
 H410: Very toxic to aquatic life with long lasting effects.

### Precautionary statements:

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
 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.  
 P273: Avoid release into the environment.  
 P280: Wear impervious rubber gloves and boots, protective clothing and chemical safety goggles.  
 P301+P304+P316: IF SWALLOWED OR INHALED: Get emergency medical help immediately.  
 P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 P305+P354+P338+P317: IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical help.  
 P331: Do NOT induce vomiting.  
 P332+P317: If skin irritation occurs: get medical help.  
 P391: Collect spillage.  
 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 3

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

**Substance / Mixture:** Mixture.

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## Composition:

Chemical name	CAS	Conc. (m/v%)	Classification EC 1272/2008
Deltamethrin TC	52918-63-5	2.5 %	Acute Toxicity 3 (H301) Acute Toxicity 3 (H331) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)
Aromatic Solvent	64742-94-5	< 95%	Aspiration Toxicity 1 (H304)
Calcium Dodecyl Benzene Sulphonate	26264-06-2	< 5 %	Acute Toxicity 4 (H302) Skin Irritation 2 (H315) Eye Damage 1 (H318) Aquatic Chronic 4 (H413)

## 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. **Obtain medical attention immediately.**

**Skin:** 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. **Obtain medical attention if irritation occurs.**

**Eyes:** Flush eyes immediately with large amounts of gently flowing cold water, occasionally lifting upper and lower lids, until no evidence of chemical remains (approximately 15 to 20 minutes). **Get medical attention.**

**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:

Toxic if inhaled.

May be fatal if swallowed and enters airways.

Causes serious eye damage.

Causes mild skin irritation.

May be harmful if swallowed.

**Anticipated delayed effects:** None known.

**Most important symptoms:** dizziness, headache, nausea, fatigue, listlessness, vomiting and increased stomach secretion, muscular, fasciculation of limbs,

unconsciousness, convulsions, and coma (very high doses).

**Advice to physician:** 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 rhinorrhoea, chest tightness or dyspnoea.

## 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media:** 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.

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

**Specific hazards:** Fire may produce irritating or poisonous vapours, and may include hydrocarbons, ammonia, organic and acid halides, oxides of carbon, nitrogen and sulphur 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 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 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

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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:** 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.

**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 suitable detergent. See section 13 for disposal considerations.

### 7. HANDLING AND STORAGE

**Handling:**

**Precautions for safe handling:** May be fatal if swallowed and enters airways. Avoid contact with eyes, skin and inhalation of spray and vapours. Use with adequate ventilation. 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 product. Wash hands before eating, drinking, chewing gum, smoking, using the toilet or applying cosmetics. Operators should change and wash clothing daily. Remove clothing immediately if the insecticide gets inside. 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:**

**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 and 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 product 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:** 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 available.

**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 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:** Colourless homogeneous liquid.

**Odour:** Chemical odour.

**Odour threshold:** Not available.

**pH (1% aqueous dilution):** 5.8 (1% m/v solution).

**Melting point:** Not available.

**Freezing Point:** Not available.

**Boiling Point:** Not available.

**Flash Point:** 60 °C

**Flammability:** Combustible liquid.

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

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

**Relative Vapour Density:** Not available.

**Density / Relative density:** 0.908 g/ml @ 20°C.

**Solubility:** Forms an emulsion with water.

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**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:** Compatible with many insecticides, fungicides and acaricides, but incompatible with alkaline substances.

**Hazardous decomposition products:** Fire may produce irritating or poisonous vapours, and may include hydrocarbons, ammonia, organic and acid halides, oxides of carbon, nitrogen and sulphur mists or other products of combustion.

## 11. TOXICOLOGICAL INFORMATION

### ACUTE TOXICITY:

**Calculated according to GHS.**

**Oral LD<sub>50</sub> (24h)** > 2700 mg/kg (rat)

**Dermal LD<sub>50</sub>** > 5000 mg/kg (rat)

**Inhalation LC<sub>50</sub> (4h)** > 0.62 mg/l (rat)

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

**Eye Damage:** Causes serious eye damage.

**Skin Sensitization:** Not classified.

**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:** Toxic if inhaled.

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

**Other information:** Not available.

## 12. ECOLOGICAL INFORMATION

This product is expected to be very toxic to aquatic organisms with long lasting effects.

## ECOTOXICITY DATA:

### Deltamethrin

#### Fish:

LC <sub>50</sub> (96 h)	Rainbow trout	0.00091 mg/l.
	Bluegill sunfish	0.0014 mg/l.

#### Daphnia:

LC <sub>50</sub> (48 h)		0.00056 mg/l.
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#### Algae:

EC <sub>50</sub> (96 h)	<i>Selenastrum capricornutum</i>	>9.1 mg/l.
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#### Birds:

Acute oral LD <sub>50</sub>	Bobwhite quail	>2250 mg/kg
Dietary LC <sub>50</sub> (8 d)	Bobwhite quail	>5620 mg/kg diet

#### Bees:

LD <sub>50</sub> oral		0.023 µg/bee.
LD <sub>50</sub> contact		0.012 µg/bee.

#### Worms:

LC <sub>50</sub> (14 d)	Earthworms	>1290 mg/kg soil.
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## ENVIRONMENTAL EFFECTS

### Based on information for the active ingredient

**Plants:** No uptake through leaves and roots – non-systemic compound. No major metabolites.

**Persistence and degradability:** In soil, undergoes microbial degradation within 1–4 weeks. In field, DT<sub>50</sub> 8–28 days. Soil photolysis DT<sub>50</sub> 9 days. No incidence on soil microflora and nitrogen cycle. Rapid photodegradation in surface water in the presence of natural photosensitising substances, DT<sub>50</sub> 4 days. In water/sediment systems, adsorption from water to the sediments is the most important dissipation route, DT<sub>50</sub> (dissipation) <1 day. Major routes of degradation or dissipation in natural water systems are adsorption to the sediment, suspended solids and aquatic macrophytes, chemical and photochemical conversion to inactive stereoisomers, and hydrolysis with subsequent oxidation of the transformation products.

**Bio-accumulative potential:** Log K<sub>ow</sub> 6.4. No evidence of accumulation.

**Mobility in soil:** K<sub>d</sub> 3790–30000, K<sub>oc</sub> 4.6 × 10<sup>5</sup> to 1.63 × 10<sup>7</sup> cm<sup>3</sup>/g, confirms strong adsorption by soil colloids and no risk of leaching.

**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.

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**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:** 3352

**Road Transport ADR / ORD:**

Class: 6.1

Packaging group: II

UN Proper Shipping Name: PYRETHROID PESTICIDE, LIQUID, TOXIC (**Deltamethrin** 25 g/l)

**Maritime Transport IMDG / IMO:**

Class: 6.1

Packaging group: II

UN Proper Shipping Name: PYRETHROID PESTICIDE, LIQUID, TOXIC (**Deltamethrin** 25 g/l)

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

**Air Transport IATA / ICAO:**

Class: 6.1

Packaging group: II

UN Proper Shipping Name: PYRETHROID PESTICIDE, LIQUID, TOXIC (**Deltamethrin** 25 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 50, 100, 200, 250 and 500 millilitres and 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:**

**H301:** Toxic if swallowed.

**H302:** Harmful if swallowed.

**H315:** Causes skin irritation.

**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 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.