

# LAMBDA KILL 106 CS

# SAFETY DATA SHEET

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** LAMBDA KILL 106 CS  
**Other identifier:** Lambda-cyhalothrin 106 CS  
**Recommended use:** Insecticide  
**Restrictions on use:** Public health, hygiene and industrial

**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 4	H302
Oral and Inhalation	Asp. Tox. 1	H304
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:** None known.  
**Human health effects:**  
 None known.  
**Human health effects:**  
 May be fatal if swallowed and enters airways (Asp. Tox. 1).  
 Fatal if inhaled (Acute Tox. 3).  
 Harmful if swallowed (Acute Toxicity 4)

### Label elements:



**Signal word:** Danger.

**Hazard statements:**  
 H302: Harmful if swallowed.  
 H304: May be fatal if swallowed and enters airways.  
 H331: Toxic if inhaled.  
 H400: Very toxic to aquatic life.  
 H410: Very toxic to aquatic life with long lasting effects.

**Precautionary statements:**  
 P264: Wash hands and face thoroughly after handling.  
 P261: Avoid breathing dust, fume, gas, mists, vapours or spray.  
 P270: Do not eat, drink or smoke when using this product.  
 P271: Use only outdoors or in a well-ventilated area.  
 P273: Avoid release into the environment.  
 P301+P316: IF SWALLOWED: Get emergency medical help immediately.  
 P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 P330: Rinse mouth.  
 P331: Do NOT induce vomiting.  
 P391: Collect spillage.  
 P403+P233: Store in a well-ventilated place. Keep container tightly closed.  
 P405: Store locked up.  
 P501: Dispose of content/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 3.

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

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

# LAMBDA KILL 106 CS

# SAFETY DATA SHEET

Chemical Name	CAS	Conc. (m/v %)	Classification EC 1272/2008
Lambda-cyhalothrin	91465-08-6	11.08%	Acute Tox. 3 (H331) Acute Tox. 3 (H331) Acute Tox. 2 (H330) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)
Solvesso 150	64742-94-5	< 15 %	Asp. Tox. 1 (H304)

consider gastric lavage however, prevent aspiration. Observe patient for respiratory difficulty from aspiration pneumonitis. Treat symptomatically and supportively.

## 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media:** Extinguish small fires with water spray, carbon dioxide, dry powder or alcohol-resistant foam. For large fires, use alcohol-resistant foam.

**Unsuitable Extinguishing Media:** High volume water jet.  
**Specific hazards:** Irritating or hazardous gases may be generated by thermal decomposition or 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. Keep upwind. Avoid inhaling hazardous vapours and fumes from burning materials. 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. Do not use high volume water jet, due to contamination risk. Do not scatter the burning material. Contain fire control agents and waster 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:** Do not breathe in spray mist or dust / fumes / 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 as the product is classified to be very toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment. Any spillages or uncontrolled discharges into water courses should be immediately reported to the police and the Department of Water/Environmental Affairs.

**Methods and Materials for Containment:** Contain spilled product by diking area with sand, earth, vermiculite or clay.

**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

## 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. Immediately consult a doctor.

**Inhalation:** Remove source of contamination or move victim to fresh air. Keep affected person warm and at rest. Seek medical attention.

**Skin:** Gently wipe off excess chemical. Remove contaminated clothing, shoes and leather goods and wash before re-using. Wash skin thoroughly with water and non-abrasive soap. If irritation persists obtain medical attention.

**Eyes:** Immediately flush eyes with clean water. Lift eyelid (s) to facilitate irrigation. If present, remove contact lenses after and continue rinsing.

**Ingestion:** Seek medical attention or call a poison control centre for treatment advice if you feel unwell. 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. Avoid aspiration as product contains a solvent.

**Anticipated acute effects:** Transient paraesthesia effects (itching, tingling, burning or numbness) or allergic skin reactions may occur from skin contact. Pulmonary oedema and pneumonitis may result from aspiration. Inhalation of high vapour levels may cause headaches, drowsiness or dizziness.

**Anticipated delayed effects:** Nausea, vomiting, diarrhoea, abdominal pain, ataxia, unsteady gait, hyperexcitability, salivation, tremors and incontinence.

**Most important symptoms/effects:** Ingestion of large amounts may cause convulsions and loss of consciousness.

**Advice to physician:** There is no specific antidote available. This product contains materials that may cause severe pneumonitis if aspirated. In cases of ingestion,

# LAMBDA KILL 106 CS

# SAFETY DATA SHEET

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.

properly designed and maintained. Comply with occupational safety, environmental, fire, and other applicable regulations.

## 7. HANDLING AND STORAGE

### Handling:

**Precautions for safe handling:** May be toxic if inhaled. Ensure adequate ventilation during handling and use. May be harmful if swallowed. Avoid contact with eyes and skin. Do not handle broken packages 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 again.

### Storage:

**Conditions for safe storage:** Keep out of reach of unauthorised persons, children and animals. Store in its original labelled container in an isolated, dry, cool and well-ventilated area. Do not store near heat, open flame, sources of ignition or hot surfaces. Avoid cross contamination with other pesticides and fertilisers. Local regulations should be complied with.

**Incompatible substances and mixtures:** Refer to product label.

**Packaging material:** Fluorinated plastic containers.

### Personal Protective Equipment:

**Respiratory Protection:** Wear an organic cartridge respirator suitable for protection from mists/ vapours of pesticides if inhalation is likely to occur.

**Hand Protection:** The employee 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:** Employee must wear appropriate protective (impervious) clothing 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 mixture; the employer should provide an eye wash fountain or appropriate alternative within the immediate work area for emergency use.

## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

### Permissible concentration

Components	Exposure limits	Type of exposure limit	Source
Lambda-Cyhalothrin	Not established	0.04 mg/m <sup>3</sup> TWA (Dermal)	OEL
Solvent	100 ppm	435 mg/m <sup>3</sup> (TWA)	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

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:** Off-white to pale yellow liquid, capsule suspension.

**Odour:** Slight aromatic odour.

**pH (1% aqueous dilution):** 4.5 to 9.0

**Melting point:** Not available.

**Freezing Point:** Not available.

**Boiling Point:** Not available.

**Flash Point:** > 90°C.

**Flammability:** Not flammable.

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

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

**Relative Vapour Density:** Not available.

**Density/Relative density:** 1.04 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:** Not available.

## 10. STABILITY AND REACTIVITY

**Chemical Stability:** Product is stable at ambient temperature and pressure, under normal storage and handling conditions. Stable for up to 2 years when stored in a dry, cool covered warehouse in original, well-labelled containers. Store at low temperature conditions, below 50°C, preferably below 30 °C and not for prolonged periods in direct sunlight.

**Reactivity:** None known.

**Possibility of Hazardous Reactions:** None Known.

# LAMBDA KILL 106 CS

# SAFETY DATA SHEET

**Conditions to Avoid:** Avoid extreme heat or exposure to flames.

**Incompatible Materials:** None known.

**Hazardous Decomposition Products:** Can decompose at high temperatures and form irritant or hazardous gases.

## 11. TOXICOLOGICAL INFORMATION

### ACUTE TOXICITY:

Calculated according to GHS

Oral LD<sub>50</sub> (24 h) rat 505.56 mg/kg.

Dermal LD<sub>50</sub> (24 h) rabbit >5000 mg/kg.

Inhalation LC<sub>50</sub> (4 h) rat 0.52 mg/l.

**Skin Irritation/Corrosion:** Not classified.

**Eye Damage/Irritation:** Not classified.

**Skin Sensitization:** Not classified.

**Respiratory Sensitization:** May be toxic if inhaled.

**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 classified.

### POTENTIAL ADVERSE EFFECTS:

**Inhalation:** May cause headaches, drowsiness or dizziness.

**Skin contact:** Allergic skin reactions are possible. Transient paraesthesia effects (itching, tingling, burning or numbness) may occur from skin contact.

**Eye contact:** None known.

**Ingestion:** May cause headaches, drowsiness or dizziness.

**Other:** Pulmonary oedema and pneumonitis may result from aspiration.

## 12. ECOLOGICAL INFORMATION

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

### ECOTOXICITY DATA: AI – Lambda-cyhalothrin

#### Fish:

LC<sub>50</sub> (96h): Rainbow trout: 0.36 µg/l.

Bluegill sunfish: 0.21 µg/l.

#### Daphnia:

EC<sub>50</sub> (48 h) *D. magna* 0.36 µg/l.

#### Algae:

ErC<sub>50</sub> (96h) *S. capricornutum* >1000 µg/l.

**Other aquatic organisms:** Intrinsic toxicity to aquatic organisms is greatly reduced by rapid loss from the water by adsorption and degradation.

#### Birds:

LD<sub>50</sub> Mallard ducks > 3950 mg/kg.

Dietary LC<sub>50</sub> Quail > 5300 mg/kg.

No accumulation of residues in eggs or tissues.

#### Bees:

LD<sub>50</sub> (oral) 38 ng/bee.

LD<sub>50</sub> (contact) 909 ng/bee.

#### Worms:

LC<sub>50</sub> *Eisenia foetida* >1000 mg/kg soil.

#### Plants:

For details of metabolism of lambda-cyhalothrin in cotton and soya bean leaves, see D. A. French & J. P. Leahey, *Proc. Br. Crop Prot. Conf. - Pests Dis.*, 1990, 3, 1029-1034.

## ENVIRONMENTAL EFFECTS:

**Persistence and degradability:** Rapidly degraded in soil; DT<sub>50</sub> for microbial degradation 23-82 d, for field soil 6-40 d. Strongly adsorbed to soil and sediment organic matter, K<sub>oc</sub> 330 000. Negligible potential for leaching of lambda-cyhalothrin and its degradation products through soil. Rapid dissipation from water in aquatic systems. DT<sub>50</sub> for dissipation from surface waters in lab. water-sediment systems 5-11 h; in a microcosm DT<sub>50</sub> <3 h. Rapid and extensive degradation of parent compound in aquatic systems; DT<sub>50</sub> for degradation in lab. water-sediment systems 7-15 d; in a microcosm DT<sub>50</sub> <3 h, DT<sub>90</sub> <3 d.

**Bio-accumulative Potential:** Lambda-cyhalothrin does not bioaccumulate.

**Mobility in soil:** Lambda-cyhalothrin is immobile in soil.

**Other adverse effects:** Very toxic to aquatic life with long lasting effects.

## 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. Where possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Waste should only be handled by licensed facilities.

**Container:** Emptied containers retain vapour and product residues. Do not re-use the empty container for any other purpose. Triple rinse empty containers by inverting 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

## LAMBDA KILL 106 CS

## SAFETY DATA SHEET

with a volume of water equal to a minimum of one third of that of the container. Add the rinsings to the contents of the spray tank before recycling or destroying the container in the prescribed manner. Observe all labelled safeguards until container is destroyed.

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/RID:

Class: 6.1  
 Packaging group: II  
 Shipping name: PYRETHROID PESTICIDE,  
 LIQUID, TOXIC (LAMBDA-  
 CYHALOTHRIN, 106 G/L)

#### Maritime Transport IMDG/IMO:

Class: 6.1  
 Packing group: II  
 Shipping name: PYRETHROID PESTICIDE,  
 LIQUID, TOXIC (Lambda-cyhalothrin, 106 g/l)

#### Marine Pollutant: Yes

#### Air Transport IATA/ICAO:

Class: 6.1  
 Packaging group: II  
 Shipping name: PYRETHROID PESTICIDE,  
 LIQUID, TOXIC (Lambda-cyhalothrin, 106 g/l)

**Special/Environmental Precautions:** Wedge drums tightly to avoid movement.

**Transport in bulk** (according to MARPOL 73/78, Annex II and the IBC code): Not applicable.

### 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 ml, 20 ml, 50 ml, 100 ml, 250 ml, 500 ml and 1 litre fluorinated plastic containers, labelled according to South African regulations and guidelines.

#### Additional H-statement (s) (formulants)

H301: Acute Tox. 3

H330: Acute Tox. 2

**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

**Compiled:** August 2012

**Reviewed:** October 2024

**Revision no.:** (7)

**Next revision:** October 2029

For detailed information on revisions, contact the Registration holder.